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PROSPECTS

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Vol. XXXI, no. 3, September 2001

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FOREWORD

Director-General of UNESCO

The legacy of the twentieth century is undoubtedly a mixed one. It was a century of war, disorder and enormous human suffering, and yet it was also a century of positive change and vast potential concerning national self-government and democratization, social reform and experimentation, and scientific-technological advances affecting everything from space travel and computers to agricultural production and basic health care. One of the early casualties of the twentieth century was our collective faith in the idea of progress; our readings of the world and its possibilities are now multiple and multi-layered. We are more critical of proposed solutions or at least more aware that they often beget unanticipated problems and risks. Meanwhile, change itself has become the very substance of our lives, thereby generating a powerful challenge to our customs and practices, not least to the ways in which we rear and educate our young.

The educational legacy of the twentieth century is partly one of unfinished business, combined with a growing questioning of both the means and the purposes of educational provision. The latter requires that we pursue together the common task of setting and fulfilling the new educational agenda of the twenty-first century, while the former shows that our achievements to date, though far from negligible, are unevenly distributed and incomplete. Thus, we must address the shortfalls of much educational provision in terms of quantity, quality and equity, while simultaneously seeking answers concerning the fundamental character and aims of teaching/learning processes in the new century.

*I am delighted that the unifying theme of the forty-sixth session of the International Conference on Education, to which this issue of PROSPECTS is dedicated, reflects one of the most important challenges facing us: **learning to live together**. This theme reminds us that education is not just about the head but also about the heart. It reminds us that advances in knowledge and understanding are utterly compromised if they are put at the service of hatred, prejudice, violence and selfishness. The ongoing revolution regarding information and communication technologies is creating unprecedented opportunities for communication, information-*

sharing and the development of new knowledge. These opportunities, however, will be wasted if people are unwilling to communicate, refuse listen to each other, or withhold respect for others' cultures and opinions.

We see around us, in all parts of the world, the tragic consequences of our inability or refusal to live peaceably with others. Education must play a key role in our efforts to learn to live together; in some countries, where the bonds of civility, tolerance and mutual understanding have broken down, a process of re-learning how to live at peace with others must be launched and sustained. Education, at all levels and in all its dimensions, must play a leading part in this. By cultivating appropriate attitudes, values and ways of thinking, particularly through the contents and methods of teaching/learning processes, education can help us to prepare ourselves for living together with full respect for others' rights and freedoms. This is not a recipe for bland uniformity; on the contrary, it rests upon an acceptance of human variability and a celebration of cultural diversity. Globalization, if attuned to genuinely human purposes and sensitive to the rich diversity of the world's languages, cultures and ways of life, can help humankind to achieve forms of universality that hitherto were barely imaginable.

All of today's 'general' problems can be seen in the perspective of education. The process of globalization is contributing to a fundamental transition towards a knowledge-based society where knowledge and information increasingly determine new patterns of growth and wealth-creation—for those who have access. But what happens to those who do not? One of UNESCO's strategic tasks is explore how new intellectual and technological developments can be harnessed to fight poverty in all its forms, including the divide between the 'info-rich' and the 'info-poor'. For UNESCO, in fact, education must be central to all anti-poverty strategies.

*The main goal pursued by the educational community in the past century was the provision of greater access to education. This task has now been enlarged: we are aware of the need for **lifelong learning** and **equitable access to quality** education for all. By this, we mean an education that responds effectively to the diverse aspirations and changing needs of individuals and societies during the twenty-first century so that all can participate and all can contribute to the best of their abilities. For UNESCO, this vision is achievable only if the world is at peace, hence our focus on learning to live together.*

I have high expectations that this year's International Conference on Education, the first such meeting of the new century, will provide a forum for fruitful and enriching debates which will help us all to address the educational challenges ahead with greater clarity and vigour.

KOÏCHIRO MATSUURA

EDITORIAL

Cecilia Braslavsky

This special issue of *PROSPECTS* addresses some of the matters which will be discussed during the forty-sixth session of the International Conference on Education (Geneva, 5–8 September 2001). It contains a collection of articles — philosophical reflections, results of research, discussions and innovative experiences — which, alongside the Conference's own documents, should stimulate the debate and contribute to making the twenty-first century a **century of lifelong equitable education of quality that improves our ability to live together**. This collection concerns, in particular, such issues as new world trends and educational needs, citizenship education, education for social cohesion, cultural diversity and education, language teaching, science teaching, new technologies and the future of the school. Each of these papers, in its way, is related to the common concern shared by educationists around the world and outlined in the article by John Daniel, UNESCO's Assistant Director-General for Education.

All the articles are professional contributions that—hopefully—can help break the ice on awkward issues. At the same time, they are all to some extent controversial. But there is no reason to fear controversy. It is only if the educational community succeeds in using well-founded arguments to reach a basic consensus admitting diversity that it will be able to deal with the challenges of peace and justice facing societies in the twenty-first century.

A Swiss scholar, Uri Peter Trier, put on his futurologist's hat to share with us his vision of the place that education will occupy in the new society and of the necessary educational policies. He sets the improvement of the living conditions for each individual as the precondition for them being able to shape their own future, and he underlines that, in reality, 'societies move education more than education moves societies'.

Are 'democracy', 'civic rights and responsibilities' and other 'big words' like this only the concern of adults? What do teenagers think of all this and how do they see their role in maintaining democratic political structures and civil society? These questions were the focus of a Civic Education Study conducted by the International

Association for the Evaluation of Educational Achievement in the 1990s. The results of this survey are presented on our pages by Judith Torney-Purta, Professor at the University of Maryland, who chaired the study's International Steering Committee.

In his article on humanitarian law, Sobhi Tawil, from the International Committee of the Red Cross (ICRC), reviews the ways in which schooling, in unintended ways, may act as a catalyst to armed conflict, before focusing on the ways in which the experience of armed conflict and humanitarian law may contribute to the core content of basic education. It is argued that the exploration of ethical issues related to human behaviour in times of armed conflict and war can be an important contribution to global citizenship education and to strengthening social cohesion in the twenty-first century.

This paper by Tawil, which tackles rather extreme situations, is followed by an article by Joan Holt from the Australian Curriculum Corporation. This year marks the centenary of Australian nationhood and the author speaks of the renaissance in teaching about civics and citizenship in her country through the Discovering Democracy programme, funded by the Commonwealth Government. The author states that if this curriculum development programme succeeds, Australians will not need another public education campaign before they celebrate their next civic anniversary.

Winthrop Wiltshire from Trinidad and Tobago describes the situation in the Caribbean, where the greatest threat to social cohesion appears to be the increasing levels of societal crime and violence. He regrets that the education system in the region has so far been concerned mainly with the academic performance of students and has paid little attention to their emotional needs — the area in which, Wiltshire argues, the school has a key role to play. He feels that a change of emphasis from a shortsighted academic approach to a more holistic model of education is required.

The report on teacher education for social cohesion in the Indian context was written by J.S. Rajput and K. Walia. It offers an exhaustive overview of the development of the school system in modern India and notes many achievements, but at the same time shares concerns, in particular in connection with the 'emergence of schools for the rich and affluent', which are perceived as an obstacle to 'education for inclusion'.

The development of positive attitudes among future teachers towards pupils from different ethnic, racial, linguistic and religious groups was the final goal of an investigation undertaken in South Africa, the results of which are presented by Corinne Meier and Eleanor Lemmer. The survey has clearly revealed the need for multicultural teacher training promoting tolerance of diversity and the reduction of prejudice based on stereotypes. However, while it is encouraging that respondents to the survey rejected segregation as a solution in multicultural schools, the differentiation between the learning aptitudes of pupils from different groups and the attribution of learning problems to different causes is worrying.

When the issue of language teaching is raised, in particular that of national language, one usually immediately thinks of rare languages or dialects threatened

by the advance of their more widely used ‘competitors’. The paper by Samba Traoré from Mali shares with us an interesting experience of his country in this area—the use of a convergent pedagogy, an innovative approach to language teaching in a bi- or multilingual context aimed at the development of functional bilingualism in a learner. This innovation, first tried out in the town of Ségou in Mali, has greatly improved the performance of students in the experimental classes compared with those in the regular ones.

Jens Naumann and Peter Wolf deal with the analyses of the African systems of primary education in the framework of the activities of PASEC (*Programme d’analyse des systèmes éducatifs de la Conférence des ministres de l’éducation des pays ayant en commun l’usage du français* (CONFEMEN)). Dissatisfied with the current situation and the superfluous nature of most reports, the authors redefine the linguistic variable, economic indicators and the literacy variant in the hope of finding a more convincing distribution of the role and influence of the different explanatory variables. At the same time, they set out to show to what extent the outcomes of statistical analyses and their interpretation depend on both the validity of the starting point and the assumptions about constructivist models of analysis and research procedures applied in this context.

The German professor Jürgen Mittelstrass addresses in his article the issue of new challenges to education and research in a global economy. He states that, in a world oriented by the keyword ‘globalization’, not only are the economic parameters themselves undergoing change, but so also are the conditions for education and research, especially with regard to the connection between them — that is, the system of academic education. He argues that ‘with the globalization of the economy and the unrestricted movement of research in a research triangle, (academic) education must move out of its disciplinary boundaries’.

There has been much discussion lately about the new technologies, the digital divide, the info-rich and the info-poor. Clotilde Fonseca from Costa Rica reflects on the myths and the goals of the information and communication technologies in education, and on ways of constructing an educational model which would benefit from their potential to enrich learning.

The two articles published in the ‘Trends’ section are both devoted to the same subject: AIDS—our common concern, source of suffering and tragedy. The first paper, contributed by Inon Schenker from the World Health Organization (WHO), describes the evolution in the development of school-based HIV prevention programmes, the theoretical frameworks on which behavioural change and diffusion of programmes are based, and the existing barriers to implementing them. He also offers several examples of success stories, which highlight the key role of the education sector in helping to mitigate the impact of the HIV/AIDS pandemic.

The second article, written by Carol Coombe from South Africa and Michael Kelly from Zambia, addresses the issue of AIDS and education from a double perspective: education as a vehicle for reducing the incidence of HIV/AIDS and education as an institution itself threatened by the disease. The authors *live* the drama of AIDS every day, and their concluding appeal for action cannot leave anyone unmoved.

Finally, by including the profile of Margaret Mead in this special issue we wish to honour one of the most significant representatives of the educators attempting to improve knowledge of and respect for diversity as a prerequisite for better contributing to living together. In 2001, the international community of educators celebrates the centenary of Mead's birth. Dr Wilton S. Dillon, Senior Scholar Emeritus at the Smithsonian Institution, Secretary to the International Honorary Committee for the Mead Centenary, contributed this paper.

* * *

Altogether, these contributions are aimed at enlarging our capacity to illuminate the concept of learning to live together as one of the main axes of the new paradigm of quality education for the twenty-first century. But they are, moreover, aimed at encouraging a further dialogue and exchange of experiences that would contribute to advancing networking in favour of more effective action towards education for peace, social cohesion linked to the reduction of poverty and intercultural understanding. They are doubtless going to be enriched by the comprehensiveness and variety of the global contributions to the forty-sixth session of the International Conference on Education.

LEARNING TO LIVE TOGETHER:

A PRIORITY CHALLENGE

AT THE DAWN OF

THE TWENTY-FIRST CENTURY

John Daniel

The World Education Forum, which met in Dakar, Senegal, in April 2000, provided a timely opportunity to review the state of basic education in the world and to move collectively towards a series of commitments to action. There clearly remain some major dimensions of inequity and exclusion in education, especially among women in rural areas and in large and very poor urban centres. However, at the start of the twenty-first century, the proportion of children and young people in all countries of the world attending school has grown considerably compared with the situation that prevailed fifty years ago. The spectacular growth in school attendance in the world has been the result of considerable efforts made by many governments, by political and social movements, by the international community and, above all, by the worst-off families themselves.

Original language: English

John Daniel (United Kingdom)

Assistant Director-General for Education of UNESCO. After studies at the universities of Oxford and Paris, he started his career as a lecturer at the Institut national des sciences et techniques nucléaires, France. He subsequently worked in several Canadian universities. He was Vice-Chancellor of the United Kingdom Open University from 1990 and President of the United States Open University since 1998. He has also served on the boards of the International Council for Distance Education, the Commonwealth of Learning, the IBO, the Carnegie Foundation for the Advancement of Teaching, the Centre national d'enseignement à distance, the Advisory Group on Online Learning, the Hong Kong Open University and CEPES. His most important publication is *Mega-universities and knowledge media: technology strategies for higher education*.

All over the world, including in the developed countries, there are particular circumstances that make it difficult for children to attend or remain in school and for adults to achieve and maintain a viable level of literacy. Poverty, especially extreme poverty, is the most effective means we have invented to undermine the right to education and hinder the enjoyment of educational opportunities. Geographical isolation provides its own distinctive barriers, as do the pressures of employment, under-employment, and unemployment. For example, the maintenance of household livelihoods may require rural-to-urban and cross-border migration by adult males in search of paid employment; additional burdens may then fall on other family members, perhaps limiting their chances to continue their education. Meanwhile, of course, inequities and discrimination based on gender, race, disability and age must also be factored into our understanding of why and how educational opportunities are unevenly distributed.

Educationists the world over are a beleaguered species, threatened not so much by extinction as by exhaustion as they seek to perform their routine work while also responding to virtually incessant change derived from reforms, improvement programmes and new policy initiatives. In short, the 'goalposts' are always moving. But distinctions must be made, for some changes of 'goalposts' are positive and necessary, such as those that concern improvements in access for the excluded, increases in the length of the school day, opportunities for further and higher-level learning, and enhancements of the quality and relevance of education. Demands and expectations are not static. The battle for access is eventually supplemented by the struggle for retention and more years of schooling. A numerical focus on educational democratization shifts towards an emphasis on curriculum, the mores of school life, school/community relations and decentralization. There is no facile symmetry in such matters, however, and no 'natural' sequencing or an automatic trade-off between quantity and quality. Nevertheless, broad shifts of emphasis are detectable in the development of education systems and in the priorities assigned to different aspects of education. Thus, in many countries, parents are no longer content to send their children to primary school for just five or six years. They want them to start sooner and finish later. They have understood that in the twenty-first century much more time has to be spent in school in order to acquire the qualifications and skills required to make headway in, or even gain entry to, the labour market.

In addition, the suitability and relevance of the curriculum are increasingly attracting the attention not only of parents but also of policy-makers, who see it as a strategic lever for influencing a country's response to the challenges of globalization, international economic competitiveness and the 'digital divide'. These considerations are clearly important, but so also are the ways in which education can contribute to other vital dimensions of human well-being. In particular, education today must do justice to each of the 'four pillars' identified in the Delors Report:¹ learning to know, learning to do, learning to live together and learning to be. The last General Conference of UNESCO decided that, from 5 to 8 September 2001, the forty-sixth session of the International Conference on Education would be devoted

to the theme of the contents and methods of education required for living together in the twenty-first century. Sixteen months after the meeting in Dakar of the World Education Forum, this Conference has the aim of further developing the debate on how two essential aspects of educational quality — contents and methods — must figure in the achievement of quality basic education for all.

Education for living together

A number of concerns and issues come to mind in regard to learning to live together and how this challenge (and it is, indeed, a huge challenge) can best be addressed. These concerns, which are examined here in no particular order of priority, may serve as reference points for the Conference's deliberations.

The first concern is focused on our awareness of the nature of the challenge and its importance for all our lives. The fact that education is neither the direct, operative cause of war nor the trigger for the outbreak of inter-state or intra-state violence should not lead us to underestimate its role. After all, education plays a not-insignificant part in how societies transmit and shape beliefs, values, perceptions and understandings regarding many aspects of our lives, including questions of conflict, peace and violence. But more could be done to increase awareness of education's role in conveying messages that weaken or strengthen our capacity to live together. We have knowledge, research and experience to draw upon in these matters. Educational research has shown, for instance, that curricula and teaching methods used in certain countries before the Second World War actually encouraged racism and militarism. Studies of history and geography textbooks today sometimes reveal subtle and also quite blatant practices of stereotyping and bias. It is possible that, even now, we are not sufficiently aware of what we are teaching and what young people are learning both inside and outside the school about how we can live with others in our rapidly changing world. Special attention should be paid to the relationship between messages transmitted through the media and the family and those transmitted by the school. Formal education, for example, may be called upon to counteract some of the violent messages communicated by society, but we need to understand more about how this may be done and what the implications are for school/society relations more generally. Discovering more about such issues and disseminating more information about them should be on the agenda of international educational dialogue.

The second concern refers to our ability to decide which competencies are required for us to live together in the twenty-first century and which concepts, values and methodologies can best develop those competencies. Apart from literacy and numeracy, the Framework for Action approved by the World Education Forum in Dakar gives importance to the learning of 'essential life skills'. This means developing the capacity to deal with everyday life, particularly the difficult choices and personal responsibilities that it brings. This emphasis may be traced to a desire for forms of learning that avoid verbalism and degraded versions of eighteenth-century encyclopaedism that often create a gulf between education and personal needs. We

must be careful, however, not to allow this focus on life skills to reinforce inequalities between different groups of people in the world, between those who learn life skills and those who develop higher cognitive capacities. A quality education for all must encourage the all-round development of each person and give each of us the opportunity to discover and develop our talents, abilities and potential. Efforts to redress the excessive emphasis on cognitive skills in much formal education through a focus on life skills should not be taken to mean that cognitive skills are unimportant or that they are more important for some children than for others. The key question is, how are we to develop these two sets of competencies side by side and in an integral way? What contents and methods should we choose?

The Report of the International Commission on Education for the Twenty-first Century, chaired by Jacques Delors, offers many clues in this respect. As noted earlier, the Delors Report advocates building education on four pillars that develop at the same time practical life skills and higher intellectual capacities. To put these orientations into practice, however, it is necessary to pose a variety of questions. Is it possible, and if so, is it desirable, to define a corpus or list of contents that can be taught in every country? With regard to methods, are some demonstrably more appropriate than others? On a global scale, is it desirable to privilege certain methods over others in a world enriched by cultural diversity, the interactions of different personalities, and the serendipities born of experimentation and inventiveness? In order to improve how we learn to live together, how can we achieve the most felicitous mixture and balance of elements in curricula and teaching/learning processes? In particular, how can we avoid an exaggerated emphasis on cognitive development to the detriment of emotional and social aspects of personal growth? What kinds of curriculum design and educational practices can best help us to deal with the strong emotional component within the prejudices and stereotypes that often obstruct the process of living together?

The third concern refers to the relation between the demand made on educational institutions to better prepare young people to live together and the existing set of social practices and values. At the same time as we endow education with responsibilities for such preparation, we have to recognize the limitations of education. We must not demand of education what we do not or cannot demand of society at large. How effective can educational messages be if they are contradicted or at least unsupported by the actual conditions for peace and justice in society? If educational institutions are asked to educate for social cohesion, it is only fair to ask in return for a minimum degree of social cohesion to enable schools to fulfil their mission properly. Thus, learning to live together must be conceived as a societal task to which education should contribute, but it should not be expected to shoulder the entire burden. Consensus-building and the promotion of tolerance, respect for differences and mutual understanding require broad-based support as well as committed political leadership. We cannot expect schools to be havens of tranquillity if they are surrounded by social turbulence and violence.

The fourth concern refers to the relation between educational institutions and the new systems of information distribution deriving from advances in information

and communication technologies. From the 1950s onwards, schools in many parts of the world learned to live with television. In the years ahead, however, schools will have to decide what type of relationship they want with the information highways. When television was invented and began to spread, some educational idealists suggested that it might replace teachers. Today, others are suggesting that the new information and communication technologies will replace teachers. But is this really feasible and, more important, is this what people actually want?

Educational contents and methods do not arise naturally. They are the product of a series of conscious decisions taken by a multitude of actors. They are the outcome of deliberate acts of selection and emphasis carried out within each person's freedom of manoeuvre. There is no doubt that the new information distribution systems in themselves offer some highly promising opportunities for educational development in the twenty-first century. But how can we take advantage of those opportunities to promote greater access to information while ensuring that the information is used for the benefit of living well together? In this matter, attention must be paid to the social relations of learning, especially the interactions among learners, as well as between learners and their teachers. In regard to learning to live together, with its concern for developing affective competencies, promoting reflection on attitudes and beliefs, and addressing the realities of inter-personal differences and conflicts, there is a premium on skilful mediation by professional educators. While information and communication technologies will furnish useful tools for learning to live together, the role of teachers is vital for guiding the learning process.

The fifth concern is focused on those who are responsible for defining the contents and methods of education for living together. Throughout the period during which modern schooling and education systems were invented and expanded, educational contents and methods were defined by a variety of institutions, according to particular cultures and specific historical backgrounds. The public authorities of nation states have been the main agent, though religious institutions sometimes played an important role. Some levels and types of education attracted the interest of other actors; commercial enterprises, for example, were sometimes deeply involved in technical secondary schooling.

In recent decades, there has been a growing awareness of the importance of mobilizing and gathering together all the social actors relevant to decisions on educational options, including those pertaining to the curriculum. In many countries, successful experiments have been conducted aimed at establishing profiles of school-leavers, with the participation of businesses. In others, a large share of decision-making has been accorded to teachers' unions and other non-governmental organizations. It has been recognized that curriculum reforms sometimes fail because they have not enjoyed sufficient backing from society in general and teachers in particular. There is much to learn from such experiences, both successful and less successful. Within curriculum contents and methods, the theme of learning to live together is one which stands out as requiring an approach that is thoroughly consultative and participatory, involving all interested parties.

The sixth concern is related to the scale on which learning to live together should be promoted. In an increasingly globalized world, learning to live with others cannot be confined to relations with one's immediate neighbours. The virtues of good citizenship, for example, are applicable not only to local communities but also to people in distant countries whom one has never and will never meet. Environmental education, an important component of approaches towards learning to live together, can offer countless examples of how actions in one corner of the world may produce effects very far away. We must investigate how other dimensions of learning to live together also transcend the constraints of distance; these additional dimensions include, for example, promoting an empathetic understanding of the plight of refugees, victims of war or those whose basic human rights have been denied. Some years ago, it became popular to say that we should 'think globally and act locally'. It is time to re-visit this statement in the age of the Internet and consider how many individuals now have acquired a capacity for participation in global-level action.

The seventh and final concern is related to the way we understand the meaning of conflict and difference. Learning to live together should not be based on a false presumption that we can create a conflict-free world or forms of difference that do not elicit a reaction. We must achieve better knowledge of the nature of conflict and acquire improved skills for handling conflict so that it does not degenerate into violence or oppression. We must learn to accept the reality of other people's distinctiveness and the fact that they are unlikely to change themselves just to please us. Learning to live with others implies the right of people to remain 'others'.

In conclusion, it is surely no mere coincidence that in the same month as the forty-sixth session of the International Conference on Education is being held in Geneva, other conferences will be gathering in New York and South Africa — convened by sister agencies of the United Nations system — in order to discuss problems of childhood and racism, xenophobia and discrimination. The three events together should make a substantial contribution towards attaining a better understanding of the triangle of childhood, education and social practices. This understanding, in turn, will feed into national, regional and institutional policies, as well as the global strategies of Education for All. Our collective goal is to strengthen each individual's ability to build peace and justice in the information society during the era of globalization.

Note

1. Jacques Delors, et al., *Learning: the treasure within*, Paris, UNESCO, 1996. (Report of the International Commission on Education for the Twenty-first Century.)

LEARNING TO LIVE TOGETHER

FUTURE SCENARIOS FOR
EDUCATION: A WINDOW
TO THE UNKNOWN

Uri Peter Trier

The *conditio humana* changes slowly, if at all. The conditions under which humans must live, however, are undergoing a thorough and significant transformation. Education—i.e. the effort to equip each new generation with what it will need for the time of its maturity—necessarily involves a conception of what is to come. We cannot know the future, and it will always remain unpredictable, but nonetheless, we need a vision of it.

When reflecting on the future, we are all looking through windows, looking through ideological lenses at society, culture, nature and ourselves. We are engaged in a sophisticated discourse dealing with the complexity of our so-called post-modern societies. What follows is my personal view, or rather a part of it: I present only a few aspects of the future, fully aware that there are others, not less relevant. My main interest here is to deal with issues I consider especially important for shaping educational policies.

Original language: English

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Life in dignity

Switzerland is a nice, comfortable and quiet place to live and to think about the future. But before looking out of the window from my home, I shall briefly open a second window, not to the future but to a well-known present, one that exists primarily in continents far from mine but also in my own. Mankind today is divided into two very different worlds. In one of these two worlds, mothers cannot be sure if 'tomorrow' holds the possibility of feeding their babies; families are without shelter; educational levels and life expectancies are low; the concept of human rights is meaningless; and people are killing men, women and children in large numbers.

There is a clear boundary between the one world and the other, but it is not primarily an economic or continental one. It cannot be captured by the usual slogans, such as 'Third World', 'North versus South' or 'developing versus developed'. It cuts across cities, regions or nations, and it is defined by whether or not it is possible for humans to live in dignity.

Currently there is much talk about and writing on 'the poor'. The World Bank has organized what they call 'consultancies with the poor' and written intriguing booklets on their condition. The educational community is involved in a vigorous debate over which competencies educational systems should prioritize. But they are sometimes prone to a common fallacy: too often, they concentrate on equipping students with adequate knowledge and compiling lists of tools, skills, instruments and competencies that have to be inculcated, while overlooking the determining impact of the living conditions of each person. There is frequently not due attention to the simple and brutal fact that without shelter, food, protection of health, adequate security and access to basic education, people cannot lead lives in dignity, and thus they cannot be held responsible for the shape of their future.

Our capacity to find ways to improve living conditions in our societies, beginning with the weakest ones, will be the crucial factor for the next decades. To achieve this goal, education is an important, but not the most important, determinant. The reality is that societies move education more than education moves societies.

To demonstrate this point, I offer three examples. If we lived in a global society in which the manufacture of arms was limited to a small controlled production (that needed, say, for a legitimate police force), clearly our societies would be much safer, independently of whatever social and civic key competencies individually acquired. Or, to be a little less dramatic, imagine if television programmes showed us pistols and arms only as frequently as we once saw them in 1950s Hitchcock films. Certainly our need for crime-prevention education would be decreased. Finally, focusing on one of the most horrible and incredible facts of our time, we must ask who is really responsible for the loss of millions of children and young people to AIDS in Africa. Is it primarily illiterate parents and ineffective schools or rather the economic and political conditions and the marketing interests of multinationals?

Before stepping back from the second window and moving to the first, my message is simple: all of us are always moving and acting in a political field. This

means that all our actions and all our decisions regarding social, economic or cultural issues do have an influence on the future. And visionary sustainable development policies can truly make a difference between people living without hope and people striving towards a dignified future. Only societies living in social peace will survive in the twenty-first century. They will be those that provide a minimal threshold of welfare to all, promote an equity-oriented distribution of wealth, safeguard human rights, fight violence everywhere and on all levels, and ensure the implementation of juridical norms.

The well-being of state and community

The decisions future citizens will have to make will be more complex and opaque than those of today and the consequences will often be irreversible. Decision-makers at all levels—community, region, state, country, continent and world—will have to plan on growing interdependence between levels and within each level.

Already today, organizations and institutions that have been the traditional seats of political opinion making—such as churches, political parties, unions and associations—are gradually losing their influence. New organizational patterns are developing within civil society, such as national and international non-governmental organizations, and are increasing their influence on mainstream politics. The media-centred preparation of politics often runs the danger of in-fighting, dramatizing and polarizing. The availability of information over many possible networks will increase radically. The question is how that information will be integrated into the political thinking of citizens.

The greatest chance for competent political action lies within a decentralized system that allows for some autonomy. These are systems in which the basic dynamics of decision-making progress from the bottom up (rather than from top down). Some decision-making can in this way be directly undertaken by citizens in local contexts. At the same time, some top-down decision-making is always necessary—preferably with as much built-in flexibility as possible—for the sake of efficacy and in order to set essential limits and constraints.

Perhaps the most important lesson we can learn from twentieth-century experiences is that political responsibility through democratic processes has the highest priority in social life. More than a goal of education, democracy should be a principle of social and even economic organization. Democracy exists only where it is lived.

Human genetics and genetic engineering: extending human life

Our generation currently expects to live, on average, about eighty years (although, sadly enough, this is not the case for all people throughout the world). Yet the division of a life span into three segments, (i) growth and education, (ii) work and

reproduction, and finally, (iii) retirement, is no longer—thanks to progress being made in medicine and genetic research—a pertinent model for the future.

The immense consequences of completely exploiting the human genome for life expectancy purposes have yet to be fully understood, probably because the possibilities seem so far removed from our reality today. They extend from disease prevention through gene manipulation to therapies based on genetic technology aimed at controlling ageing itself. New generations in more privileged societies can expect a quantum leap in quality of health and life expectancies beyond 100 years. Even this is a conservative estimate. According to recent forecasts by some biologists, 200 to 300-year life expectancies are conceivable for upcoming generations (Mittelstrass, 1998). This means that people we would now call 'old' are likely to be physically and psychically capable of fully participating in the social, economic and cultural lives of their societies.

Furthermore, it may be that individuals will have access to their genetic determinants, making it possible to deliberately change their own genetic constitutions, as well as those of their progeny. The human condition could thus change in the sense that even its biological foundations would be alterable. This would add a completely new dimension to intra-national and international inequity. Not only the access to wealth and traditional health but also the access to the genetically geared prolongation of life will be subject to factors of political and economic power.

In this emerging, completely new area, ethical standards and political and juridical controls are ever more crucial. Alongside our current ecology, devoted to the preservation of nature, we need a new 'human ecology', devoted to the preservation of human beings. Public awareness promotion is necessary for responsible action for both.

The divorce of production, employment and workplace

The traditional integration of labour within a constant—and at least during the 'good years'—stable institutional and work-oriented framework, with the accompanying predictable career paths, is breaking up (Sennett, 1998). This destabilization is occurring with the convergence of two trends, and brings with it both new opportunities and new risks. The decisive impetus is economic pressure for innovation, which demands the constant restructuring of enterprises. Multinational networks and the decentralization of production and services make it easier for firms to adjust to the changing markets. Flexibility in the specialization of production increases the degree of freedom that economic organizations have in their strategic decision-making regarding the comparative advantages of certain locations for production and services.

The second impetus, without which a development of this kind would be impossible, comes from the hi-tech world. Production and services can now be directed with greater flexibility. Electronic communications networks are facilitating the relocation of work from the traditional office, with the temporal physical presence of

employees, to settings chosen by workers, independent of the place of business. This development will predictably lead to a completely new organization of work and new working conditions in the twenty-first century. Employment opportunities are likely increasingly to consist of clearly defined contract work, of specific and time-limited projects completed by individuals or groups. The 'classical' professionally determined career paths that constituted the prospective goals of educational planning and life are likely to disappear bringing—difficult to calculate—insecurity and risk for individuals. These risks may be moderated to some degree by social security systems, but market forces are imposing more and more deregulation even in welfare states.

Non-employment-related work

Many factors from the last decade of the twentieth century indicate that the social support systems for the retired and disabled, and partially also for the young, that were built up (at huge expense) in European countries following the period of 'welfare-state' politics will not be viable in the same form in the future. Necessary social services will not be completely covered by the monetarized economy, and it will be necessary for families, partners, neighbourhoods, communities and communes to carry more of the load in this renewed development of the social network. Such networks would be maintained through voluntary co-operation and mutual solidarity, not a monetary bartering system, and as such could not be organized according to a provider principle. We do not have to go very far back in the history of our modern times to see how this can be done, and still today there are societies in which examples such as this can be found. But as it has been lost in much of our world today, we will have to reinvent and reorganize it in the framework and under the conditions of post-modern life.

A paradigmatic change will be required in our attitudes towards both the highly valued employed sector and the devalued unemployed sector. But there are more reasons than just the necessary securing of dependable social networks to reinvest non-salaried work with value. The further development of economic productivity can be expected to continue to reduce jobs. In some countries we already know the four-day work week, fluctuating or flexible work schedules for a majority of employees and a consistent level of unemployment. At the same time, a third of the population is over 60 years of age. We need to take into account that we will have even more and healthier 'retirees' in the future. Traditional labels such as 'free time', 'retirement', or the time in our lives when we disengage from traditional employment, will have to be reconsidered. These are labels that underestimate the human need for meaningful activity. I believe that in the future a new culture of work will come into being that is parallel to today's employment but not tied to it.

Such a model of the future necessitates that non-salaried work be valued as equal to salaried work in the monetary economic sector. In this scenario, non-salaried work would have little in common with what we call hobbies in today's leisure society. On the contrary, creative and recreational activities, and social or environmental

services, would be fully recognized by society and organized through a direct barter or co-operative type of system.

The knowledge and the learning society

The three interrelated dimensions I have just sketched out, i.e. extension of the human life span, increased flexibility and mobility in the workforce, and the higher valuation of non-salaried work, have dramatic consequences for our understanding of education and learning:

- People will increasingly no longer focus on one career or profession, but rather on acquiring skills in several areas of specialization, skills that can be used for employment as well as non-salaried work. Furthermore, what people do during the non-salaried portions of life will require the same level of professionalism as during the employed segments.
- The increased flexibility and mobility of the labour market will continue to mean more opportunities (and risks) that require higher levels of competence in managing one's own skills. This means that individuals will need a broad palette of specialized, viable and varied achievements and the ability to conform to the labour market by adapting or adding qualifications. Moreover, safety nets allowing shifts or changes in one's sense of identity and security will need to be perceived as a positive challenge rather than a threat.
- The temporal division of life into distinct phases of (i) education and training, (ii) employment and (iii) post-employment (or non-salaried employment) will become increasingly vague. Conceivably even the distinction between 'schooling' and 'adult education' will no longer be clear. In response, we may institute completely new phase models, such as a shortening of the first phase of education and adding fully accredited second and third phases of education. We could also create formal training for new professional skills to be followed concurrently with part-time employment, either in the same field or in a new one.
- In an effort to find an appropriate description for this radical change in our social and economic conditions, we have tried out the terms 'post-industrial society,' 'information-society,' 'learning society' (Keating, 1998) and, more recently, 'knowledge society' (Bereiter & Scardamalia, 1998). The operating belief behind all these terms is that the acquisition and application of knowledge is an added value.

Knowledge has always been invested in the production of goods and services. What is different now is that knowledge, increasingly taken for granted, is becoming a traded good independently of any process of production or service.

In a knowledge society, the (educated) individual naturally remains the carrier of knowledge. But alone, the individual is hardly in a position to administer and develop the knowledge that is in demand. When the creation of knowledge becomes the cardinal point for economic and social development in society, then the concept that it can only be produced through collective effort will become more concrete for many people.

In the knowledge society, co-operation will become the decisive production factor. Modern societies will come to a fork in the road in the twenty-first century. Either society will be able to organize itself so that the majority of people participate in knowledge development and acquisition, or it will split into two groups, a 'knowledgeable' elite and the marginalized masses, a scenario that clearly endangers social cohesion. Thus, societies that develop and use collaborative and social learning will be able to secure their economic and social progress, while those that do not, will fail.

Computers and learning

Knowledge is already inextricably linked to information technology and will be even more so in the future. The convergence of psychology, neurophysiology and computer science is already underway (Frawl, 1997). Computers are becoming popular learning partners in many areas of cognitive learning, even areas of 'intelligent' learning. This interaction between humans and computers, which includes a high level of complexity in data entry, processing and retrieval, has until recently grown at a relatively slow pace. Now it is advancing at breathtaking speed. Coherent, cognitive human/computer interface systems are already being developed. For instance, in highly specialized fields, computers master the data procurement and operational problem-solving while humans take responsibility for the criteria-based decisions. Our discussion on the knowledge and learning society in the age of information technologies may be summarized by four simple propositions:

- the acquisition and use of knowledge is the critical factor in our innovative, changing and developing society;
- such knowledge must be based on the co-operation of people in various groups;
- the emergence of a knowledge society must be based on the creation and organization of a learning society; and
- all age levels of learning should include a necessary push towards raising learning efficiency. New forms of learning—many of which will be accompanied or supported by computers—will make this easier.

Conclusion

I have imagined *homo saeculi XXI* to be healthy and active for a much longer period of life, during which she or he will engage in a variety of activities, some salaried, some not. With this change, 'work' that is not connected with monetary compensation will increase in value. The traditional curriculum vitae will be replaced by a personal profile of multiple professions and competencies. Salaried employment often will not require a fixed place of work nor will it be bound by fixed contracts. The relative importance of learning during childhood and youth as compared with adult learning will reach a balance. Professional training and education will decreasingly be understood as preparation for adult life and increasingly as a process that must continue throughout life.

This future generation will live, even more so than today, in a globally connected world, one that will bring together people from different languages and cultures. It is a world in which individuals will need anchors to link them to local environments. It will be flooded by messages and information transmitted through the media. And, in it, virtual experience will be hardly distinguishable from direct experience.

Society in the twenty-first century will become increasingly complex. The growth in technology and knowledge will continue to expand exponentially, as will the risks—such as environmental threats. On the one hand, we will be able to manipulate nature and human life increasingly; on the other hand, the direct and secondary effects of high technology will become less transparent and only conditionally controlled. The growth of individual and collective knowledge in the knowledge society will be necessary not only for further innovation but also for the responsible control of the technological impulse we have created.

The potential for a decent or high standard of living for all depends on continuing economic productivity. However, it is uncertain whether current social models that provide safety nets for the less fortunate, or for difficult times, can be sustained. For that reason, citizen participation in political discussions and decisions (from the city to the supra-state organization) is a critical factor in further development.

Moving far into the future, imagine people looking back at the end of, say, the twenty-third century to our times. Perhaps they will look at us in much the same way as Norbert Elias looked back to the carnage of the Middle Ages. They will possibly wonder how it was that a whole civilization could believe that the key to happiness or to 'development' should be unlimited economic growth in Darwinistic capitalism. Perhaps these twenty-third century people will have (re)discovered that equilibrium is more important than growth.

I finish with a current sign of the tendencies I hope are to come, an example taken from the Himalayas. In Bhutan, a country I know and love, the government has proposed to introduce the term 'gross national happiness' (GNH) in addition to the universal sacred cow, gross national product (GNP), as a germinal idea of development policies. For Bhutan happiness is a 'policy concern and a policy objective'. Looking at the Bhutan proposal demonstrates the dramatic dialectical tension between the forces of our global post-industrial economy that is driving the world and warning messages coming from old cultures. In its proposal, the Bhutan Government calls for 'a new policy orientation and new departures in research', asserting that '[w]e need to ask how the dramatic changes [e.g. developments in information technology, the shrinkage of biological and cultural diversity and the rapid societal and economic automation] propelling the new century will affect prospects of happiness'. Bhutan is working towards the development of educational policy geared to retaining the 'culturally rich and value-full basis of daily life'. In policy-making, they are asking questions such as whether 'the process of secularization and nuclearization of family will increase [. . .] loneliness and self-enclosure in the midst of [the] urban crowd' and if 'global capitalism and competitive international trade [will] make people more vulnerable to unhappiness and uncertainty [in] their lives'. Bhutan is asking 'the basic question of how to maintain the balance

between materialism [including the benefits of science and technology] and spiritualism'. In their decision-making, they are taking into account what they perceive as 'the likelihood of loss of spiritualism, tranquillity, and gross national happiness with the advance of modernization' (Thinley, 1998). Bhutan is leading the way to a brighter future as it strives to develop and implement vision-based ecological, cultural and educational policy.

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CIVIC KNOWLEDGE, BELIEFS ABOUT

DEMOCRATIC INSTITUTIONS,

AND CIVIC ENGAGEMENT

AMONG 14-YEAR-OLDS

Judith Torney-Purta

What are the common features of young people's understandings of their societies and of their civic rights and responsibilities in democratic countries? How do they intend to fulfil their own responsibilities to maintain democratic political structures and civil society? What roles do schools play in these processes? A massive empirical study of 90,000 young people in twenty-eight countries provides some answers to these questions, which have taken on new urgency in the past decade.

In the mid-1990s the International Association for the Evaluation of Educational Achievement (IEA), an independent co-operative of research institutes and agencies in more than fifty countries, began planning the Civic Education Study.¹ This is one of twenty large-scale cross-national studies of educational achievement conducted by the association. Areas related to civic education were popular topics for research in the late 1960s and early 1970s, and a number of international organizations, as

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well as nationally based research units, conducted studies related to civic education and developed new curriculum and teacher training programmes. Many of these investigations were conducted by those interested in political socialization. IEA itself conducted a small civic education study in 1971 (Torney, Oppenheim & Farnen, 1975). Recognition that the political and social changes of the late 1980s and early 1990s posed new challenges for civic education led IEA to develop a study based on the collection of data in its member countries in 1999.

The IEA Civic Education Study was conducted in two linked phases, largely because there was no widely accepted framework available when the study began that could guide the development of a test and survey across old and new democracies. The first phase involved qualitative national case studies based around a series of structured framing questions. Experts within participating countries were interviewed about what the average 14-year-old student might be expected to know, understand and believe about topics such as laws and law-making institutions or the nature of problems in the community. Curriculum guidelines were examined and the opinions of teachers and other experts were gathered. This process identified a common core of similar expectations for students across countries, as well as differences in the curricular structures and processes designed to ensure that young people would have the opportunity to meet them. In many countries civic education objectives were embedded in courses such as history or social studies or spread throughout the curriculum.

A model was developed showing the embedded nature of individual student's civic-related learning in macro- and micro-processes encompassing society, family, peer group, community and school. The researchers used frameworks such as situated cognition to understand the ways in which everyday experience both inside and outside school influences students' beliefs and behaviours (Lave & Wenger, 1991; Wenger, 1998). The results of this phase were published by IEA in a volume entitled *Civic education across countries: twenty-four national case studies from the IEA civic education project* (Torney-Purta, Schwille & Amadeo, 1999).

The second phase of the IEA Civic Education Study, which forms the basis of this article, began with an extensive process of developing a content framework built around three domains of content identified in countries' submissions during the first phase. These domains were: i) democracy, democratic institutions and citizenship, ii) national identity and international relations, and iii) social cohesion and diversity. This framework was the basis of the test and survey construction. The IEA National Research Co-ordinators in each country and a ten-member International Steering Committee contributed to the development, pilot testing and question selection for the student instrument. This resulted in a multiple-choice test of civic knowledge and of skills in interpreting civic-related information (thirty-eight items, each with a correct answer); a survey of concepts, attitudes and behaviours (136 items without correct answers); and background questions asking about home literacy resources, expected years of further education, and membership in organizations and associations (as well as gender, age and other demographic characteristics). In addition, there was a school questionnaire and a teacher questionnaire.

The international co-ordinating centre was at the Humboldt University of Berlin under the direction of Rainer Lehmann. IEA quality control procedures for sampling, translation verification, test administration and item response theory (IRT) scaling were followed. During 1999 approximately 90,000 students in the grade containing the majority of 14-year-olds were tested in the following countries: Australia, Belgium (the French-speaking community), Bulgaria, Chile, Colombia, Cyprus, the Czech Republic, Denmark, England, Estonia, Finland, Germany, Greece, Hong Kong (China), Hungary, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Sweden, Switzerland and the United States.

There was some initial scepticism about possibilities for test development in the civic education area. Much nationally-based research on civic education had dealt with particular details of that one nation's governmental structure, but such questions were unsuitable for use cross-nationally. The IEA Civic Education Study devoted resources to the process of international test development over a four-year period. Through a process that included building cross-national consensus about the framework, preparing 140 draft items, reviewing and pilot testing these questions, and obtaining the agreement of National Research Co-ordinators, a meaningful, valid and reliable instrument resulted. Alpha reliabilities for the resulting 38-item test of knowledge and skills exceeded .80 in every participating country. Both the test and survey were scaled using IRT methods to meet IEA's standards.

This process of designing cross-national measures gave the participants and study leaders an awareness of the essence of core fundamental understandings and beliefs about democracy applicable across countries. In addition, this process led to agreement cross-nationally about a range of valued outcomes of effective civic education not limited to knowledge or to attitudes.

The design, in which nationally representative samples were tested and in which every student answered the same instrument, allows several types of analysis and presentation. First, international averages based on the responses of all students tested can be used (and much of this article describes the typical 14-year-old across these twenty-eight countries). Second, cross-national differences can be examined. Graphs presenting performance by the different countries predominate in the volume reporting the study's findings, *Citizenship and education in twenty-eight countries: civic knowledge and engagement at age fourteen* (Torney-Purta, Lehmann, Oswald & Schulz, 2001). Some cross-national differences are presented in this article as well. Third, one can identify correlates or predictors within countries of important civic outcomes, such as knowledge or engagement. These analyses suggest possible directions for exploring civic education reform within countries. These analyses can examine the effect of one school factor, such as classroom climate, while holding constant other factors, such as home educational resources and gender. These analyses provide a clearer picture than simple comparisons of the mean scores of different groups. A brief section of this article presents a model predicting civic knowledge.

The analysis and conclusions of this study are summarized in this article under the following content headings: Civic Knowledge, Civic Engagement and Civic

Attitudes. Both the average responses across countries and some country differences are presented. In addition, a short section of this article presents a model relating civic knowledge to a selection of student characteristics and school factors. A great deal more about the cross-national differences and the predictors of civic knowledge and civic engagement can be found in Torney-Purta et al. (2001) and in the national reports that are being issued by participating countries (references at www.wam.umd.edu/~iea/).

Analysis and conclusions about civic knowledge

The IEA civic education data show that the average student across the participating countries has an understanding of fundamental democratic values and institutions. For example, test results indicate that internationally a majority of students recognize the function of laws, private civil society associations and political parties. Their understanding sometimes appears superficial, however. This corroborates previous research on smaller samples in single countries using interviews or written essays, which have suggested that many young people understand democracy by referring to a set of slogans about freedom or in relation to one particular institution (Doig et al., 1993–94; Torney-Purta, Hahn & Amadeo, 2001).

The average student in the IEA Civic Education Study demonstrated a moderate level of skills in interpreting civic-related material such as political cartoons or a mock election leaflet and in distinguishing between statements of opinion and of fact (Torney-Purta et al., 2001, chapter 3).

There are statistically significant differences between countries in performance on the test of civic knowledge and skills, however. The countries are grouped in Table 1 according to whether they fell *above*, *at* or *below* the international mean. Most differences between countries within these three groups were not significant.

It is helpful to relate these results to studies in other subject areas. The differences between countries in civic knowledge and skills were similar in size to those found in previous IEA cross-national literacy studies, but were not as large as those found in previous IEA mathematics studies, such as the Third International Mathematics and Science Study (TIMSS).

There are no simple explanations for these differences in levels of civic knowledge among these countries. The high performing group includes not only long standing democracies but also nations that have experienced massive political transitions during the lifetimes of the 14-year-olds under study, and are in the process of consolidating democracy (the Czech Republic, Poland and Slovakia). These countries experienced political changes that were highly visible and widely discussed. Soon after these changes, the school systems in these countries moved rapidly to institute new programmes of democratic civic education. These factors may have influenced student performance, and national reports will suggest additional factors.

The total knowledge score presented in Table 1 is composed of two subscores, entitled 'content knowledge' (of fundamental democratic principles) and 'skills in interpreting civic-related information' (such as political cartoons, election leaflets

TABLE 1. Country performance on total civic knowledge in the IEA Civic Education Study: means and standard deviations

Countries significantly above the international mean of 100		Countries not significantly different from the international mean of 100		Countries significantly below the international mean of 100	
Poland	111 (1.7)	Australia	102 (0.8)	Portugal	96 (0.7)
Finland	109 (0.7)	Hungary	102 (0.6)	Belgium (French)	95 (0.9)
Cyprus	108 (0.5)	Slovenia	101 (0.5)	Estonia	94 (0.5)
Greece	108 (0.8)	Denmark	100 (0.5)	Lithuania	94 (0.7)
Hong Kong (China)	107 (1.1)	Germany	100 (0.5)	Romania	92 (0.9)
United States	106 (1.2)	Russian Federation	100 (1.3)	Latvia	92 (0.9)
Italy	105 (0.8)	England	99 (0.6)	Chile	88 (0.7)
Slovakia	105 (0.7)	Sweden	99 (0.8)	Colombia	86 (0.9)
Norway	103 (0.5)	Switzerland	98 (0.8)		
Czech Republic	103 (0.8)	Bulgaria	98 (1.3)		

Notes: Samples of tested students were nationally representative, weighted to correspond to population figures, and ranged in size from 2,076 in Belgium (French) to 5,688 in Chile. Students were tested in grade 8 or 9 (whichever national statistics suggested would contain the larger proportion of 14-year-olds). The lowest mean age was in Belgium (French), 14.1, and the highest was in Hong Kong (China), 15.3.

Data source: IEA Civic Education Study, 14-year-old samples tested in 1999. See Torney-Purta et al., 2001.

or newspaper articles). Comparing performance on these sub-scales shows interesting patterns. Students in Australia, England, Sweden, Switzerland and the United States ranked higher in their performance on the items measuring skill in understanding civic-related information than on the items measuring content knowledge of fundamental democratic principles. In contrast, students in countries such as Bulgaria, the Czech Republic, Hungary, the Russian Federation and Slovenia ranked higher on the items measuring content knowledge than on the items assessing skill in interpreting concrete political communication. The performance of these countries may reflect differences in curricular emphases, for example, more stress on abstract political concepts and principles in the post-Communist countries and on their concrete application in North America, Australia and parts of Western Europe. Countries not mentioned above performed at a similar level on the two subscales.

In almost all the participating countries, students who reported having more books in their homes demonstrated more civic knowledge. Comparing the availability of such literacy resources can also help in interpreting some of the cross-national differences. Students in four of the eight countries that performed below the interna-

tional mean on the knowledge test reported having few of these literacy resources at home (for more detailed analysis see Torney-Purta et al., 2001, chapter 3).

The extent to which 14-year-olds understand democratic principles is also demonstrated in the study's 'concepts of democracy' measure. Students' responses to these rating scales (which asked what was good for democracy and what was bad for democracy, but did not have designated correct answers) corroborate the test results cited above. Across these twenty-eight countries there is consensus that democracy is strengthened when citizens can elect leaders freely, when many organizations exist for people who wish to join them, and when everyone has the right to express opinions. Conversely, these young people believe that democracy is weakened when wealthy people have special influence on the government, when politicians influence the courts, when one company owns all the newspapers, and when people are forbidden to express ideas critical of the government.

Although many students have a grasp of the basic fundamentals of democracy, there are groups in each country that do not show this level of understanding. The relatively low level of skill in understanding some civic-related communications (e.g., leaflets like those issued at the time of an election) among students in some countries is of concern.

Analysis and conclusions about civic engagement

The IEA Civic Education Study placed emphasis on several aspects of civic engagement. The survey instrument included a number of questions without right and wrong answers to measure participation and involvement. These included the extent to which young people thought different aspects of citizenship were important for adults, the civic-related activities in which they were already participating along with those in which they intend to participate as adults, and the amount of confidence they had in the value of participation in organized school groups.

TABLE 2: International means on items assessing the concept of good citizenship for adults

An adult who is a good citizen:	Importance	An adult who is a good citizen:	Importance
Obeys the law	3.65	Votes in every election	3.12
Takes part in activities promoting human rights	3.24	Follows political issues in the newspaper, radio, or on TV	2.85
Takes part in activities to protect the environment	3.15	Engages in political discussions	2.37
Participates in activities that benefit the community	3.13	Joins a political party	2.11

Notes: Rating scale ranged from 1 (not important) to 4 (very important). On these eight items there was either high or moderate consensus across countries, defined as a difference of one scale point or less between the lowest country mean and the highest country mean.

Data source: IEA Civic Education Study, 14-year-old samples tested 1999. See Torney-Purta et al., 2001.

Table 2 displays items assessing what 14-year-olds across countries believe is important for adults to do as good citizens. These young people view obeying the law as a very important responsibility of adult citizenship and voting as important. Other behaviours that have traditionally been associated with adult citizenship, such as engaging in political discussion or joining a political party, are viewed by these young people as relatively unimportant. On the other hand, across countries, young people believe that the responsibilities of adult citizens include taking part in activities that promote human rights, protect the environment and benefit the community. In some countries following political issues in the media is also important (for further detail see Torney-Purta et al., 2001, chapter 4). In summary, the responsibilities of conventional citizenship are perceived by these students as considerably less important than what are sometimes called 'social-movement-related activities'.

Students were also asked to estimate the kinds of political participation they expected to undertake as adults. Only about 20% of the respondents across countries said that they intended to participate in those activities usually associated with conventional adult political involvement, for example joining a political party, writing to newspapers about social and political concerns, or being a candidate for a local or city-wide office. Some 80% across countries did say that they would probably or definitely vote, however. These students were also likely to say that they would collect money for a social cause or charity (international mean of 59%) and somewhat likely to say that they would participate in a non-violent protest march (international mean of 44%). In contrast, participation in protest activities that would be illegal in most countries, such as blocking traffic or occupying buildings, was likely for only about 15% of the students across countries. Aside from voting, students appear quite sceptical about traditional forms of political engagement. On the other hand, many are open to other involvement in civic life.

To look at cross-national differences, three separate scales relating to civic engagement were constructed—one emphasizing beliefs about the importance of conventional citizen activities, one emphasizing beliefs about the importance of social-movement-related citizen activities, and one asking about the intention to participate in conventional citizen activities as an adult.

When country means were compared, students in the following countries had **high** levels of civic engagement (above the international mean on two out of the three scales listed in the previous paragraph and at least at the average on the third scale): Chile; Colombia; Cyprus; Greece; Poland; Portugal; Romania; United States. Students in the following countries had **low** levels of civic engagement (below the international mean on all three of these scales): Australia; Belgium (French); Czech Republic; Denmark; England; Finland; Sweden; Switzerland. Other countries showed more mixed patterns.

These results suggest that involving young people in civic-related activities is a complex process within different political contexts. Among the countries where students were relatively enthusiastic about civic participation and appeared to be engaged were four countries that scored low on civic knowledge (Chile, Colombia, Portugal and Romania) and four that scored high on knowledge (Cyprus, Greece,

Poland and the United States). Among the countries where students appeared relatively disengaged in a civic sense were countries with high knowledge scores (the Czech Republic and Finland) as well as those with more moderate knowledge scores (Australia, Belgium (French), Denmark, England, Sweden and Switzerland). High levels of civic knowledge and of civic engagement do not necessarily go together when country differences are examined.

In addition to examining potential engagement in citizenship activities oriented to the national or community scene, the IEA instrument included a measure entitled 'Confidence in participation at school' to inquire about the democratic experiences of students in their schools. Previous research often included political efficacy measures in which respondents were asked about citizens' effectiveness in influencing national or local government. The IEA study examined the everyday experience of young people in their schools, and not only their orientations towards more distant governmental authorities. This measure was developed to assess the sense of school efficacy, i.e. to what extent students think that getting together with other students to try to improve their school is likely to have positive results.

Among the most interesting of the cross-national comparisons involve the 'Confidence in participation at school' measure. In Chile, Cyprus, Greece, Poland, Portugal and Romania students showed high levels of civic engagement *both* in the political realm of adult activity (see the countries listed as high and as low in civic engagement previously in this section) *and also* high levels of confidence in engagement at school. In these countries it appears that experience with democracy at school and civic engagement in the broader society are reasonably congruent. In contrast, in Denmark and Sweden, there were high levels of confidence in participation at school but relatively low levels of engagement in the realm of national or local politics. In these two Nordic countries, students report positive experiences of political efficacy at school, but this does not seem to translate into civic engagement in the arenas of adult-oriented political behaviour.

In summary, across nations, there is considerable variability in the civic engagement of students. Most young people are not drawn to the kind of activities that are common among politically involved adults in many democracies. There is also a complex picture of cross-national differences. Countries where students express relatively high levels of belief in the importance of conventional and social-movement related activities include some countries that performed well on the knowledge test, and others that performed relatively poorly. Further, countries where students report positive experiences with participation at school do not always correspond to the countries where students believe in the importance of conventional political and social movement activities outside of school.

Analysis and conclusions about civic attitudes

A variety of measures of civic and political attitudes were included in the IEA instrument. Because the legitimacy of democratic governments is thought to depend on a

sense of political trust on the part of citizens, and because of previous cross-national research in this area (Inglehart, 1997; McAllister, 1999), a measure of trust in government-related institutions was included. Across countries, the courts and police were trusted the most by these 14-year-olds, followed by national and local governments. Some countries deviated from this pattern, with national or local governments trusted more than the justice system institutions. In all countries political parties were trusted the least, however.

14-year olds already appear to be members of the political cultures of their countries, expressing levels of trust that largely correspond to those of adults in their nations. The highest level of trust in government-related institutions was found among 14-year-olds in Denmark, Norway and Switzerland, and the lowest in Bulgaria, the Russian Federation and Slovenia. Generally, the countries with short histories of democracy (including the post-Communist countries) showed lower levels of trust in governmental institutions (for more detail see Torney-Purta et al., 2001, chapter 5; for similar data on adult samples, see McAllister, 1999).

One of the purposes of the study was to investigate attitudes toward social cohesion and diversity. This proved difficult because of the different situations and characteristics of groups subject to discrimination in different regions. In some participating countries, discrimination is a problem of racism or religious intolerance; in other countries, it is a problem of discrimination against national minorities, immigrants or those speaking a mother-tongue different from that of the majority population. A scale regarding attitudes toward rights for immigrants did prove feasible, however. Across countries students were supportive of the rights of immigrants, with the greatest support for educational opportunity and the least support for the right to keep their own language.

Women constitute another group subject to discrimination in the political life of many societies. A scale of support for women's political and job-related rights was included in the IEA instrument; students were largely supportive of these rights, agreeing with items such as, 'women should run for public office and take part in the government just as men do' and disagreeing with items such as, 'men are better qualified to be political leaders than women' and 'when jobs are scarce, men have more right to a job than women'.

Students in Australia, Denmark, England and Norway had the *highest* scores on support for women's rights, with scores also above the international mean in Cyprus, Finland, Germany, Sweden, Switzerland and the United States. Students in Bulgaria, Latvia, Romania and the Russian Federation had the *lowest* scores on women's rights, with Chile, Estonia, Hong Kong (China), Hungary, Lithuania and Slovakia also below the international mean. In almost all the countries where students scored below the international mean on women's rights, adult unemployment rates were greater than 10% of the labour force. Low scores in these countries may have been related to the items on the scale about competition for jobs.

The political dimension of this scale is also important. These data provide an opportunity to compare a range of countries from several regions with differing representations of women in national legislatures. In Denmark, Finland, Germany, Norway

and Sweden, where women hold more than 30% of the parliamentary seats, young people’s support for women’s rights is high. The majority of countries whose adolescents score significantly below the international mean on support for women’s rights have relatively few women in their national legislatures—ranging from 6% in the Russian Federation and Romania to 17% in the three Baltic States. It may be that young people see women holding political positions, view them as role models, and develop more positive attitudes toward women’s rights. Or it may be that voters who developed support for women’s rights during their adolescence are more likely to vote for women candidates when they become adults. An alternative explanation involves a combination of these processes and other factors, such as a well organized and visible women’s movement (for more detail see Torney-Purta et al., 2001, chapters 1 & 5).

There are substantial gender differences in support for immigrants’ rights and very substantial gender differences in support for women’s political and economic rights. Support for immigrants’ rights and for women’s rights is greater on the part of females (corroborating much previous research).

Predictors of civic knowledge

Country differences, such as those presented in previous sections, are of great interest in understanding civic education contexts and processes. Numerous questions of interest to policy-makers, educators and researchers would remain unaddressed, however, if correlates of students’ civic knowledge and engagement were not explored. In order to address some of these questions and suggest directions for future analysis, simple models for predicting civic knowledge and expressed likelihood of voting were developed. As a first step, a path regression model was developed for a composite sample in which the twenty-eight countries were equally weighted; separate regressions using the full weighted sample for each country were then produced. The regression model for ‘civic knowledge’ is summarized in Table 3 (for more complete information, including a parallel analysis of predictors of the likelihood of voting, see Torney-Purta et al., 2001, chapter 8.)

TABLE 3. Predictors of the civic knowledge score

Expected years of further education (+ predictor in twenty-eight countries)	Frequency of watching television news (+ predictor in sixteen countries)
Home literacy resources (+ predictor in twenty-seven countries)	Female gender (– predictor in eleven countries)
Spend evening with peers outside the home (– predictor in twenty-four countries)	Participation in student council (+ predictor in ten countries)
Open climate for classroom discussion (+ predictor in twenty-two countries)	
<i>Note:</i> Squared multiple correlations ranged from .10 in Colombia to .36 in the Czech Republic with a median of .22.	

The most important predictors of the civic knowledge score were aspirations for higher education and the literacy resources available in the home, both related positively to knowledge. Predictors of civic knowledge are quite similar to those found in other subject areas tested by IEA. Students from backgrounds that foster high educational aspirations and provide literacy resources possess more civic knowledge and skills. In addition, young people who spend many evenings out of their homes with peers have lower civic knowledge and skills. This may indicate a group that does not spend as much time on schoolwork, or a tendency of some youth to be oriented to the values of their peers rather than those of parents and teachers.

Female students in slightly less than half of the countries had lower knowledge scores than males (when these other factors were held constant). The size of these gender differences tended to be relatively small in comparison to studies conducted in the past.

Frequency of watching news on television predicted higher knowledge in about half of the countries. With this variable we cannot discount the possibility that students who are more knowledgeable about civic matters are also more interested in watching television news rather than the effect going in the other direction.

Even when the factors of home, peer group and media are held constant, there are two aspects of schooling that make a substantial contribution to civic knowledge. The first replicates a relationship found in the 1971 IEA Civic Education Study and in other studies reviewed by Torney-Purta, Hahn and Amadeo (2001). In the 1999 IEA testing the extent to which students experienced an open classroom climate for discussion of issues was positively related to civic knowledge in twenty-two of the twenty-eight countries. In the 'classroom climate' scale students were asked, for example, how frequently they were encouraged to make up their own minds about issues, the extent to which teachers respected students' opinions and encouraged their expression during class discussions, and the extent to which teachers encouraged the discussion of issues about which people have different opinions and presented several sides of these issues. Nearly 40% of students reported that they were often encouraged to make up their own minds and felt that their opinions were respected. Only 15–25% felt that they were often encouraged to discuss issues about which there is disagreement or that they heard about several sides of an issue. Students who did have these experiences in their classes had higher knowledge scores, even when differences in educational aspirations and home literacy were taken into account.

The other school experience that was positively related to knowledge was participation in a student council or student parliament (a positive influence on knowledge in about one-third of the countries). In some countries, however, such school-based organizations appear not to be available to many students (Torney-Purta et al., 2001, chapter 7). The case studies conducted as part of the first phase of the IEA Civic Education Study also indicated that there is considerable ambivalence in some countries about how much power these organizations should have in school (Torney-Purta, Schwillie & Amadeo, 1999).

In summary, there are two school factors, both indicative of a democratic atmosphere, that appear to foster 14-year-olds' achievement in civic education: an open classroom climate in which discussion of civic-related issues is encouraged and participation in a school council or school parliament. Encouragement for students to express their opinions appears to be limited in certain countries, however, while the opportunity to participate in school parliaments appears rare in some places. These are matters for further exploration by educators and policy-makers interested in enhancing students' civic knowledge.

Overall conclusions

This study paints a relatively positive picture of the average 14-year-old across these twenty-eight countries as someone who:

- Has considerable knowledge about fundamental democratic principles and moderate skills in analyzing civic-relevant information;
- Subscribes to the basic 'narrative of democracy';
- Intends to vote;
- Believes that other activities traditionally associated with adult citizenship are less important than environmental or community group participation; and
- Is already a member of a political culture shared with adults in the country.

There are substantial differences in civic knowledge and skills associated with home background. Those differences are more modest in the likelihood of voting and quite small in attitudes. There are some gender differences in knowledge (with females less knowledgeable than males in some countries), more substantial differences in attitudes toward immigrants (with females more positive than males in many countries), and very substantial differences in attitudes toward women's rights (with females much more positive than males in all the participating countries).

Groups of countries that might have been expected to have similar scores on civic knowledge and civic engagement (for example, the post-Communist countries), in fact show quite diverse patterns. The 14-year-olds in some of these countries have high average scores on both civic knowledge and engagement, while those from some other countries in this group are low on both. Scores of the students in still other post-Communist countries show high knowledge and low engagement (or low knowledge and high engagement). There is similar diversity among the long-established democracies that participated.

It appears that schools enhance students' civic knowledge when they give students opportunities for open discussion in classrooms. Participation in organizations such as class or school parliaments also appears to have a positive impact in some countries. Enhancing these aspects of schooling poses a number of challenges, however. How can teachers' skills in establishing an open and respectful classroom climate be enhanced in a way that still maintains a strong focus on content and skills in analyzing civic-related topics? How can students' activities

in the community, environmental groups and other organizations in which they seem interested be linked to conventional political engagement? How can the 14-year-old's expressed willingness to vote and engage in certain aspects of civic life be converted into actual voting at age 18? How can the gaps be bridged between students from resource-rich homes who are on the way to tertiary education and those with fewer resources?

The analysis of this rich set of data has just begun with the issuing by IEA of *Citizenship and education in twenty-eight countries: civic knowledge and engagement at age fourteen* (Torney-Purta et al., 2001). Many issues will be discussed in publications authored by other International Steering Committee members (including the results of a teacher questionnaire that was not dealt with here). National reports will be issued by participating countries. The character of civic education in 1999 as reflected in the responses of these 90,000 young people will be open for still wider consideration by the international educational community when the data are released for analysis in 2002.

Note

1. The IEA Civic Education Study has no official connection to any United Nations agency. The authors of the international report, J. Torney-Purta, R. Lehmann, H. Oswald and W. Schulz, offer thanks to members of the International Steering Committee, National Research Coordinators, the IEA Organization, the Deutsche Forschungsgemeinschaft (DFG), and the William T. Grant Foundation.

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EXPLORING HUMANITARIAN LAW:

ARMED CONFLICT

AND EDUCATION

FOR SOCIAL COHESION

Sobhi Tawil

In the 1945 United Nations Charter, the international community expressed its determination to 'save succeeding generations from the scourge of war'.¹ Over half a century later, the continued outbreak and spread of armed conflict around the world makes the 1945 promise of peace seem ever more elusive. Far from confirming the early optimism generated by the end of the bipolar world order and the consequent acceleration of globalization, the last decade of the twentieth century saw no significant reallocation of resources away from destruction towards the satisfaction of human needs such as basic education. On the contrary, the end of the Cold War appears to have brought with it a continuation, if not an accentuation, of the trend towards greater political instability, violence and armed conflict. Thus suffering caused by armed conflict continues unabated and represents one of the most tragic shared experiences of human society.

It is this continuing reality that explains the emergence of the issue of armed conflict as a major concern in facing the challenges of providing basic education to all people, as outlined at the 1990 World Conference on Education for All (WCEFA) held in Jomtien. While by the time of the conference a connection had already been made between declining primary school enrolments and armed conflict (Berstecher

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& Carr-Hill, 1990), the Jomtien Declaration and Framework for Action made only limited reference to armed conflict. But the issue has progressively emerged as a key concern over the past decade. The inter-agency mid-decade review of international achievement towards the goal of education for all, held in Amman from 16 to 19 June 1996, devoted one of its round-table sessions to Education in Emergencies and identified 'escalating violence caused by growing ethnic tensions and other sources of conflict' as an 'emerging challenge' for education. More recently, the strategic parallel session on Education in Situations of Emergency and Crisis at the World Education Forum, held in Dakar from 26 to 28 April 2000, introduced into the Dakar Framework for Action that Education for All initiatives 'must take into account the needs of [. . .] children and adults affected by armed conflict'. In addition to the importance of the continued provision of education during emergencies, it is increasingly accepted that education is an essential component of early emergency relief assistance (cf. Retamal & Aedo-Richmond, 1998).

Such considerations have important implications for the ways in which we conceptualize the inter-relations between formal education and armed conflict. If one of the principal functions of education is to ensure social cohesion, what do violent breakdowns of social cohesion tell us about the content and function of formal education? How does formal education contribute to the breakdown of social cohesion and the outbreak of internal conflict? Conversely, in what ways can formal education contribute to the reinforcement or rebuilding of social cohesion? Curricular innovation in the area of citizenship education is one important, albeit limited, means of promoting social cohesion. (Others include reducing inequities in access to basic education and encouraging contact between members of divided communities.) The recent focus on citizenship education points to the original and central function of public schooling—enhancing citizenship and ensuring social cohesion (Heynemann & Todoric-Bebic, 2000, p. 161).

This paper begins by briefly reviewing the ways in which schooling may act as a catalyst for armed conflict, even if in unintended ways. Next, it focuses on the ways in which the experience of armed conflict and an understanding of humanitarian law may contribute to the core content of basic education. The argument is made here that the exploration of ethical issues related to human behaviour in times of armed conflict and war can make an important contribution to global citizenship education and to the strengthening of social cohesion in the twenty-first century. The next section presents data collected as part of the development and pilot testing of the Exploring Humanitarian Law (EHL) project in a number of very different settings around the world. The last section pinpoints some of the more fundamental considerations related to definitions and design of both content and methodology of educational programmes.

The effect of education on social cohesion

One of the principal functions of mass schooling since its inception during the industrial revolution in Europe has been to ensure social cohesion and a sense of belong-

ing. Indeed, compulsory, standardized, public schooling played a crucial part in the emergence, construction and consolidation of the nation state. But schooling sometimes fails in this essential function, reflecting and even exacerbating existing social and political divisions and conflicts. Only recently have scholars begun seriously to explore the role of education as a possible catalyst or precipitating factor in the process of social and political disintegration and in the outbreak of violence and armed conflict (cf. Tawil, 1997).

Determining how education relates to this process means identifying the causal factors that contribute to the general breakdown of social cohesion. While the devastating consequences of armed conflict for families, communities and nations are clearly identifiable, the combination of precipitating factors and evolving causes of these conflicts (declared and undeclared) is not always easy to disentangle. Cultural factors that are easy to politicize, such as ethnicity, language and religion, are often intertwined with socio-economic factors related to disparities in income distribution and exclusion. Important catalysts include the declining legitimacy of nation-states, the lack of good citizenship behaviours and the absence of a collective identity (Bigo, 1998). Changes in the nature of armed conflicts are also relevant. Since the end of the Cold War, violent conflicts have increasingly taken place within, rather than between, states (a trend that can be traced back to at least the mid-1970s). Indeed, only two of the twenty-seven major armed conflicts observed throughout the world in 1999 were international (SIPRI, 2000, p. 15). The diverse range of relevant factors must be considered in the process of educational reform.

CONFLICTING PROCESSES OF SOCIALIZATION

In its most general sense, education can be understood as the process of socialization that results in the transfer of knowledge, norms, values, beliefs and myths from one generation to the next. As an instrument in the process of nation-building, schooling destroys the traditional social bonds of the extended family, the clan or the group and institutes a direct relationship between individuals as citizens and the nation-state. Tension between the local culture and the national culture being imposed through schooling often leads to conflict. The collapse and reformulation of what Benedict Anderson calls 'imagined communities' (1983) lie at the heart of numerous current internal armed conflicts; this fact highlights the crucial issue of the breakdown and reconstruction of social cohesion. The increasingly competitive and contradictory values, attitudes, beliefs and world views transmitted by schools and other agents of socialization—families, peer groups, the media, and religious organizations—threaten social cohesion even further, especially as the relevance of the nation-state model of organization to the lives of individuals and communities deteriorates.

SCHOOLING AS AN INSTRUMENT OF POLITICAL DOMINATION

Schooling functions as an ideological vehicle for political socialization. This socialization can occur as authoritarian structures act as media of repression, apartheid

and discrimination, or as dominant groups impose official languages of instruction in multilingual settings. Sometimes the catalysis of increased inequality, discrimination or domination is inadvertent, stemming from unscrutinized textbook content or teacher attitudes.

Political socialization is significantly shaped by what is transmitted through official curricula—particularly in courses in civics, history, geography and religion. The content of textbooks in Sri Lanka, for example, has clearly contributed to civil conflict (cf. Heynemann & Todoric-Bebic, 2000, p. 155). There has thus been an increasing emphasis in educational research on the ways in which textbooks portray *in* and *out* group identity and on the other ways in which they may contribute indirectly to conflict and communal strife.

The hidden curriculum—the informal transmission of values, attitudes and beliefs to students through the everyday behaviour of teachers—plays as significant a role in political socialization as the explicit curriculum. Teacher attitudes, easily transmitted to students, may conflict with the content of curricula and official views of the histories of diverse co-existing groups.

SOCIAL EXCLUSION

‘Social exclusion’ is multidimensional. It may be economic (concerned with, e.g., employment, the means of production or land), socio-political (related to, e.g., the denial of security, representation, citizenship or rights) or social (involving, e.g., exclusion from education, health services or housing). In many contexts, formal education may contribute to the multiple processes that lead to social exclusion. The widespread and increasing failure of schooling to ensure the socio-economic integration of individuals and groups, for example, calls into question the efficiency of formal education as an instrument of upward mobility. Formal education may actually threaten social cohesion. A ‘structure of inequality gives rise to differential identities, posing a challenge to a unified sense of national identity’ (Heynemann & Todoric-Bebic, 2000). The failure of formal education in its nation-building and distributive functions undermines the legitimacy of existing power structures and exacerbates political and social tensions. Moreover, educational exclusion is often accompanied by the creation of false expectations and frustrations that may fuel existing social tensions and conflicts and lead to violence (Wright, 1997).

CURRICULAR REFORM

Political change and armed conflict are dialectically linked to processes of educational transformation. These reforms are often undertaken in times of relative stability to update curricula by incorporating new knowledge, skills and attitudes. With the goal of adapting to the accelerated pace and scale of global change at the turn of the twenty-first century, many countries around the world ‘are undertaking reforms of schools and curriculum’ (Kerr, 1999, p. 2). These processes of educational transformation may contribute to wider and more radical political attempts to rede-

fine educational systems following political upheavals and post-conflict social reconstruction. Recognizing the potential role of education as a catalyst for civil strife paves the way for new thinking about education during emergencies and in post-conflict situations (Tawil, 1997).

Education in humanitarian law as a contribution to social cohesion

Whatever the causes of violent conflict, formal education has an important part to play in strengthening or rebuilding social cohesion in the wake of violence. A wide spectrum of educational initiatives, often grouped under the heading of 'peace education', contribute to the strengthening or rebuilding of social cohesion. These initiatives range from education for mutual understanding to environmental and citizenship education. Generally speaking, peace education works to promote 'knowledge, skills, attitudes and values needed to bring about change' at the 'intrapersonal, inter-group, national or international level'. These changes encompass (i) the prevention of conflict; (ii) the peaceful resolution of conflict; and (iii) the creation of the 'conditions conducive to peace' (UNICEF, 1999, p. 1).

Education in humanitarian law aims to develop informed and responsible citizens with:

- a deepened understanding of the multiple perspectives and the potential complexity of applying humanitarian norms in times of war;
- an increased interest in international current events and humanitarian action;
- a capacity to view conflict situations at home and abroad from a humanitarian perspective; and
- a disposition to become involved in community service or other forms of mobilization to protect and promote humanitarian attitudes.

The potential role of humanitarian law education within the context of peace education is clear. While humanitarian law is not explicitly about conflict prevention or resolution, by reinforcing the need to respect and protect life and human dignity at all times, even in times of violent conflict, it can contribute to the creation of conditions conducive to peace.

Education in humanitarian law has clear links to human rights education and citizenship education programmes. The development of international humanitarian norms relative to situations of armed conflict constitutes an emerging 'civic megatrend' (Kennedy, 1997, in: Kerr, 1999, p. 7), holding a central place in the preparation of people for informed citizenship world-wide. Such basic precepts as the right to life, the right to be protected from torture or inhumane treatment or to be brought into slavery or servitude, and the right to a fair trial, constitute what is often referred to as the 'hard core' of human rights. These are international laws that must be respected under all circumstances, including during armed conflicts. International humanitarian law and human rights law are thus complementary in that they have the common goal of protecting the individual, albeit in different ways and not always in the same circumstances.

The 1990 World Conference on Education for All defined basic education as providing the

essential learning tools (such as literacy, oral expression, numeracy and problem-solving) and basic learning content (such as knowledge, skills, values and attitudes) required by human beings to be able to survive, to develop their full capacities to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, [and] to continue learning (WCEFA, 1990).

Humanitarian law education does not explore violent conflict in the same way as conventional history or current events courses. It encourages the examination of war from a humanitarian perspective and the exploration of the fundamental ethical issues war raises. By emphasizing the commonalties between all human groups—focusing on the shared experience of violence, suffering and the devastation from war, and the need for minimal protection of life and human dignity—education in humanitarian law can help rebuild or strengthen social cohesion. It can exert an indirect pacifying effect in situations of acute social and political tension and help to cultivate individual responsibility and solidarity.

One of the principal arguments often advanced to explain and justify the widespread absence of humanitarian law in basic education is the claim that it is irrelevant to students in non-conflict settings. Preliminary results from the Exploring Humanitarian Law project (to be discussed below) suggest that adolescents are eager to explore the ethical issues related to humanitarian law and armed conflict. When, during exploratory discussion groups, researchers asked young people why they should learn about humanitarian law, they responded by pointing out that war involves young people, by affirming the need to become more aware of issues related to war and by asserting the importance of knowing about individual rights and responsibilities. One respondent answered that humanitarian law education ‘could help us teenagers in our small wars in life’, and another that ‘it activates the spirit of peace and reduces that of war within the human being’.

A 1999 UNICEF/*Le Monde* survey of 1,300 French adults and children in the 12–15-year-old age range, conducted on the occasion of the tenth anniversary of the Convention on the Rights of the Child, further substantiates the relevance to young people of studying humanitarian law. The survey indicated that French young people viewed war as a major preoccupation more frequently than did their parents (Kramer, 1999). This is partly a consequence of the fact that young people in non-conflict settings are increasingly exposed to greater media coverage of armed conflict. And the changing nature of violence makes it increasingly difficult to differentiate between conflict and non-conflict settings. Indeed, every community is likely to be affected by violence of one sort or another: if not riots or armed conflict, then inter-group violence related to social unrest or school-based or street-based violence. Thus, issues related to violence and to respect for and protection of life, dignity and justice in times of armed conflict will be relevant to the lives of students in a variety of settings. Exploring these issues can help students who do not live in areas ravaged

by large-scale conflict to deal constructively with a range of challenges related to the use or threat of physical force and the endangerment of life and health.

The Exploring Humanitarian Law project

The Exploring Humanitarian Law (EHL) project, initiated by the International Committee of the Red Cross, aims at designing learning modules focused on humanitarian law and related ethical issues and introducing them into existing educational programmes for 13–18-year-olds around the world. During the second half of 2001, these modules will be adapted and progressively integrated either into secondary school curricula in the areas of citizenship or ethics education and/or into non-formal education programmes. Those involved in the implementation of these programmes include ministries of education, national Red Cross/Red Crescent organizations and other educational partners. EHL project development work began with the establishment of a network of some fifteen sites around the world to identify interest in humanitarian law education and create informal contact groups. Once established, the groups provided the research and curriculum development process with input and critical feedback from the viewpoint of those in local learning environments. The first step included conducting some thirty-five exploratory focus group discussions with 13–18-year-olds in ten countries in order to probe perceptions of war, humanitarian limits on armed conflict, human dignity and the perceived relevance of humanitarian law education.

Researchers used the qualitative data collected through this consultation to design learning modules. These modules focused on topics including democratic citizenship in divided societies, the role of citizenship in post-war social reconstruction and the need to demilitarize youth and reverse a culture of violence. Examples from countries participating in research and development work on the EHL modules may serve to illustrate participant countries' sense of the importance of education in humanitarian law.

DJIBOUTI: EDUCATION AND THE THREAT OF ARMED CONFLICT

A recent report by the Djibouti Ministry of Education described the multidimensional crisis afflicting Djibouti's educational system, including its general failure to promote cultural and socio-economic development. Djibouti has experienced extremely low levels of basic education development; in first grade, the enrolment ratio is only 31.8% and the Secondary Gross Enrolment Ratio was only 15.4% for the 1998–99 school year. These educational indicators, much like those of neighbouring Ethiopia, Eritrea, Somalia and Yemen, are among the lowest in Africa. Moreover, the economy has suffered from conflicts in the Horn of Africa in the 1980s (and the resulting refugee influx from Ethiopia and Somalia), from natural disasters such as drought and famine, and from extreme poverty. Life expectancy at birth, among the lowest in the world, is estimated at 48 % (UNICEF, 1999). Finally, internal conflict between 1991 and 1994 in the northern part of the country has inflated the defence budget

at the expense of allocations for education and other social sectors. Public resources for education have continued to decrease as a result of the introduction of structural adjustment programmes during the 1995–96 school year.

Given this generally dismal picture of pressing social and economic priorities, education in humanitarian law might appear to be low on the country's list of priorities. However, the Djibouti Ministry of Education has strongly supported the EHL project. Educational authorities point to the experience of internal conflict and the conflict-ridden history of the Horn of Africa as arguments for the relevance of an educational project for youth, parents and communities that seeks to develop greater awareness of humanitarian issues and a sense of responsibility relative to situations of armed conflict. They describe the EHL project as one with 'human dimension and humanitarian implications'.

NORTHERN IRELAND: GLOBAL VERSUS PAROCHIAL SOCIALIZATION IN DIVIDED SOCIETIES

The current process of curricular review in Northern Ireland involves a 'values education' component connected with the introduction of what is now being provisionally called 'Educating for Democratic Citizenship' in the core curricula for 14–16-year-olds for the 2001–2002 school year. The twenty-four-month-old review is being conducted under the auspices of the Council for Curriculum Examinations and Assessments (CCEA) in Belfast; its role is to advise the Northern Ireland Department of Education on curricular reform (CCEA, 1999). The EHL project is seen as offering a positive contribution to education for democratic citizenship, in particular through the Social, Civic and Political Education pilot project (Arlow, 1999), one of the main pilot projects shaping the current review process. Education about the rights and responsibilities of citizens in a broad international context appears to respond to specific educational concerns in Northern Ireland. Humanitarian law education could have an indirect pacifying effect while heightening awareness of international current events, thus lifting the small communities of Northern Ireland out of their insular parochialism and opening them to the world.

LEBANON: CURRICULAR REFORM AND POST-WAR SOCIAL RECONSTRUCTION

Curricular reform, particularly in the area of citizenship education, provides an important opportunity for educational transformation in post-conflict societies such as Bosnia-Herzegovina, Burundi or Lebanon. Consider the current reform of civic education being undertaken by the Educational Center for Research and Development in Lebanon. After a complete absence from Lebanese curricula since the outbreak of the civil war in 1975, civic education is being redefined and reintroduced in the official curricula at all grade levels.² The new civic education programme, with its four cross-cutting strands of social, civic, national and humanitarian education, is intended to shape a new generation of informed and responsible citizens who can contribute to post-war social reconstruc-

tion. EHL has an obvious contribution to make to this programme. In the words of a pilot teacher in Beirut: 'The more young people have the opportunity to discuss these issues, the more they become aware that they have a shared destiny.'

SOUTH AFRICA: POLITICAL STRIFE, EDUCATION AND CULTURE OF VIOLENCE

Since the early 1990s, educational development in South Africa has been marked by a context of extreme political upheaval. The initial source of this upheaval was the institutional violence resulting from over 300 laws of physical separation that constituted the legal framework of the apartheid-era regime. Resistance to apartheid in the context of education sparked off the Soweto student uprisings of 1976, marking the beginning of a process of large-scale 'militarization of youth' (Marks, 1995). Young people growing up in the 1970s and 1980s were regularly exposed to violence by police and security forces, until they themselves 'moved to the forefront of resistance'. Youth who found themselves in direct contact with the repressive forces of the National Party regime became 'perpetrators of violence themselves in the name of resistance' (Downall, 1994, p. 77–78). Daniel Nina observes that 'a great deal of the "people's revolution" that took place between 1976 and 1990 was led by or involved children under 18' and took place in battlefields that 'included the streets of many urban and rural communities, where the involvement of children, fundamentally students, was crucial to destabilize the regime' (Nina, 1999). This '[r]evolutionary and political violence [exerted] a significant influence in the lives of huge numbers of children' (Downall, 1994, p. 77–78). Inevitably, it distorted 'normal' processes of socialization, as many young people were killed, maimed, or otherwise traumatized, in addition to being deprived of normal schooling.

The culture of violence continues to shape life in the post-apartheid era. It has led to 'ongoing violence between groups with different affiliations' (Downall, 1994, p. 77–78). It has fostered anti-social behaviour, a lack of discipline, and a refusal to accept the legitimacy of authority. One of the main challenges for education is to restore young people's confidence in authority, currently at a record low.

Noel Chabani Manganyi explains that one difficulty in dealing with South Africa's current educational problems is that some scholars are reluctant even to acknowledge that 'there is a war out there in the township schools'. In this context, according to Kader Asmal, South Africa's Minister of Education, EHL can serve as a 'peg to deal with violence' within the framework of the urgent need to 'demilitarize' South African youth.

MOROCCO: POLITICAL TRANSFORMATION AND HUMAN RIGHTS EDUCATION

The EHL pilot tests organized and conducted by the Ministry of Education in the two Moroccan provinces of Al-Hoceima and Khouribga in October 2000 provided a provocative and immediately relevant learning opportunity. The test took place at the time of

the second Intifada in the West Bank and Gaza. Throughout the test period, Moroccan high school students, exposed daily through the media to the violent confrontation between Palestinians and Israelis, were staging demonstrations in support of the Palestinian uprising. The open nature of the EHL pilot-test discussions and debates around the experience of the violence of armed conflict seemed to help students to perceive war differently. In the words of one student: 'Before, I thought war was just killing and destruction, but now I know about the rights of prisoners to be treated in a dignified manner and to have contact with their families. Now I think of the victims and their plight.' Moreover, exposure to the multiple perspectives of people involved in armed conflict as combatants, victims, civilians or humanitarian workers affected their perception of the reality and limits of violent conflict. One student, for instance, reported having learned to see even enemies as human beings.

In the context of national educational reform efforts, the National Charter for Education and Training includes the objective of progressively introducing human rights education into all levels of the school system. Pilot testing of draft EHL modules provided the Ministry of Education with an opportunity to enrich its own experience with human rights education by introducing humanitarian law as a curricular theme. Preliminary evaluations of these pilot tests have been positive.

Education in humanitarian law sensitizes young learners to the complex issues relative to relations between individuals and groups. If war can probably not be completely prevented, young learners have to become aware of their possibility of interacting more positively and humanely in situations of conflict. That is perhaps the necessary condition to prevent and limit the devastation of war (BenMaiza, 2000, p. 28).

Considerations for educational reform

In order to undertake this important educational reform world-wide, it is necessary to address several key issues related to content and methodology.

DEFINING VIOLENCE

The definition of 'violence' ranges widely—the term can refer to anything from the threat or use of force to such denials of human dignity as extreme poverty and deprivation. It is important to distinguish both between the overt violence of crime, riots and war and the covert violence of symbolic or structural oppression and between interpersonal, social and political levels of violence. Peace education initiatives often focus on interpersonal behaviour, while violent conflict is typically generated at the group level. Finally, it is important to establish perspective. What may be termed the 'humanitarian perspective', in which violence is construed 'as essentially a matter of violating a person[,] requires a substantial shift in one's perspective [. . .] [I]t requires a shift of attention from the perpetrator to the victim of violence' (Litke, 1992, p. 174). This translates into a focus on the wounded, sick and detained combatants, as well as on the civilian population affected by conflict through lack of security, displacement, separation and so forth.

AVOIDING VALUE-JUDGEMENTS

Unlike the term 'force', 'violence' has carried a negative and condemnatory connotation in much recent discourse. It is just this condemnatory sense of the term 'violence' that explains its ever-expanding application. While on the descriptive level 'violence' may simply refer to physical force used to damage, on the moral level it denotes the unacceptable use of physical force to harm another person. This moral sense confers on the term 'violence' 'an emotive aura as well as a prescriptive function' (Platt, 1992, p. 186). This is important because international humanitarian law takes no position on the legitimacy of the recourse to violence in situations of armed conflict. Rather, international humanitarian norms aim to regulate the conduct of hostilities once armed conflict has broken out. Such a perspective allows for a more neutral and less judgemental examination of human behaviour in armed conflict and makes it possible to transpose these considerations to one's own immediate reality of violence.

SHARED LEARNING EXPERIENCES

Method and content in the area of values education are inseparable. What should be taught cannot be separated from how it must be transmitted. Active, participatory, dialogical learning methods appear to be central to the development of the critical thinking, communication skills and behavioural patterns associated with respect for human rights, tolerance, mutual understanding and peaceful co-existence. This fact has important implications for the global adaptability of any curriculum, particularly in authoritarian, hierarchical educational contexts. In addition, overcrowded classrooms with limited teaching periods, a focus on the transmission and memorization of factual knowledge, and a climate of competition and selective evaluation are not conducive to the kind of active, participatory and shared learning associated with peace education.

GLOBAL VERSUS LOCAL ISSUES

A curriculum focusing on global rather than local issues helps to transcend divisions between communities and societies and strengthens social cohesion by contributing to a global "civic consciousness", [marked by unifying] common ideals [. . .] to which all citizens ascribe' (Heynemann & Todoric-Bebic, 2000, p. 148). A focus on the minimal international norms contained, for example, in humanitarian and human rights law, and the introduction of content that provides primary source materials from different areas of the world and different historical periods, can help to foster a global focus. A global focus helps learners become aware that, regardless of the historical or political specificity of any one situation of armed conflict, individuals and communities suffer in the same way and require the same minimal protections during armed conflict.

FOCUSING ON THE CONSEQUENCES RATHER THAN THE CAUSES

Non-politicized exploration of sensitive ethical issues related to human behaviour during armed conflict is possible only when the consequences, rather than the causes, of armed conflict occupy centre stage. Though it is necessary to identify, understand and address the causes of conflict to prevent or to resolve conflict, discussing the causes of conflict may easily cloud humanitarian concerns by leading to disputes over varying political and ideological interpretations of specific historical struggles. Focusing on the suffering and destruction caused by armed conflict in a variety of historical and geographical settings is much less contentious and helps learners come to terms with the common experiences and needs of those affected by large-scale violence.

LEARNING AND MOBILIZATION

It is important to recognize that, at times, the positive consensual values, attitudes and perceptions transmitted through peace education may be in contradiction with existing role models in the wider society. Non-violent resolution of conflict, mutual understanding, empathy, respect and tolerance promoted through peace education initiatives may thus be in direct contradiction with existing behaviour patterns among adults. Overcoming this potential limitation could therefore integrate an action/mobilization component. The knowledge, values and attitudes that are transmitted in these educational initiatives must translate into action, community service and in some form of participation in the protection of life, health and human dignity.

Conclusion

Preliminary evidence from a variety of settings around the world indicates that a focus on the shared human experiences of people affected by armed conflict appears to respond to diverse educational needs in very different social and political settings. Education in humanitarian law fosters increased awareness of humanitarian issues in the face of the threat of armed conflict, encourages a shared sense of citizenship in post-conflict settings through the exploration of minimal international humanitarian norms, and heightens awareness of less contentious means of addressing social and political violence through the examination of various issues of global concern. In post-conflict and divided societies, education based on the exploration of humanitarian issues highlights the common human concerns that arise in times of armed conflict, concerns that are often obscured by politically and ideologically driven analyses. By developing a sense of shared destiny, education in humanitarian law can contribute to strengthening and rebuilding social cohesion.

Notes

1. Preamble to the Charter of the United Nations (26 June 1945).
2. The rewriting of history textbooks is much more controversial, given the difficulty in reaching any consensus among the various components of Lebanese society regarding

what has actually taken place over the last quarter of a century since the outbreak of the civil war.

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LEARNING TO LIVE TOGETHER

DISCOVERING DEMOCRACY

IN AUSTRALIA

Joan Holt

This year marks the centenary of Australian nationhood: in January 1901, six British colonies federated to become one nation and the Commonwealth of Australia came peacefully into being. There was no war of independence or civil war. No kings were beheaded. There was no uprising of the people against tyranny, no blood spilt—only some fierce legislative battles were fought.

For the past two years, leading up to the centenary celebration, a public education campaign has been raging. Alongside a picture of Edmund Barton lies the question: 'What kind of nation doesn't know its first Prime Minister?' As this question suggests, Australians know little about the origins of their Federation or the dynamics of their system of government.

It is important, therefore, that in recent years a civics education renaissance has been taking place, thanks to a well-orchestrated and well-funded Commonwealth Government programme, Discovering Democracy. Currently in its fifth year of operation, the eight-year endeavour—which aims to inject \$31 million into civics and citizenship education—is the largest curriculum development programme ever undertaken in Australia.

The principal component of the programme is the production of materials, overseen by Curriculum Corporation,¹ which are supplied to both government and

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private educational institutions. These are further supported in a number of ways, including professional development across Australian states and territories; funding of principals, teachers, parents and their professional associations with the aim of promoting programme objectives; and targeted research activities for monitoring outcomes. Programme kits intended for adult learning circles work to 'shadow' the learning taking place in schools and higher education courses have been aired on radio and television. Furthermore, funding and support have been provided to universities aimed at the development of accredited teacher training courses.

Where did this programme come from and what was its impetus?

By the late 1960s, social studies programmes were becoming increasingly concerned with current affairs. Over the next thirty years, the teaching of civics in the compulsory years of schooling dramatically declined in many Australian states and territories. Although the curricula of some schools included units on government, the study of civics was often viewed as an undemanding option for those who found other humanities subjects too difficult. Common means of civic education in this period included class parliaments and opportunities for student participation in school governance.

In November 1994, the Civics Expert Group, established by the Commonwealth Government, published a report called *Whereas the people: civics and citizenship education*. The Group had been asked to develop a strategic plan for a non-partisan programme of public education and information about the Australian system of government, Constitution, and civic issues including citizenship. Its goal was to help Australians understand their rights and responsibilities as citizens, promote good citizenship, and ensure that Australians could participate fully in civic decision-making. The Group asserted:

Civics [...] is not an academic subject divorced from everyday life, but a way of understanding how participation and decision-making operate in contemporary Australia. The informed and active citizen appears in a variety of guises—as a shareholder at a general meeting, as a rank and file unionist at a workplace meeting, or a resident running for office in local government elections (Civics Expert Group, 1994).

The report warned against falling into the 'old kind' of civics and citizenship education that was seen by many as dull and irrelevant, jingoistic, and designed to promote unquestioning acceptance of the prevailing order. It recognized the importance of avoiding either 'boastful triumphalism' or an approach that emphasized only the deficiencies of Australian civic life:

'New civics' may, if care is not exercised, become a dirge on the social ills of 'ugly Australia' rather than a study of the possibilities for improving and strengthening those institutions and values in which Australians can take pride. Those charged with the teaching of adolescents

are in the best position to steer a course which discourages cynicism and appeals to realism and idealism (Civics Expert Group, 1994).

A widely based national civics survey was launched concurrently with the work of the Civics Expert Group. It revealed a high level of ignorance regarding Australia's history and system of government. For instance, most citizens reported having never seen the Australian Constitution. Only half were aware of the existence of Australia's High Court and not all of these understand its constitutional role. To most Australians, 'federalism remained a mysterious concept', and only a 'minority [could] name the two chambers of the Commonwealth parliament'. Furthermore:

- a mere 19% of respondents showed some understanding of the effect of federation on Australia's system of government;
- only 40% could correctly name the two houses of parliament;
- just 18% showed some degree of understanding of the contents of the Constitution, with most of these having misconceptions about it (the main one being that it includes a Bill of Rights);
- only 28% were aware of the reality of judicial independence;
- despite the fact that 65% reported spending time in at least one of twelve given voluntary activities and 41% in two or more—indicating a high level of participation in citizenship activities—voluntary work was infrequently cited as an example of civic duty (Civics Expert Group, 1994).

In the light of the survey and under the direction of the Civics Expert Group and the Commonwealth Department of Education, Curriculum Corporation was given the job of translating the principles and directions laid down in *Whereas the people* into practical materials that could be used in schools across Australia.

Work on the project stopped when the Labor government fell and the Liberal government came to power following a general election. But on 8 May 1997—the anniversary of the opening of the first Australian parliament in 1901—Education Minister David Kemp, a political scientist, announced that the new government would continue supporting civics and citizenship education. Its new Discovering Democracy programme would feature many of the elements of its predecessor, but would have a much stronger historical focus.

In his speech announcing the programme, Kemp pointed to the decline in the study of history in Australian secondary schools over the preceding ten to fifteen years. In the state of Victoria, for example, while 25% of students took history as a final-year subject in 1985, only 6% took it as part of their post-compulsory certificates ten years later. He also pointed to the inconsistent availability of history as an option for study in the final year of schooling, noting that 94% of schools in one state offered history as a final-year option while only 35% of the schools in another did so. According to Kemp:

It is not necessarily the case that the decline in the study of [h]istory has been the only reason for students' lack of knowledge of their country, and it is not the case that such material is only taught within the ambit of '[h]istory' as a subject, but the figures do reflect a trend away

from the study of the important towards a teaching of the immediate, and perhaps uncertainty about the importance of our past for our ability to understand our present and to make the best decisions for our future (Kemp, 1997).

Results from the National Inquiry into School History, subsequently commissioned by Kemp, were used to launch a new programme to revitalize history teaching through a range of measures including professional development and special materials.

Kemp also emphasized the importance of knowledge about civic institutions in his announcement. The issue of civic identity, he said, is inevitably raised in civics and citizenship curricula. He highlighted the roots of Australia's democracy in a convict past that quickly showed, he said, the possibilities of creating a society freed from European concerns about class, parentage and even past misdeeds. The democratic ideals of the British Chartists, he declared, had enjoyed greater success on the gold fields of Victoria than they had in Britain. He spoke of Australia's indigenous people, of their dispossession from their land, the past denial of their democratic rights and the fact that Australians were still addressing the consequences of past injustices today. He spoke also of Australia's successful melding of immigrants from 150 countries into one democratic nation.

Kemp said the programme was to pay explicit attention to values, including co-operation, personal responsibility, and care and concern for others; it was to foster attitudes of tolerance and qualities of leadership. Participatory skills and dispositions were to be developed in tandem with a strong knowledge base. Passion and insight—reflecting his own background in political science—were to characterize Kemp's involvement in the programme over the next several years.

A new Civics Education Group was appointed, and remains active today. Chaired by historian John Hirst, it incorporates all members of the previous government's Civics Expert Group, as well as two additional members; the members include two historians, a professor of law, and two senior education officials—one each from the governmental and non-governmental sectors. Though its members represent a range of political perspectives, it has proved surprisingly unanimous in the directions it has for the Discovering Democracy programme.

The decision was made to merge Discovering Democracy school materials into the Studies of Society and Environment (SOSE—integrated studies covering history, geography, politics, sociology, economics and commerce) sector of the curriculum. Materials would be developed for students in the middle primary to middle secondary years of schooling.

The context for the development and use of the curriculum materials

The Australian Constitution makes education a state and territory government responsibility; the Commonwealth must seek approval of local bodies to undertake programmes at the state or territorial level. Its only power of encouragement is funding. There are eight states and territories, each with its own curriculum—a syllabus

and/or outcomes framework. In most states, course content is determined at the school level.

There were a number of reasons for teachers, the non-government sectors and the states and territories to be suspicious of the new civics and citizenship programme:

- the central place of history in the programme;
- the role of the central government in shaping curricula, which had traditionally been the responsibility of individual schools within most states and territories;
- the primary emphasis on knowledge (although skills and values were also important);
- the programme's stress on civics rather than citizenship education; and
- the initiation of the programme by a Liberal government (teachers in Australia tend to be a Labor-voting group, with teacher unions reasonably powerful within Australia's Labor party).

Each working group was concerned to steer a course between 'boastful triumphalism' and a litany of the ills of Australian society. This is how John Hirst, chair of the Civics Education Group, described the place of history at the outset of the new programme:

We do not want students to learn about the political and legal system as a series of institutions set out on a chart, but as living things which have been changed and can be changed again.

History serves a double purpose in the programme. It can illuminate our institutions. The monarchy and parliament are both ancient. Parliament is now supreme over the monarch, but at the outset the position was reversed. To watch parliament seizing power from the monarch is the best way of understanding the positions they now occupy. It would be very hard to explain, without recourse to history, that a bill needs royal assent before it becomes law.

History can make civics a human and interesting story. In mid-nineteenth century Britain, working people drew up a charter to provide for a democratic parliament. The Chartists' six points were etched into the minds of a generation, including the migrants who came to Australia in the gold rush. The Chartists [...] agonised over how to make their campaign effective. Should they stick to peaceful protest or was violence the only way to make a parliament of property holders yield [...] . [H]ere is the jumping off point for students to consider what the characteristics of a democratic parliament are and to begin debate on the forms of dissent and protest [...] but it is not to become a history course. [...] History may be the beginning point, but the unit will bring the story to the present and look into the future. [...] (*Introducing Discovering Democracy*, 1997).

Discovering Democracy avoided particular contemporary issues, taking the view that they would quickly date the programme. Instead most units included research components that involved, for example, investigating modes of dissent used by current social and political movements. The particular stories used were historical—the Eureka rebellion, ancient Athens, the Myall Creek massacre of Aborigines, the English Revolution, the American Civil War and so on.

At the time *Discovering Democracy* was adopted, the place of history in Australian curricula had been the subject of much recent debate. History had declined in the post-compulsory years because students were choosing subjects that had what they perceived as immediate vocational relevance: information technology and legal studies, for example. But it is also likely that it had declined because many schools taught the integrated SOSE, the teachers of which are often trained in only one of the subjects within this broad 'umbrella' area of study. Sometimes they are even trained in none, owing to the perception among many school timetablers that anyone can teach SOSE.

A further problem was the relationship between school structure and course content. Teachers regularly asked: 'How can we teach about democracy when we don't have democratic classrooms or democratic schools?' It is likely that the development of participatory skills would have had a stronger place under Labor's programme, although a strong knowledge base would also have characterized it. The development of participatory skills and civic dispositions *is* important in *Discovering Democracy* but not as important as many teachers would like.

To say that the programme has a strong knowledge base is not to say that the content was to be delivered in an unquestioning or uncritical way, or to say that students would not be encouraged to ask 'Is this how it should be?' and 'How could it be made better?' Nor is it to say that a didactic form of pedagogy was to be used, that there would be a sudden abandonment of all that has been discovered about effective learning methods.

The Curriculum Corporation's charter called for it to consult with the states and territories and modify and link materials so that they would work within the various curricula; to consult with other interested bodies, such as subject associations; and to trial materials in classrooms. Its task was not only to make materials that would fit within the eight state and territory curricula, but also to make a new and suspect paradigm workable, attractive, challenging, and exciting to students and to convince others that this was what it had done. The materials would be distributed to 11,000 schools across the country. They had to resonate with students in the bush, in regional towns and in cities. They would be used in schools in far North Queensland with indigenous communities in which English is a second language; in schools in urban centres whose students might represent sixty or more different cultural and language backgrounds; and in rural towns where most of the students might be from Anglo-Celtic backgrounds.

What was done and how was it done?

Curriculum Corporation identified four key organizing concepts or themes. Each set of curricular materials, it decided, would deliver outcomes that related to these themes, increasing in complexity and being reinforced during the middle primary, upper primary, lower secondary and middle secondary school years.

The four themes were:

- 'Who rules?'—focusing on sovereignty, citizenship and power;

- 'Law and rights'—examining the rule of law, how laws are made, key principles of law and justice, the High Court and human rights;
- 'The Australian Nation'—considering the underpinning principles and institutions of government, Federation and Australian identity; and
- 'Citizens and public life'—addressing the role of individuals and groups in civil society and how they can contribute to change.

The centrepiece of the materials is a set of eighteen teaching and learning units. There is at least one unit for each of the four themes at each of the four stages of schooling—four at each of middle primary, upper primary and lower secondary and six at middle secondary. There is one book for each stage of schooling, providing notes for the teacher and the teaching and learning activities for students in a photocopiable format. All the resources teachers are likely to need are included within the published unit. Appendix one provides an overview of each of the units, their outcomes and the contexts of the learning.

For example, looking at the 'Who rules?' theme:

- The middle primary unit within this theme, 'Stories of the people and rulers', examines ideas about power, different kinds of rule and what that means for citizens in three societies: ancient Athens, ancient Egypt and modern Australia.
- The upper primary unit, 'Parliament versus monarch', takes as its main story the struggle for power between king and parliament in Britain, leading into a study of parliament in Australia today.
- The lower secondary unit, 'Should the people rule?', returns to ancient Athens and through a comparison with ancient Sparta explores the connection between types of governance and culture. It also explores the difference between representative democracy in Australia and forms of direct democracy in ancient Athens and various countries today. Students debate whether there should be more direct democracy in Australia by considering the advantages and disadvantages of citizen-initiated referendums.
- A middle secondary unit, 'Parties control parliament', explores parties and their place in representative democracies. The origins and beliefs of the major Australian political parties are covered, and the campaign strategies and party platforms adopted during two major elections are analysed.
- A final unit in middle secondary school spans the 'Who rules' theme and the 'Law and rights' theme. This unit, 'Democracy destroyed', examines what happened in Germany after 1933.
- Stuart MacIntyre highlights the importance of exploring party politics and not merely public institutions:

In the public discourse of this country, the words political and partisan are terms of disparagement. Australians mistrust politics and regard parties as obstacles to popular sovereignty. We treat the people as good, the politicians as bad. The depreciation of politics and the validation of the popular, the juxtaposition of the self-serving dissembler and his long suffering victims, are deeply embedded prejudices. ...

Most of the enthusiasts for the teaching of civics in school think that it should deal principally with the institutions of government [...] without regard to the party politics that animate their activity and determine their effects.

They shrink from this vital dimension partly in order to preserve neutrality and partly because of the distaste for party politics. By doing so they miss very essence of representative government in Australia. ...

History makes it possible to discuss the importance of parties, and the distinctive character of the major parties in a non-partisan manner. This is the approach taken by 'Parties Control Parliament'. [...] I would like to think that civics education would give a better understanding of the competing versions of political history that the various parties represent. [...] Until young Australians come to appreciate the necessity of politics, as well as its shortcomings, they will remain resentful victims of a central aspect of citizenship (MacIntyre, 1998).

The units are backed up by two CD-ROMs that support and reinforce the learning taking place in the classroom. The visual and auditory learning opportunities of this medium are fully exploited, a fact that made these materials particularly useful for students with limited skills.

These units were developed after extended consultations. After the Corporation developed a series of detailed unit outlines and student outcomes, it sought the views of teachers, the state and territory education departments, the Catholic and independent sectors and a wide range of interest groups—as it did throughout the development process. Initial responses were not enthusiastic. The outlines identified lesson contents, relevant concepts and desired student outcomes. Without information about the teaching and learning activities that would help teachers bring the assigned topics alive in their classrooms, the outlines seemed to confirm the worst suspicions of many.

Could 11-year-olds really learn about Charles I and the English Revolution? Why would 13-year-olds care about the Chartists? Why was the Corporation specifying a set of outcomes when the states and territories had their own? What about participation? What about the teaching of values and so on?

With some modifications, and in the light of the concerns initial readers had expressed, writing got under way. The focus of the new curriculum guides was not really 'history', although they featured historical stories. History was there, but only as narrative from which concepts about civics or citizenship could be drawn, given life, made human and shown to be debatable and problematic.

Once drafts were complete, it was clear that some units worked well. Some parts of others worked well—perhaps with modifications. Some units, however, were simply too long and tried to cover too much. Some just did not work at all. The Corporation encouraged teachers to forward proposed adaptations and additions.

The units were reworked. Their coverage was substantially reduced. During subsequent evaluations of the programme and in feedback at professional development sessions, it became clear that one of the reasons that reactions to the materi-

als had grown increasingly positive was that trial school teachers and the hundreds of others involved in consultations and focus groups could see that their professional and practical advice was reflected in the developed curricula. Of course, teachers continue to use the curricula creatively, in the light of their own abilities and interests and their perceptions of student needs.

The curricula emphasized opportunities to develop participation skills. In some units this was a major focus—for instance, the middle primary unit ‘Joining in’ in which students study community groups and then undertake school or community-based projects. They are led through the processes of forming groups, writing constitutions, forming committees for data collection, communication, management, developing action plans, undertaking projects and evaluating them.

Others units develop these skills in alternative ways. Students debate topics about governance: for instance, ‘A good government is one run by a strong ruler’. They take on the roles of people who have different views about the creation of new laws; they debate; they draft laws; they test them against various scenarios; they change them. They are put in the positions of state or federal legislators arguing about the positions their parties should take about the damming of a river—should they listen to union members, should they worry about the electoral consequences of particular policy choices, should they worry about states’ rights, should they be concerned about the environment or the economy? They hold class conventions discussing whether Australia should become a republic. They play the history mystery game and chant the King John rap. They take on the roles of famous political activists and politicians in a television interview and answer questions about why they acted as they did in relation to particular issues and what they would do about particular issues facing Australians today. They form their own political parties, deliver their party platform and decide how they will handle party discipline.

Values are embedded throughout. In the ‘Human Rights’ unit, students are told they are in a balloon with a set of rights. The balloon will sink if they do not jettison a right. Again it sinks and another must go. They are told that they now must imagine that they live in a different society with a set of beliefs—based on Confucian values—that are described. Which rights would they now jettison first?

The chair of the Civics Education Group aptly characterizes the importance of values:

How are we teach the values that we want students to carry with them into their lives as citizens? Show them a stark injustice and let them be enraged by it. Show them the campaigners who worked to remove this injustice and let them admire the campaigners. Show the injustice and its removal as events happening in their country so they will know more fully what their inheritance is. Let them see for example a segregated town in outback New South Wales where Aboriginal children were not allowed into the swimming pool. Then let them see the Freedom Riders who came from Sydney to expose this injustice to the world (*Introducing Discovering Democracy*, 1997).

A set of Australian Readers provides collections of speeches, poetry, paintings, extracts from novels, biographies and short stories. These are intended for use in English and SOSE classes. The Readers are organized in sections each of which casts a spotlight on an aspect of one of the Discovering Democracy themes. The Readers work in a different way from the units designed to explore and teach about certain ideas or concepts and lead students down defined learning paths: paths that encourage critical thinking, but paths nonetheless. The Readers give students opportunities to explore ideas from a range of diverse perspectives.

The Middle Secondary Reader explores the issue of equality and difference. What does it mean not to have equal rights? Two texts help students explore this question: Martin Luther King's 'I have a dream' speech and the story of Ella Simon, an Australian Aboriginal woman who was prevented from attending her own white father's funeral because her very existence was 'a shameful secret'. Australians also face the challenge of determining how best to celebrate the differences between each other in a multicultural environment. The issue of adapting to the dominant society or maintaining cultural difference is explored in the story of a Pakistani man in Australia who wants desperately to retain the traditions of his country of origin even as he sees his children and other Pakistani children becoming more Australian and as he himself is forced, half-willingly, to adapt as well. The Reader uses an extract from Jung Chang's *Wild swans* to help students see what it means to live in a society in which there are marked divisions and differences in the rights and privileges of different groups. A young woman's marriage to a much older man of higher status causes confusion and resentment as the man's adult children are forced to submit to the young wife. How far should societies go in fostering equality? An extract from Orwell's *Animal farm* and the story of the failed attempt by a group of late-nineteenth century Australians to establish a New Australia in Paraguay help students explore this question. The Reader uses the story of Australian explorers to highlight the significance of both equality and the innate and created differences between people—those who can lead and those who are put in the position of leading.

Other materials include a guide for the active and participatory kinds of civics and citizenship education many teachers had wanted; exemplary assessment materials to support the units; and a 'Big Book' for early primary students and a CD ROM designed to support teaching and learning about the Australian Federation in its centenary year.

Where are we now?

The new curricular materials have not been mandated by any state or territory, although the Ministerial Council that includes all Ministers of Education has given its support to the programme. Most states and territories indicate how the materials can be used within their SOSE or English curricula. But there is no doubt that the Discovering Democracy programme has found widespread—indeed, enthusiastic—acceptance among teachers. The programme still has its critics. However, as a 1999 consulting group concluded, 'the polarization of reactions is influenced more

by the respondents' backgrounds, pedagogical preferences, and school contexts than the quality of the materials' (*Evaluation of the Discovering Democracy programme*, 1999).

The marked increase in enthusiasm for the programme is partly a result of the quality of the materials. They shape strongly knowledge-based courses that use active and imaginative teaching and learning strategies and incorporate the teaching of values and citizenship skills. Teachers' responses are also more positive because they recognize that their judgements about the materials have been taken seriously and have been reflected in ongoing revisions. Also important is the fact that the range of materials produced over the years has featured a diversity of approaches that meet the differing needs, desires and personalities of individual educators and the education systems and sectors within which they work. No doubt the change in response also reflects the inevitable cyclical alteration in views about curricula. There is less concern about the teaching of history as a separate subject in the compulsory years than there once was. A focus on specific content is more apparent in the learning outcomes identified in some state curriculum frameworks than was once the case.

The programme is also clearly in accord with the new national goals for Australian schooling, endorsed by all Australian states and territories. *The Adelaide declaration on national goals for schooling in the twenty-first century* states that schooling 'should develop fully the talents and capacities of all students. In particular, when students leave school, they should':

have the capacity to exercise judgement and responsibility in matters of morality, ethics and social justice, and the capacity to make sense of their world, to think about how things got to be the way they are, to make rational and informed decisions about their own lives, and to accept responsibility for their own actions.

[...] be active and informed citizens with an understanding and appreciation of Australia's system of government and civic life.

Conclusion

Discovering Democracy is designed to give tomorrow's Australian citizens the knowledge and skills they will need in order to know what values and institutions they can and must change and which should endure. They will know how their democratic system behaves. They will be confident in their ability to act within it as citizens. If it is successful, Australia will not need another public education campaign before Australians celebrate their next civic anniversary.

Note

1. Curriculum Corporation is a not-for-profit company owned by all Australian State, Territory and Commonwealth Departments of Education. Its charter is to encourage and undertake collaborative curriculum development across the states and territories.

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LEARNING TO LIVE TOGETHER

EDUCATION FOR

THE PROMOTION OF

SOCIAL COHESION AND

A CULTURE OF NON-VIOLENCE¹

Winthrop Wiltshire

A society functioning with a significant amount of social cohesion is one that is imbued with long-term and stable internal harmony. In several regions of the world, active internal warfare stemming from strongly held antagonisms based on religious, cultural or ethnic differences has been a common occurrence. The lack of social cohesion is evident in such situations, but the absence of open warfare in a country or region does not necessarily mean the existence of social cohesion.

In multi-ethnic societies, such as those in the Caribbean, competition between different ethnic groups for political power and economic resources often leads to social tension. The aftermath of the March 2001 general elections in Guyana was one such situation. The greatest threat to social cohesion in Caribbean countries, however, appears to be the increasing levels of societal crime and violence.

Original language: English

Winthrop Wiltshire (Trinidad and Tobago)

Ph.D. in Chemistry, University of Toronto. From 1970 to 1988 he worked at the Caribbean Industrial Institute in Trinidad and Tobago. From 1988 to 1998 he was the UNESCO Science and Technology Adviser for the Caribbean and Head of the UNESCO Port of Spain Office. In 1990 he also assumed the role of UNESCO Representative to the Southern Caribbean. In 1993 he became a teacher in re-evaluation counselling and taught individuals emotional healing in his spare time. In 1997 he initiated Changing the Culture of the Classroom, a project to assist teachers in creating nurturing classroom environments, later extended throughout the Caribbean. In 1996 he became a Reiki Master and currently teaches hands-on healing enabling others to heal themselves.

In one Caribbean nation, an April 2001 newspaper article reported that there had been as many as 233 murders in that particular country since the beginning of the year. From this we can extrapolate an even greater number of aggressions not resulting in death. This problem is spread throughout most of the Caribbean, where, furthermore, countries are afflicted with frequent cases of rape and other forms of violence against women.

The absence of physical injury does not in itself imply the absence of violence, however. 'White collar crime', a term used to signify office-related illegal activity, is also a kind of violence, as is interpersonal violence, appearing in the form of harsh words or the brutal invalidation of the other. It is this kind of violence that is at the root of much other anti-social, aggressive behaviour prevalent in Caribbean countries today, and it is this kind of violence with which education systems are especially equipped to deal.

Much of the deviant anti-social behaviour observed in the Caribbean is perpetrated by young people. To deal with the problem of youth violence, education systems in the region must redefine their role as the moulders of socially and emotionally well-adjusted young people who are equipped with both a well-defined set of personal attributes and a predetermined range of aptitudes and skills.

Basic precondition for social cohesion

I propose that the root cause of many of the behavioural problems being manifested by Caribbean youth is low self-esteem, something that is prevalent across all social classes. Furthermore, this is the main cause of the widespread illicit drug use by young people—a significant contributory factor to youth crime and violence, with a destructive impact on individual family cohesiveness as well as that of the wider society.

Social cohesion can be guaranteed only when the predominant reality in a society is that individuals feel comfortable with themselves, that they have inner calm reflecting a high degree of emotional health. Caribbean youth tend to have not only low concepts of self, but also latent feelings of resentment, isolation and anger. Such negative characteristics are intimately linked with personal insecurity and lack of self-confidence and are usually the cumulative result of systematic mistreatment in early childhood.

Young people need praise, validation and demonstrations of love. If instead they are subjected to systematic invalidation and other put-downs, both at home and at school, the result is severe damage to their psyches. Unresolved negative feelings resulting from experiences of early emotional hurt easily lead to anti-social behaviour, including violence (see Wiltshire, 1998). Someone who is overwhelmed with insecurity and self-hate is capable of doing an enormous amount of societal damage, including the perpetration of overt forms of violence.

Redefining what is taught and how it is taught

In general, Caribbean education systems have been excessively concerned with the academic performance of the students and inadequately concerned with meeting their emotional needs. While it is true that parents have an important responsibility to nurture children, the reality is that many parents, as a result of their own inadequate socialization, do not themselves have the skills to perform this critical role. Indeed, it is often the parents themselves who cause the most emotional damage to their young charges. In this context, the education system has a key role to play in fostering emotionally healthy children. No longer can the focus be exclusively on academic concerns. Caribbean education systems must adopt holistic approaches to the education of young people if they are to have a positive impact on the promotion of social cohesion and the reduction of societal violence.

THE NECESSARY ATTRIBUTES

This holistic approach implies a dramatic change in how teachers' roles are perceived. In the twenty-first century, teachers in the Caribbean must assist in the moulding of well-adjusted young people, helping them:

- learn to love themselves completely;
- to be emotionally secure;
- to have self-confidence;
- to take full responsibility for their actions;
- to trust their own thinking; and
- to get in touch with their innate spirituality.

In order to nurture a culture of tolerance in society, teachers must, furthermore, help young people learn to respect:

- self and others;
- differing views;
- other cultures; and
- disabled people, both physical and otherwise, as well as to treat them with dignity.

Finally, they must assist them in acquiring:

- good writing, speaking, listening and numeracy skills;
- competent information-seeking skills; and
- sound problem-solving and good critical-thinking skills.

This list of attributes is not meant to be exhaustive. For example, the issue of responsible sexual behaviour is of paramount importance in today's world. The highlighted elements, however, constitute an indispensable core of attributes for moulding the personalities of socially and emotionally well-adjusted young people. Possessing these characteristics, they can achieve inner calm and thus be better able to make the vast array of decisions necessary for the promotion of social cohesion. They will, furthermore, be predisposed to achieve personal success.

CURRICULAR REFORM

Traditionally, curriculum has been understood as the elements of course content for a given academic subject. Increasingly, however, it is being recognized that everything that is relevant to classroom dynamics is part of curriculum. This development is important in that it allows elements or attributes necessary for moulding socially and emotionally well-adjusted young people to be made explicit in school curricula irrespective of field of study.

There are many possibilities for curricular reform in Caribbean countries. Values education could be made an important component of curricula in primary and secondary schools. Activities such as the Peace and Love in Schools (PALS) programme spearheaded in Jamaica provide examples from which we can draw generic elements to be adopted in curricula throughout the region. Initiatives such as the Health and Family Life Education programme, which has been endorsed by Ministries of Education throughout the English-speaking Caribbean, could be very useful in communicating important values to young persons.

The teacher's role in the classroom

We cannot rely primarily on course content in the promotion of social cohesion and a culture of non-violence, however. What is of even greater importance in the socialization of these students during classroom hours is the quality of the teacher/student interaction, independently of the subject matter being taught.

POWER RELATIONS

The sense of alienation and frustration that comes from the sense of powerlessness in young people promotes disharmony and works against social cohesion. One of the biggest challenges for educational authorities and parents alike is to teach young people to trust their own thinking and to feel in control of their own lives. Too often, it is the far easier task of teaching them to trust the thinking of the authority figure that is undertaken in the classroom. But this is a trap in two important respects. In the end, it serves to erode self-reliance, making it easy for young people to be led astray by those with strong personalities who may indulge in anti-social behaviour. Furthermore, it increases levels of frustration resulting from the perception that others have excessive power over their lives, and tends to promote increased delinquent behaviour and disharmony. The classroom must be marked by a partnership between teacher and students, rather than a power relationship with the teacher being perceived as an authoritarian figure.

THE TEACHER AS COUNSELLOR

One of the main roles of guidance counsellors, who are attached to most schools in the Caribbean, is to interact with students who exhibit behavioural problems. In most cases, they provide counselling outside of the normal classroom activities. Although the 'fire fighting' role of these counsellors is important, I suggest that what is even more critical is that teachers function as counsellors in their normal class-

room interaction with their students. This means that the norm for teachers must be a nurturing and validating posture vis-à-vis young people, where every student is treated with dignity and respect, where students are listened to attentively and treated as valuable and capable of learning. It is such an environment that is the most conducive to students learning to love and respect themselves and others.

It is not always easy for teachers to function in this nurturing and validating mode, however. Often they are working in overcrowded classrooms, with young people who are exhibiting a vast array of disruptive behaviours. And it is a difficult challenge, indeed, for teachers to apprehend students as separate and distinct from their disruptive behaviour. Additionally, teachers themselves, like all other normal adults, are saddled with their own unresolved emotional issues, something that tends to manifest itself in inappropriate reactions to classroom situations.

Whether they are teaching mathematics or social studies teachers in primary and secondary schools of the Caribbean will find that when they adopt a nurturing and validating posture, not only will they contribute effectively to producing emotionally healthy young adults, but also management of their classrooms will become considerably less problematic.

THE USE OF CORPORAL PUNISHMENT

It ought to be self-evident that the use of corporal punishment as a sanction in the school system is inappropriate. Convincing teachers of this sometimes presents a challenge, however. Trinidad and Tobago recently abolished corporal punishment as an option for disciplining students and a cross-section of teachers expressed their disappointment. Teachers must be brought to understand that it is simply impossible to promote a culture of non-violence through the use of violence.

Changing the culture of Caribbean classrooms

There are numerous conscientious and dedicated teachers throughout schools in the Caribbean. Their ability to create, on an ongoing basis, nurturing and validating environments in their classrooms depends largely on their own early socialization, however, and on how successful they have been in releasing emotional pains encountered in during youth.

When we speak of culture, we are talking about the usual or normative ways of being, doing and relating. For the goals of social cohesion to be achieved, the norms of the classroom culture must entail the nurturing and validating of young people. One such effort in this direction is the Changing the Culture of the Classroom programme led by UNESCO/CARNEID.

An example from a training workshop can help highlight some of the efforts being made. During a workshop being conducted with teachers from a junior secondary school in Trinidad and Tobago, the teachers reacted with great surprise when I asserted that there are no 'problem students'. One teacher interjected: 'If there are no problem students, you have to be implying that there are problem teachers.' After repeating my assertion that there were no 'problem students', I pointed

out that there *are* students with problems but that this is different from applying the damaging label 'problem student' to these individuals. The basic point I was trying to get across is that the student must be seen as a distinct entity, not to be identified with his/her behaviour, however inappropriate that behaviour might be. Only then can the teacher help the student with behavioural modification.

In these experiential training workshops the teachers learn specific skills for classroom management while exploring themes such as:

- early distress experiences and the natural recovery process;
- the essence of the role of the teacher;
- the concept of flexible intelligence;
- internalized oppression and its impact on behaviour;
- limited categories of new adult hurt;
- the concept of restimulation of early distress experiences;
- validation as a nurturing tool;
- appropriate and inappropriate sanctions;
- use and misuse of the syllabus;
- the undesirable use of fear as a control mechanism;
- the challenge of maintaining discipline in the classroom; and
- empowerment of the teacher for optimum effectiveness.

Conclusion

Although the topic of this paper has implications for young and old in every aspect of Caribbean society, I have focused here on education in the regular school system, and in particular at the primary and secondary levels. The education systems in the region, as well as individual teachers, must work towards redefining their roles if they are to help mould socially and emotionally well-adjusted young people. This change to a more holistic model of education has implications both for school curricula and for teacher training and retraining. As much attention needs to be placed on the strategies for implementing course content as on the course content itself. A reorientation away from a short-sighted academic focus has a good chance of leading to societies that are more socially cohesive and less violent by enabling young people to leave school with more confident images of themselves.

It will take time to arrive at the destination towards which we are striving, but it is a journey well worth embarking on. And the time to begin that journey is now.

Note

1. Presented at the seminar/workshop on Curriculum Development for Learning to Live Together held by IBE/UNESCO-CARNEID, Havana, Cuba, 15–18 May 2001.

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LEARNING TO LIVE TOGETHER

TEACHER EDUCATION

FOR SOCIAL COHESION:

THE INDIAN CONTEXT

J.S. Rajput and K. Walia

Already in the first decades of the twentieth century, the Gandhian school of thought devoted considerable attention to education in India. Its comprehensive approach was built upon an understanding of Indian ethos, culture and traditions, and an appreciation for its diversity, plurality and inherent trend to unity. In his first major political campaign, known as the Champaran Movement (1917), Gandhi revealed that he fully grasped the role education could play in the struggle against ignorance, poverty and hunger. He launched primary schools and persuaded communities to bear the expenses of both voluntary teachers and children. Throughout his life, he devoted considerable time and thought to providing access to basic education for every child. He was very clear that only a model suited to

Original language: English

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K. Walia (India)

Holder of a doctorate in secondary teacher education from the University of Jamia Millia Islamia, New Delhi. Has published papers on education in leading journals and newspapers. Is co-ordinating several projects at the national level, including the implementation of the curriculum framework for teacher education developed recently by the National Council for Teacher Education in India.

the particular needs of his country could achieve universal basic education in India (NCTE, 1998c).

Sensitivity to the links among equity, cohesion and education is a major feature of the Constitution of India (1950), which commits the new nation to securing 'to all its citizens: justice—social, economic and political; liberty of thought, expression, faith, belief and worship; equality of status and of opportunity; and to promote among them all fraternity assuring the dignity of the individual and the integrity of the nation'. The Constitution delineates the fundamental duties of every citizen, which include imbibing the spirit of common brotherhood regardless of linguistic, religious or other diversity. According to the Constitution, every citizen must also be committed to protecting the sovereignty and integrity of India, eliminating practices derogatory to women, preserving the national heritage and conserving the natural environment. Furthermore, the Constitution includes special measures aimed at ensuring that the caste system is abolished and that those from the weaker strata of society are provided with special opportunities and specific incentives that will help them attain equality of status. The central role which education must play in implementing these provisions is clear and the Constitution mandates that the state work towards providing 'free and compulsory education for all children until they complete the age of fourteen years'.

India's teachers, who have traditionally stood for universal brotherhood and unity irrespective of diversity, have played a crucial role in efforts to reduce social and economic disparity and to fulfil the other mandates of the Constitution. These can be achieved only when educational institutions provide environments conducive to the inculcation of the attitudes, values, skills and competencies needed to deal with discrimination, segregation and inequality.

Challenges that arise from such modern trends as globalization become all the more significant in a pluralistic society like India.

Education can help people understand and respect diverse cultures, languages, traditions and practices. Schools can encourage a respectful attitude towards difference at an early age, which would have a potential impact throughout life and could even be passed on to the next generation. Again, the role of teachers is critical. The success of the entire effort hinges on their acceptance by and credibility in the eyes of the community and the learners. In order for them to be the transmitters of social cohesion and harmony, their role has to be reformulated and effectively internalized so they can inculcate faith in democratic procedures and in the values of justice, liberty and freedom. Teacher preparation programmes must encourage prospective teachers to affirm the key aspects of democratic equality and must make the achievement of socio-cultural and economic equity one of its central goals. The equal opportunity for all that teacher training institutions must help their graduates to foster is essential to the creation of a strong and cohesive nation.

Education for inclusion in India: flexibility, universality and tolerance

India operates a large education system: there are nearly one million learning centres offering formal and non-formal primary education, and more than 2,300 teacher education institutions prepare instructors for both primary and secondary stages of education. Out of a total of 4.5 million teachers, nearly 3 million are teaching at the primary level.

The education system underwent an extensive review in 1986; simultaneously, the government articulated a new educational policy (which includes the goal of universal basic schooling) and formulated an educational Programme of Action designed to ensure implementation of the new policy. Both the 1986 review and a 1992 assessment highlighted the need to enhance the professional commitment and overall competence of teachers to ensure higher attainment by learners. Several programmes were designed to achieve the aim.

The Committee on Emotional Integration, appointed by the Government of India in 1961, aims to ensure that teachers learn strategies and approaches designed to help every learner develop capacities to interact harmoniously with other persons and with nature (India, 1961). Current teacher education programmes still do not focus on these strategies and approaches. Student-teachers at teacher training institutions need greater opportunities for learning the necessary skills (UNDP, 1998). The Committee on Emotional Integration has recommended extending the duration of teacher training to allow time for additional skill development.

In a context marked by rapid change, the imposition of a homogeneous curriculum on teacher education programmes throughout the country is counter-productive. Adherence to uniform curricula and a single pattern of teaching has caused tremendous waste and stagnation in India as in other developing countries. A large number of drop-outs and academic failures can be attributed to this entrenched, though unsound, practice. The curriculum framework for quality teacher education in India, developed in 1998 by the NCTE, envisions giving autonomy to the institutions, organizations and agencies responsible for curriculum development in teacher education. These entities would be accountable to the educational authorities, who would ensure their efficiency. The curriculum framework for teacher education at the national level would offer only broad guidelines, with detailed curricula being formulated by educators at individual institutions. This approach would allow curricula to 'respond to the specific regional needs and aspirations of the people and the requirements of a developing learning society'. The inherent strength of the Indian nation can be augmented if curricula are based on 'sensitive, need-specific and relevant pedagogy'. Teachers and teacher educators can 'experiment with new ideas and alternative practices for bringing improvement in the programme of teacher education'. The hope is that this will increase the overall quality of education as well as providing a higher level of 'professional responsiveness, responsibility and intrinsic sense of accountability to the learning society and the system' (NCTE,

1998b). Of course, the task of devising culturally specific strategies for studying individual learner needs as well as responsive teacher-orientation strategies at the institutional level can have its drawbacks. In schools suffering from various deficiencies and deprivations, including inadequate numbers of instructors, teachers can easily become overworked (Walia & Rajput, 1998).

Another major cause for concern is the emergence of schools exclusively or primarily serving the rich in developing countries. The resultant widening of the social gap hampers efforts intended to foster equality of opportunity. As a general rule, these elite schools seem generally to focus on learner attainments in cognitive areas, and thus arguably contribute less than other schools to the achievement of social cohesion and equality. Bold decisions at the policy level are necessary to establish harmony and the equal distribution of available resources among schools everywhere.

A specifically Indian problem is the presence of students affiliated with multiple religions in nearly every classroom. The essence of Indian secularism is equal respect for all religions, which is essential if a religious plural society like India, which relies heavily on religion as the main source of its values and moral norms, is to achieve social cohesion. Teacher training institutions must enable prospective teachers to internalize fully the imperatives of secularism and to pass them on to the students and communities they serve.

Curricular initiatives in teacher education

India's teacher education curricula have changed little over the five decades since independence. Gandhi called for teacher training programmes reflective of India's national and cultural ethos, ones that fostered necessary changes while maintaining continuity. The current national approach can facilitate the realization of constitutional goals, contribute effectively to the emergence of a new social order, and strengthen the understanding and acceptance of unity and diversity in a pluralistic society.

The new curriculum framework attempts to meet the challenge of ensuring quality teacher education. It identifies, among others, the following objectives:

- to promote capabilities for inculcating national values and goals as enshrined in the Constitution of India;
- to enable teachers to act as agents of modernization and social change;
- to sensitize teachers to the promotion of social cohesion, international understanding and protection of human rights and the rights of the child;
- to transform student teachers into competent and committed professionals willing to perform the identified tasks;
- to develop competencies and skills necessary for effective teaching;
- to sensitize teachers and teacher educators about emerging issues, such as the environment, ecology, population, gender quality and legal literacy;
- to empower teachers to cultivate rational thinking and a scientific temper among students;

- to develop critical awareness about the social realities; and
- to develop managerial and organizational skills.

In addition to the conventional roles of the teacher, the following additional roles are envisioned:

- inculcating the intrinsic and extrinsic values of professional competency, professional commitment and professional ethics;
- creating and reconstructing knowledge;
- selecting, organizing and using learning resources;
- effectively transacting curriculum, selecting and organizing educational activities and programmes for learners with special needs;
- using media and appropriate instructional technologies;
- communicating effectively and responding to the challenges of continuity and change;
- counselling students for personality development, adjustment and learning attainment;
- conducting research, especially action research, and initiating innovative practices;
- organizing student activities;
- inculcating a sense of value judgement, value commitment and value transmission;
- understanding the import of inter-relationship between culture and education and 'culture and personality';
- fostering interest in life-long learning; and
- understanding the aspirations and expectations of the community and establishing mutually supportive linkages between the school and the community (NCTE, 1998b).

To achieve the goals embodied in the new curriculum, future teachers will need to acquire much more than professional competence, professional ethics and the capacity to synthesize and transmit knowledge, organize resources and use media. They will need to become builders of a society simultaneously rooted in India's millennia-old culture and committed to progress.

Pre-service teacher education—basic schooling

In developing countries, early childhood education is the weakest link in efforts to universalize primary education. Systematic curricula, institutional structures and facilities for early childhood education have yet to stabilize and expand appropriately; thus far, governments, NGOs, specialized institutions and community initiatives have adopted several different approaches. There is a consensus that teachers must be well acquainted with child psychology and the various facets of children's emotional, mental and physical development. They must acquire social sensitivities and develop respect for the uniqueness of every child. With a sense of involvement, familiarity with local resources, and willingness to develop appreciation for scientific and technological literacy, teachers must employ effective pedagogical tech-

niques without causing stress to learners. A thorough acquaintance on the part of prospective teachers with human rights and the rights of children, the law, community dynamics, local and national festivals and emerging trends in community life will help them prepare their students for social cohesion.

Apart from acquiring a deeper understanding of relevant psychological and sociological factors, primary school teachers need to acquire skills enabling them to encourage the development of curiosity, imagination and creativity among learners and establish mutually supportive linkages with communities and parents. Issues such as gender bias, weaker sections of society, human rights, interaction with parents and school/community relationships should be central elements of the teacher-training programme. Peer learning, self-motivated learning and group learning could be encouraged within a cohesive learning environment.

Pre-service teacher education—secondary stage

Secondary school teachers need to understand the dynamics of adolescent emotional development and the process of socialization. They need develop their aesthetic sensibilities and to understand how to synthesize knowledge and how to use community resources as educational inputs.

Prospective secondary school teachers need to explore alternative approaches to instruction, the place of vocational training in secondary education, the education of the handicapped, the preparation of students to make career and higher education choices, and special regional and community-specific requirements. Such improvements in the education of secondary school teachers can lead to great advances towards a cohesive social order.

In-service teacher education

In-service teacher preparation is now treated as a continuation of pre-service teacher training. In-service programmes have yet to take firm systemic roots in India, but a variety of approaches are being tested. To remain professionally up to date, teachers need not only to renew existing competencies but also to acquire new ones. The curricula for in-service teacher training programmes must be updated continuously in the changing context of globalization, liberalization and the emergence of new information technologies. Teachers' familiarity with international trends and sensitivity to the dynamics of India's multicultural, multiracial, multilingual and multi-religious reality is necessary if they are to foster social cohesion. In-service teacher education programmes are characteristically more contemporary in context and approach than pre-service programmes. They tend to be more interactive, dynamic, lively and participatory. The participants also tend to come from even more diverse backgrounds, at least at the higher levels of training. This itself provides a practical model for learning to live together—for the social cohesion education ought to foster.

Both the formal and informal aspects of in-service training programmes can enhance teachers' commitment to learners and to society and their awareness of

relevant social realities. Such programmes can help provide committed teachers with more in-depth understanding of and appreciation for the educational needs of disadvantaged groups and children with learning disabilities, thus enabling them to refine their own strategies of interaction with parents and community members. Even short-term in-service programmes can serve as sources of enrichment for teachers by increasing their motivation, enhancing their self-concepts and giving them opportunities to reflect upon their experiences. These opportunities could help teachers be more receptive, perceptive, reflective, innovative and dynamic as they set objectives and implement strategies designed to foster social cohesion.

Commitment

Over the past five decades, educational planners in India have focused on curricular requirements and changes in a gradual and comprehensive manner. Only in recent years have educational planners given appropriate scope to institutional autonomy and flexibility in curricular development.

Infrastructure and resource concerns make it especially crucial to ensure the availability of effective and committed teachers. The NCTE has developed a matrix of competencies, commitment and performance areas designed to facilitate the preparation of such teachers (Rajput & Walia, 1998; Walia, 1998). A focus on contextual and management competencies and on skills related to parental and community concerns can help teachers and, through them, students to live together in harmony. The enhancement of commitment to the learner, society and basic human values can contribute to increased social cohesion, as can an emphasis on continuing life-long learning.

Community and cohesion

Five decades after the signing of India's Declaration of Independence, a constitutional amendment has transferred responsibility for basic education to village-level bodies. The success of this bold approach depends on the proper delineation of the ways in which teachers are expected to interact with students, parents and community members. The seeds of social cohesion are sown within families, communities and schools. Thus, teacher education programmes must provide adequate opportunities for participants to interact with various segments of the communities they serve, thus exposing student-teachers to community diversity and preparing them to respond to various kinds of actual and potential conflicts. Such opportunities will enable prospective teachers to develop communication skills and the capacity to observe and analyse. Two decades ago, India's national teacher education curriculum was modified to ensure that each teacher-trainee spends a substantial amount of time working 'on the ground' in an Indian community or communities. Subsequent experience has made it clear that even more community involvement on the part of prospective teachers would be useful.

The development of a comprehensive government school system has been a national policy objective in India for several decades. The creation of such a system was identified as a goal in 1968 (India, 1968) and reasserted in 1986 and 1992. Progress towards the achievement of this goal has been limited, however. Private schools—which charge high fees but whose students seems to out-perform those in government schools—are all the rage. The increase in the number of these schools has exerted a demoralizing effect on those parents and students—the vast majority—who cannot afford private school fees. Education specialists have concluded that if responsibility for the management of government schools is localized, these schools could be rendered more efficient and the academic performance levels of their students improved. But local control, while valuable, is not enough to solve the problems government schools face in India. A large number of schools have only one teacher each at the primary level. Preparing a teacher to deal with students who may have serious deprivations or to handle multi-grade classrooms requires intensive spiritual and critical teacher training. Sound and well-designed participatory and interactive teacher education programmes are prerequisites to the creation of a cohesive society, whose members are even now being educated in India's schools.

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LEARNING TO LIVE TOGETHER

FUTURE TEACHERS' CONCEPTIONS

CONCERNING THE LEARNING

CAPACITY OF PUPILS

IN MULTICULTURAL SCHOOLS

IN SOUTH AFRICA

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Introduction

The development of positive attitudes among future teachers towards pupils from different ethnic, racial, linguistic and religious groups is a priority in teacher educa-

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tion world-wide (Gagliardi, 1994). Thus, an important aim of teacher education programmes should be to help prospective teachers to change negative feelings towards pupils from diverse groups and to develop a positive disposition instead. Against this background, a comparative international research project investigating future teachers' conceptions about the learning capacity of pupils from different ethnic, social and cultural groups was conducted in ten countries in collaboration with UNESCO's International Bureau of Education (IBE) (Gagliardi, 1994). This project aimed at helping member States of UNESCO to improve the training of teachers working with pupils from different groups. The participating countries were Bolivia, the Czech Republic, Jordan, Lebanon, Mauritius, Mexico, Pakistan, Poland, Senegal and Spain (Gagliardi, 1994). Future teachers' conceptions about and attitudes towards pupils from different groups were explored by means of a multiple-choice questionnaire submitted to samples comprising first-year students from teacher training institutions in each of those countries (Gagliardi, 1994). As a result of links established between the IBE and the University of South Africa, a similar investigation based on the research design used in the ten-nation IBE research project was undertaken in South Africa. This article presents the findings of that investigation.

Teacher education in South Africa

Prior to the first democratic elections held in South Africa—in 1994—the education system, including teacher training and state schools, was racially segregated (Claassen, 1993). Since 1994 an open admission policy has been in force throughout the education system. This has set in motion a process of desegregation of educational institutions. The desegregation process taking place in schools has highlighted the need for all teachers to develop the knowledge, skills and attitudes which will equip them to work effectively with all children, regardless of their life experiences, gender, language backgrounds, race or family socio-economic status, through appropriate teacher education programmes. Teacher education in South Africa is by diverse teacher education providers: universities, technikons, colleges of education and private for-profit colleges. Teacher training colleges are the main providers of teacher education and educate about two-thirds of all new teachers annually (Republic of South Africa, 1997). In spite of desegregation, many educational institutions in South Africa remain monocultural, largely because of population numbers and distribution. For example, the majority of teacher training colleges cater exclusively for black students. Yet, according to Squelch (1993), multicultural approaches in teacher education curricula should not be limited to those institutions which cater for a multiracial student body only. Equal educational opportunities and a culture of tolerance will not be achieved unless they are accompanied by comprehensive reforms throughout the entire teacher education system.

Very few, if any, studies have yet been done on the effect of teachers' conceptions about and attitudes towards culturally diverse groups in multicultural schools

in South Africa. Consequently, this study makes an important contribution to the field. In contrast, there is an expanding body of overseas research available in this regard. For example, numerous studies undertaken in the United States indicate that teachers tend to treat and cherish expectations about students belonging to minority groups differently and that the cultural background of students is often a reason for this differential treatment (Rios, 1996). According to Sadker and Sadker (1985), teachers tend to interact with, call on, praise and intellectually challenge White, male middle-class students most frequently and reprimand Black, male students most often. A possible explanation for this behaviour in the classroom is the effect of teachers' thinking on their actions in multicultural contexts (Rios, 1996). Inconsistencies have been observed between teachers' beliefs and their actions in the classroom. In this regard, teachers tend to be consistent in thought and action over time in their interactions with pupils (Rios, 1996).

Teachers' conceptions and attitudes are formed by, among other things, their personal experiences and professional education. On a personal level, teachers' conceptions are located in the individuals' psyche (for example, in beliefs, values, biases, prejudices and generalizations drawn from personal experience). As a result, teachers' conceptions, attitudes and personal experience may be fundamentally at odds with the experiences of their students who come from a different background with regard to class, religion, gender and culture (Rios, 1996). Moreover, teachers' conceptions are also shaped by a complex and extended process of socialization, which takes place as a result of the kind of teacher education received, teaching experience, actual classroom practice as well as their individual response to the former. However, Pohan (1996) points out that pre-service teachers' beliefs about teaching and learning often serve as a filter through which all that is encountered during their education programmes is interpreted. Thus, in spite of progressive teacher education, which prepares teachers to react in culturally responsive ways, teachers may unconsciously resist this kind of training. To be effective, teacher education programmes dealing with multicultural issues should not only focus on increasing teachers' content and pedagogical knowledge but also give attention to the disposition of prospective teachers, since multicultural competence appears to be a function of beliefs, knowledge, skills and experience (Pohan, 1996).

Research design

In the light of the need to develop effective teacher training programmes for multicultural education, the project aimed at gathering data about future teachers' conceptions about:

- the main objectives of the school;
- different groups of pupils with whom teachers will have to interact in a multicultural school in terms of:
 - learning abilities;
 - causes of learning difficulties;

- the solutions suggested for the learning difficulties of pupils belonging to the different groups.

The data-gathering instrument was the multiple-choice questionnaire which was developed and provided by the IBE and had been used in the ten-nation IBE project. It consisted of seven sections aimed at analysing future teachers' conceptions about and attitudes towards pupils from specific groups. The IBE guidelines for the sample stipulated the use of first-year student teachers at teacher training institutions. Moreover, according to the guidelines, three ethnic or cultural groups, namely a majority group and two minority groups, had to be selected by the researchers. In this case, Black, Asian and White groups were selected since these were the groups present in schools at which future teachers would be teaching. The groups were represented equally in the sample of respondents. Furthermore, these groups formed the basis for the questions contained in the questionnaire. Sampling was done in four urban multiracial teacher training colleges, three situated in the province of Gauteng and the fourth in the province of Kwa-Zulu-Natal. The basic sample population consisted of 503 respondents. A random sampling was then done to constitute a sample of 300 respondents as stipulated by the IBE research design. This sample contained 100 respondents from each of the three groups chosen. Data obtained from the questionnaire were analysed according to the procedures determined by the IBE. The SPSS statistical software was used. A probability level of $p = 0.05$ was set for all tests of statistical significance.

Research findings

The following section presents and discusses the research findings. Respondents' conceptions about the main objectives of schools (question 1), about diverse groups of pupils in terms of learning abilities (question 2), causes of learning difficulties (question 3) and the solutions envisaged for resolving learning problems in multicultural schools in South Africa (question 5) are discussed. Inter-group distances, the role of the teacher and the motivation for the choice of profession were also investigated by the questionnaire but are not reported on in this article.

THE MAIN OBJECTIVES OF THE SCHOOL

This question offered the respondents twenty-seven objectives which they had to judge as vital, important, not very important or as not concerning the school. Table 1 shows the percentage of respondents who indicated a particular scale option for every objective. Items are ordered according to the percentage of students who rated them as 'vital'.

TABLE 1. Respondents' views on the main objectives of the school (question 1)

Number and item	Does not concern the school (%)	Not very important (%)	Important (%)	Vital (%)	Dimension
20 to be able to read, write and count	0.3	2.0	12.8	84.8	Instrum.
1 to have confidence in themselves	0	1.0	32.0	67.0	Instrum.
23 to have self-respect	2.0	2.7	30.7	64.7	Moral
4 to show understanding for others	1.0	5.0	41.8	52.2	Communi.
21 to show respect for authority	5.0	2.3	42.6	50.0	Conform.
2 to be aware of their responsibilities	1.0	2.0	47.0	50.0	Moral
10 to learn self-control	2.7	3.0	45.8	48.5	Instrum.
5 to concentrate and be studious	0.7	3.7	49.5	46.1	Conform.
22 to adopt clean habits	2.7	5.7	47.5	44.1	Instrum.
6 to develop their morals	3.7	5.0	49.0	42.3	Moral
8 to be orderly and punctual	1.3	5.7	51.8	41.1	Conform.
13 to express themselves easily	1.7	7.4	51.8	39.1	Instrum.
17 to obey	2.3	9.0	49.7	39.0	Conform.
26 to help each other and to co-operate	0.7	3.4	57.4	38.6	Communi.
16 to develop their imagination	3.3	9.7	50.7	36.3	Instrum.
19 to have a sense of pride	12.8	14.8	42.6	29.9	Moral
11 to be interested in different disciplines taught at school	1.3	12.4	57.2	29.1	Conform.
7 to be familiar with their own culture	12.4	16.8	42.6	28.2	Communi.
24 to be aware of the difficulties facing their country	8.3	13.0	51.7	27.0	Communi.
9 to form part of their community	9.4	13.5	51.5	25.6	Communi.
15 to be active citizens	14.0	16.7	48.8	20.4	Communi.
14 to be interested in how things work	4.4	16.1	59.7	19.8	Instrum.
3 to have a critical attitude	10.9	29.9	39.5	19.7	Communi.
12 to weigh up their options	5.0	20.1	56.5	18.4	Moral
27 that boys act like boys and girls like girls	16.1	30.8	36.1	17.1	Conform.
25 to develop their sporting abilities	1.7	26.3	57.2	14.8	Instrum.
18 to appreciate the arts	6.0	46.5	41.8	5.7	Instrum.

Table 1 shows that the six items considered *vital* by the highest proportion of respondents are as follows:

- Option 20: to be able to read, write and count (84.8%);
- Option 1: to have confidence in themselves (67.0 %);
- Option 23: to have self-respect (64.7%);
- Option 4: to show understanding for others (52.2%);
- Option 21: to show respect for authority (50.0%);
- Option 2: to be aware of their responsibilities (50.0%).

Grouping of objectives in dimensions

To further understand the conception of the school's objectives, four dimensions were defined: the instrumental dimension, the moral dimension, the community dimension and the role-conformity dimension. Each dimension is defined by means of a group of objectives. It is thus possible to show respondents' conceptions of the school in relation to each of these dimensions. To obtain an indication of whether the clustering of objectives in dimensions could be considered valid, item field total correlations and accompanying Cronbach Alpha coefficients were calculated for each dimension.

The *instrumental* dimension of the school's objectives in the general sense of the term expresses the notion that the school strives to give children the means to enable them to acquire knowledge or to develop certain aptitudes. In other words, the instrumental dimension sums up the notion of empowering the children. This dimension groups items 1, 10, 13, 14, 16, 18, 20, 22 and 25:

- 1 to have confidence in themselves;
- 10 to learn self-control;
- 13 to express themselves easily;
- 14 to be interested in how things work;
- 16 to develop their imagination;
- 18 to appreciate the arts;
- 20 to be able to read, write and count;
- 22 to adopt clean habits;
- 25 to develop their sporting abilities.

The *moral* dimension expresses the idea of a school being required to teach the pupils values such as morality, responsibility and self-respect. This dimension groups items 2, 6, 12, 19 and 23:

- 2 to be aware of their responsibilities;
- 6 to develop their morals;
- 12 to weigh up their options;
- 19 to have a sense of pride;
- 23 to respect themselves.

The *community* dimension conveys a conception of the school being required to develop the necessary aptitudes for living in harmony with others, teaching pupils to have an active social life and making pupils aware of the country's problems. This dimension groups items 3, 4, 7, 9, 15, 24 and 26:

- 3 to have a critical attitude;
- 4 to show understanding for others;
- 7 to be familiar with their own culture;
- 9 to form part of their community;
- 15 to be active citizens;
- 24 to be aware of the difficulties facing their country;
- 26 to help each other and to co-operate.

The dimension of *role conformity* conveys the image of a school responsible for

teaching pupils to behave in accordance with roles more traditionally assigned to them: respect for rules, hierarchies, conformity to gender roles and the acquisition of educational skills in the strict sense of the term. This dimension groups items 5, 8, 11, 17, 21 and 27:

- 5 to concentrate and be studious;
- 8 to be orderly and punctual;
- 11 to be interested in different disciplines taught at school;
- 17 to obey;
- 21 to show respect for authority;
- 27 that boys should act like boys and girls like girls.

In calculating the main scores for the dimensions, an objective of the school was allocated a score of 0 if it was considered of no concern and a score of 1, 2 or 3 if considered not very important, important or vital, respectively. The scores calculated for the four dimensions identified are presented in Table 2. The table shows the average importance for each dimension observed for all these responses, that is the importance given to each dimension by the respondents. Next there is the theoretical average, that is what would be obtained if all respondents considered the items of each dimension 'important'. Finally, the table shows the Cronbach Alpha value which indicates the reliability of the scale measuring each dimension. The importance of a dimension is determined by comparing the mean score of a dimension with its theoretical mean.

TABLE 2. Responses to the objectives of the school in terms of the four dimensions

Dimensions observed	Observed average (\bar{X}_1)	Theoretical average (\bar{X}_2)	Cronbach Alpha	$\frac{(\bar{X}_1 - \bar{X}_2)}{\bar{X}_2} \times 100$
Instrumental	20.02	18	0.63	11.22
Moral	11.12	10	0.62	11.20
Community	14.01	14	0.63	0.07
Role conformity	13.03	12	0.52	8.58

Three of the dimensions observed averages are noticeably higher than the theoretical averages (11.22%, 11.20% and 8.58% higher, respectively), with a reliability coefficient of 0.52 and higher for each of them. The dimension reflecting role conformity shows a lower observed average than the other three. Thus, the findings indicated that the respondents preferred the instrumental and moral objectives of the school. In other words, respondents desired a school which provides the pupils with means, which allows them to acquire knowledge but which also develops certain aptitudes (instrumental dimension). They also expect the school to teach the pupils morality, responsibility and self-respect (moral dimension).

DIFFERENTIATION AMONG GROUPS

This investigation deals with the conceptions that the respondents have of the three different groups of pupils which they will encounter as teachers in multicultural schools in South Africa. These conceptions co-determine how the respondents as future teachers may define and tailor their interaction with the pupils with whom they will be interacting when practising their profession.

The social conception specifically allows each individual to be classed according to a category (process of categorization) and then for the attribution to this individual of characteristics specific to that category (process of attribution). In everyday life categorization and attribution serve to reinforce the existing conception if they render situations experienced more coherent. By contrast, the inadequacy of the conceptions of everyday experiences leads to the modification of the categorization and the attribution which will either enrich or transform these conceptions. People with stereotypical conceptions of a group will tend to behave in a very stereotypical manner towards the individuals because they attribute to each individual of the group the characteristics of the group and not the characteristics which are specific to that individual. On the other hand, people who have a complex conception of a group will tend to behave in a differentiated manner towards the members of an identical group because these people are able to use categories other than merely group identity in which to classify these people. Consequently, they can attribute to these people different characteristics from those which are specific to the group to which they belong. Social conceptions vary according to the social characteristics of the individuals, and most notably of the groups to which they belong. Social groups have conceptions of the different objects and actors with which they interact. Certain groups may have common conceptions of the world which surrounds them, while other groups may have particular conceptions specific to them. The groups which interact most often develop reciprocal conceptions. Thus people's membership of a group is important when it concerns the definition or the characterization of another group or of individuals who belong to it (Gagliardi, 1994).

These processes were dealt with by first illustrating the conceptions of the characteristics of three groups. To do this, the respondents were asked to evaluate the ease of attaining the objectives of the school as put forward in question 1 of the questionnaire. Each respondent had to say whether certain objectives of the school were easier to achieve than others for the pupils belonging to each of the groups chosen. This approach allowed representations of the conceptions which the respondents have of the learning aptitudes of the three groups to be compiled.

The categorization into three groups was previously determined while bearing in mind the local context and was put forward as such to the respondents. This categorization must serve as the foundation both for the social conception and for the attribution made by the respondents; it is thus simple and inflexible. The three groups defined in this questionnaire are Black pupils (B), Asian pupils (A) (in South Africa, 'Asian' is understood as referring to those of Indian origin) and White pupils (W).

The respondents were then asked to indicate whether they belonged to one of the three groups chosen. Testing was done to see whether this group identity translated itself by some form of closeness to its group and also to see whether they felt closer (attracted) to one of the other groups.

First, which conception the respondents of the different groups have of the learning aptitudes of the pupils of the three groups is indicated. Then it is shown how the respondents attribute the causes of educational difficulties, depending on the groups to which the pupils belong. After that we look at how the differentiation of the learning aptitudes between the groups influences the differentiation of the causes of educational difficulties. Finally, the coherence of the group identity sentiment is examined.

The inter-group conceptions of learning aptitudes

In question 2, each respondent had to evaluate whether it is easy, difficult or very difficult to convey the objectives of the school as identified in question 1 of the questionnaire to pupils of the Black, Asian or White groups respectively. To analyse the inter-group conceptions, the overall aptitude ratings for each group as well as aptitude scores for each learning domain are determined in terms of the same dimensions formulated for question 1 (i.e. the instrumental, moral, community and role-conformity domains).

The three overall aptitude ratings for each group were calculated by awarding 1 to the response 'very difficult', 2 to the response 'difficult' and 3 to the response 'easy', and by adding up the score for each group. For each group we therefore have two 'easy' aptitude ratings, which are given to it by the respondents belonging to the two other groups, as well as an aptitude rating which the respondents belonging to this group give it. To obtain comparable scores, no rating is calculated for the respondents who consider that one or more items do not concern the school. The same procedure is used to calculate the aptitude ratings of each group, for each learning domain. These aptitude ratings do not indicate any real learning ability of the pupils of one or other group, but simply the conception of it which the respondents have. It is thus indispensable to proceed to inter-group comparisons in order to reveal the conceptions which the groups have of one another.

Three notions are used here to make the comparisons between the evaluations of the groups. *Auto evaluation* compares the aptitude rating which the members of each group attribute to the pupils of their own group with that which they attribute to pupils of the two other groups. For example, the auto evaluation of the Black group refers to comparing the aptitude rating which Black respondents attribute to Black pupils with the aptitude rating which Black respondents attribute to White and Asian pupils.

When reference is made to *hetero evaluation*, we are comparing the aptitude ratings which the members of one group attribute to pupils of their own group with the aptitude ratings which the members of the two other groups attribute to them.

When we speak of the hetero evaluation of the Asians, we are comparing the aptitude ratings which the Asian respondents attribute to their own pupils with the aptitude ratings which the Black and White respondents attribute to the Asian pupils.

Finally, *differentiated perception* is measured by comparing the ratings which the members of one group attribute to the pupils of the two other groups. If we speak of the differentiated perception of the Blacks and Asians by the Whites, we are only comparing the aptitude ratings which Whites attribute to Black and Asian pupils.

Before the analyses of the conceptions of learning aptitudes are presented, the following must be stated: on the one hand, we are analysing the conceptions which the chosen groups have of the learning aptitudes of the pupils in these groups. It is thus clear that when we say that one group over- or underevaluates another group, we are only accounting for the perception which this group has of the learning aptitudes of another group. It is also essential to remember here that our analysis is based on a sample of the respondents of four teacher training colleges, so that when we speak, for example, of what the Blacks think of the Asians, one must always understand a wording such as 'the Black respondents surveyed think that the learning aptitudes of the Asian pupils...'.

Auto-evaluation

The statistical analysis for auto-evaluation was done using respondents' t-test for pairs. The results discussed above can be given in tabular form as follows:

TABLE 3. Auto-evaluation of the perceptions of the Black group

Perceptions of Black group				
Comparison	Domain	Mean values		p-value*
		B	W	
B and W	Instrumental	22.9	25.7	0.000
	Moral	12.9	13.9	0.001
	Community	18.8	18.1	0.099
	Conformity	15.3	15.4	0.848
Comparison	Domain	Mean values		p-value*
		B	A	
B and A	Instrumental	22.8	24.4	0.003
	Moral	12.8	13.2	0.162
	Community	18.7	17.9	0.033
	Conformity	15.3	14.9	0.183

TABLE 4. Auto-evaluation of the perceptions of the Asian group

Perceptions of Asian group				
Comparison	Domain	Mean values		p-value*
		A	B	
A and B	Instrumental	23.5	18.9	0.000
	Moral	13.5	11.4	0.000
	Community	18.3	16.5	0.000
	Conformity	15.7	12.9	0.000
Comparison	Domain	Mean values		p-value*
		A	W	
A and W	Instrumental	23.4	25.2	0.000
	Moral	13.5	13.6	0.308
	Community	18.2	18.2	0.818
	Conformity	15.7	15.6	0.661

TABLE 5. Auto-evaluation of the perceptions of the White group

Perceptions of White group				
Comparison	Domain	Mean values		p-value*
		W	B	
W and B	Instrumental	24.6	19.9	0.000
	Moral	13.8	10.8	0.000
	Community	18.3	16.7	0.000
	Conformity	16.0	12.1	0.000
Comparison	Domain	Mean values		p-value*
		W	A	
W and A	Instrumental	24.5	22.0	0.000
	Moral	13.7	12.7	0.000
	Community	18.1	17.8	0.224
	Conformity	16.1	14.8	0.000

* A p-value < 0.05 implies a significant difference at the 5% level.

Overall, the *Black respondents* differentiate the learning aptitudes of Black pupils from those of White pupils in favour of the White pupils. They also consider that the pupils of their group learn the instrumental and moral dimensions significantly less easily than the White pupils. There is no significant overall differentiation of learning aptitudes by Black pupils comparing themselves with Asian pupils.

However, their perception is that Black pupils learn the community dimension more easily and the instrumental dimension less easily than the Asian pupils.

The *Asian respondents* differentiate significantly between all the learning aptitudes of the Asian pupils compared with those of the Black pupils. The Asians perceive the pupils belonging to their group as having overall more learning aptitudes in the instrumental, moral, community and role-conformity domains than the Black pupils. They perceive the pupils of their group to differ significantly from White pupils in the instrumental and community domains, where they consider White pupils to be superior.

White respondents differentiate significantly overall the learning aptitudes comparing themselves to the Black pupils and over three of the learning aptitudes comparing themselves to Asian pupils. Only in the domain of community do they not differentiate significantly. White pupils perceive that they have greater learning aptitudes in all four domains compared with Black pupils and in the instrumental, moral and role-conformity domains compared with Asian pupils.

Hetero-evaluation

The hetero-evaluation was done by ANOVA's comparing the average ratings for all three groups and using Bonferroni tests to determine which group differed from which. Two asterisks (**) indicate a significant difference between that value and *both* other values in the same row. A single asterisk (*) indicates a significant difference between that value and the *one* value most different from it in the same row.

TABLE 6. Hetero evaluation of the perceptions of Black, Asian and White pupils

		Average rating given by group		
To target group		Black	Asian	White
Black	Instrumental	22.8**	18.9	19.9
	Moral	13.0**	11.4	10.8
	Community	18.8**	16.5	16.7
	Conformity	15.4**	12.9	12.2
Asian	Instrumental	24.3	23.5	22.1
	Moral	13.2	13.5*	12.7
	Community	17.9	18.3	17.8
	Conformity	15.0	15.7*	14.8
White	Instrumental	25.7*	25.2	24.6
	Moral	13.9	13.6	13.7
	Community	18.3	18.2	18.3
	Conformity	15.7	15.6	16.1

Overall, in all four learning domains the *Black respondents* attribute significantly higher scores to their own group than the White and Asian groups attribute to them.

Asian respondents rate themselves significantly higher in the moral and role-conformity domains than the White respondents rate them. In the instrumental domain, they rate themselves lower than the Black respondents but higher than the White respondents rate them. In the community domain, there is no significant difference.

There is no significant difference in how the *White respondents* perceive themselves and how they are perceived by the Black and Asian groups in the moral, community and role-conformity domains. In the instrumental domain, the White respondents rate themselves significantly higher than the Black respondents rate them.

Differential perception

The results of the differential perception are summarized in the following table.

TABLE 7. Differential perceptions of the three groups

Average score for group			
Group	Domain	Asian	White
Black	Instrumental*	24.3	25.6
	Moral*	13.2	13.9
	Community	18.4	17.9
	Conformity	15.5	15.1
		Black	White
Asian	Instrumental*	18.9	25.2
	Moral*	11.3	13.6
	Community*	18.2	16.6
	Conformity*	15.6	12.9
		Black	Asian
White	Instrumental*	19.9	22.1
	Moral*	10.9	12.7
	Community*	17.8	16.7
	Conformity*	14.8	12.3

Note: In the domains marked with an asterisk (*), significant differences occurred at the 5% level. Respondents' t-tests for paired samples were also used in this analysis.

The *Black respondents* consider the White pupils to be significantly superior to the Asian pupils in the instrumental and moral domains. The *Asian respondents* consider the White group to be significantly superior to the Blacks in the instrumental and moral dimensions but vice versa in the community and role-conformity dimensions. The *White respondents* rate the Asian group significantly higher than the Black group in the instrumental and moral domains and vice versa in the community and role-conformity domains.

Synthesis

Overall, *Black respondents* manifest a negative group identity bias (i.e. not in their favour): they feel that it is easier for the White pupils to achieve all the objectives of the school (question 1) than it is for the pupils of their own group. This negative group identity bias in respect of the White group is statistically significant in the instrumental and moral domains. However, the *White respondents* manifest a positive group identity bias (i.e. in their own favour) in relation to their own group by attributing greater learning aptitudes to the pupils of their own group than to the Black and Asian pupils. They reaffirm this judgement in the four learning domains in relation to the Black pupils and in three out of four learning domains in relation to Asian pupils.

The case of the *Asian respondents* is more complex. They manifest a positive group identity bias to the Black group in all four learning domains but manifest a negative group identity bias to the White group only in the instrumental and community domains.

The hetero evaluation shows that the opinion the three groups have of the learning aptitudes of the pupils of their group is not shared by the other groups. In general, each group attributes lower ratings to the pupils of the two other groups than to its own pupils.

Finally, when the aptitudes accorded to the two other groups are compared, it is noted that all three groups differentiate significantly between the pupils belonging to the two other groups in the instrumental and moral domains.

The analysis of question 2 showed the existence of a negative group identity bias among Black respondents when they compare themselves with Whites. The Whites, by contrast, show signs of a positive group identity bias relative to the Asian and Black groups, whereas the Asian respondents show a positive bias to the Blacks and a negative identity bias to the Whites.

ATTRIBUTION OF THE CAUSES OF LEARNING DIFFICULTIES

Question 3 allowed respondents to attribute learning difficulties of the pupils of the different groups to three of the twelve causes put to them. In this way, they could attribute different causes to the learning difficulties of the pupils of the groups by using the categorization proposed in the questionnaire, or they could refrain from differentiating the groups by attributing causes to them in an identical manner.

The attribution of causes conveys the conception which the respondents have of the groups. A respondent who does not differentiate the learning aptitudes of the groups should not choose different causes for the learning difficulties of the pupils of the three groups. By contrast, a respondent who strongly distinguishes the learning aptitudes of the pupils according to their groups should also express a clear-cut opinion on the causes of the difficulties. A complex conception of groups in terms of learning aptitudes should encompass a complex attribution of causes of learning difficulties. The respondents made the following choices from among the proposed causes:

TABLE 8. Frequencies of respondents in each category

Item	No.	Black			Asians			White		
		B	A	W	B	A	W	B	A	W
Socio-economic level of the parents	1	39	26	31	31	40	44	29	33	31
Pupils' mother tongue which is not the language of teaching	2	59	25	10	71	1	2	49	46	8
Lack of teaching means and material	3	62	20	12	56	34	6	58	17	12
Parents' expectations of the school	4	6	35	41	2	43	42	3	36	54
Lack of homogeneity among pupils in the same class	5	7	30	39	12	27	29	4	14	13
Parents' level of education	6	19	20	22	10	18	13	32	20	17
Intelligence of the pupils	7	8	27	32	12	15	27	18	10	15
Elitist attitude of the school	8	6	24	23	5	14	40	5	16	31
Number of pupils per class	9	40	18	22	43	33	12	41	40	49
Pupils' difficulties with their mother tongue	10	7	8	5	6	7	2	10	11	9
Teachers' level of training and/or qualifications	11	14	18	24	6	32	11	21	16	29
Gulf between life at school and life in the family	12	30	41	31	35	32	43	29	40	32

Overall, the attribution of the causes of learning difficulties is extremely diversified.

Black respondents attribute the two principal causes for setback among Black pupils to item 3—the lack of means and material (62)—and item 2—the pupils' mother tongue which is not the language of teaching (59). They attribute the two principal causes for setback among Asian pupils to item 12—the gulf between life at school and life in the family (41)—and item 4—parents' expectations of the school (35). They attribute the two principal causes for setback among White pupils to item 4—parents' expectations of the school (35)—and item 5—lack of homogeneity among pupils in the same class (41).

Asian respondents attribute the two principal causes for setback among Black pupils to item 2—the pupils' mother tongue which is not the language of teaching (71)—and item 3—lack of teaching means and material (56). They attribute the two

principal causes for setback among Asian pupils to item 4—parents' expectations of the school (43)—and item 1—the socio-economic level of the parents (40). They attribute the two principal causes for setback among White pupils to item 1—the socio-economic level of the parents (44)—and item 12—the gulf between life at school and life in the family (43).

White respondents attribute the two principal causes for setback among Black pupils to item 3—lack of teaching means and material (58)—and item 2—pupils' mother tongue which is not the language of teaching (46). They attribute the principal causes for setback among Asian pupils to item 2—the pupils' mother tongue which is not the language of teaching (46)—and item 9—the number of pupils per class (40)—and item 12—the gulf between life at school and life in the family (40). They attribute the two principal causes for setback among White pupils to item 4—parents' expectations (54)—and item 12—the gulf between life at school and life in the family (40).

In conclusion, the differentiation in the attribution of causes of learning difficulties leads to the following:

- The differentiation in the attribution of causes of learning difficulties is less pronounced than that observed in the case of learning aptitudes. However, it confirms the fact that belonging to a group goes hand in hand with the very differentiated social conceptions of members of the other groups.
- Belonging to one group or another significantly increases the level of the overall differentiation of learning aptitudes. Black respondents differentiate significantly less than Asian and White respondents. There is no significant difference between Asian and White respondents.

SOLUTIONS TO LEARNING DIFFICULTIES

Respondents were also asked to choose solutions that they anticipated would resolve learning difficulties experienced by pupils. Question 5 required them to respond to each of ten possible solutions that aimed at resolving the learning difficulties of pupils and indicate which they thought were viable.

From Table 9 it is evident that the solutions most frequently mentioned by respondents are: 'decreasing the number of pupils per class to be able to give each child more attention' (96.3%); 'providing supplementary courses for pupils with difficulties' (86.8%); 'developing specific training for teachers who will take multicultural classes' (83.3%); and 'mixing pupils of different cultures to promote interchange and learning' would be likely to solve learning difficulties (76.9%).

'Adapting the syllabus to different cultural groups' (71.2%); 'grouping pupils in different classes according to their needs and interests' (65.6%); 'teaching each pupil to master the medium of instruction so that he (or she) can acquire further knowledge' (63.9%); and 'helping each pupil to progress in his or her mother tongue' (53%) were chosen to a lesser extent, but were nevertheless convincing solutions for more than half of the respondents.

TABLE 9. Solutions to resolve learning difficulties

Possible solutions	Yes	No	Do not know	Total
1. Grouping pupils in different classes according to their needs and interests	N 196 % 65.6	87 29.1	16 5.3	299 100
2. Providing separate schools or classes according to the children's mother tongues	N 102 % 34.0	175 58.3	23 7.7	300 100
3. Teaching each pupil to master the medium of instruction so that he (or she) can acquire further knowledge	N 191 % 63.9	66 22.1	42 14.0	299 100
4. Mixing pupils of different cultures to promote interchange and learning	N 230 % 76.9	41 13.7	28 9.3	299 100
5. Providing supplementary courses for pupils with difficulties	N 256 % 86.8	16 5.4	23 7.8	295 100
6. Developing specific training for teachers who will take multicultural classes	N 249 % 83.3	26 8.7	24 8.0	299 100
7. Decreasing the number of pupils per class to be able to give each child more attention	N 289 % 96.3	8 2.7	3 1.0	300 100
8. Adapting the syllabus to different cultural groups	N 210 % 71.2	46 15.6	39 13.2	295 100
9. Helping each linguistic, cultural, religious and ethnic group to determine its own education	N 103 % 34.6	141 47.3	54 18.1	298 100
10. Helping each pupil to progress in his or her mother tongue	N 157 % 53.0	88 29.8	51 17.2	296 100

In comparison, fewer respondents felt that learning difficulties could be resolved by means of helping each linguistic, cultural, religious and ethnic group to determine its own education (34.6%) and providing separate schools or classes according to the children's mother tongue (34.0%).

Furthermore, the solutions listed above have been defined in terms of three dimensions.

First, the *separation* dimension is reflected in items 1, 2, 9 and 10:

1. grouping pupils in different classes according to their needs and interests;
2. providing separate schools or classes according to the children's mother tongue;
9. helping each linguistic, cultural, religious and ethnic group to determine its own education;
10. helping each pupil to progress in his or her mother tongue.

This dimension reflects those solutions which require pupils to be separated according to their needs and interests or mother tongue or according to their cultural, religious or ethnic group so that they can be given specific instruction.

The second dimension is the *compensation* dimension and is reflected in items 5, 6, 7 and 8:

5. providing supplementary courses for pupils with difficulties;
6. developing specific training for teachers who will take multicultural classes;

7. decreasing the number of pupils per class to be able to give each child more attention;
8. adapting the syllabus to different cultural groups.

This dimension groups solutions which include compensatory measures to remedy learning difficulties. These compensatory measures range from instituting supplementary courses to adapting the syllabus, to giving teachers specific multicultural training or to decreasing the number of pupils per class.

Finally, items 3 and 4 comprise the *integration* dimension:

3. teaching each pupil to master the medium of instruction so that he (or she) can acquire further knowledge;
4. mixing pupils of different cultures to promote interchange and learning.

The importance of these types of solutions is reflected in Table 10 by taking into account the number of respondents indicating items making up each dimension.

TABLE 10. Importance of solutions according to dimensions

	Yes	No	Do not know	Yes/item
Compensation (4 items)	1004	96	128	251
Separation (4 items)	558	491	144	140
Integration (2 items)	421	107	70	211

The respondents were in favour of compensatory measures that range from instituting supplementary courses to adapting the syllabus, to giving teachers specific multicultural training and to decreasing the number of pupils per class. There was almost an equal distribution of those respondents in favour and those not in favour of separation. However, more respondents favoured separation (according to needs and interests or mother tongue or according to their cultural, religious or ethnic group) than those who did not favour separation. There were nearly four times as many respondents who chose integration items (teaching each pupil to master the medium of instruction before acquiring other concepts or mixing pupils of different cultures to promote interchange and learning) as there were respondents who did not choose such items.

Conclusion

With regard to solutions to learning problems which schools can offer for pupils from the groups designated in the questionnaire, it is significant that respondents were clearly in favour of compensatory strategies (such as smaller classes, teacher training in multicultural education, adjustments to the curriculum to accommodate diversity and supplementary courses for children with learning difficulties) rather than segregational strategies, particularly when the history of enforced segregated education in South Africa is borne in mind. The need for multicul-

tural teacher training which encourages tolerance of diversity and the reduction of prejudice based on stereotypes is underscored by the responses of respondents concerning the learning abilities of diverse groups of pupils and the causes of learning difficulties. In this regard, the respondents clearly differentiated between the learning aptitudes of pupils from different groups and based this differentiation on conceptions of the group to which pupils belonged. The attribution of learning difficulties encountered by pupils to different causes was very diversified. Moreover, the attribution of causes differed for pupils from each of the three groups. This suggests that the causes of learning difficulties are related to the social conceptions of a group held by the respondents.

Since 1994 South African teachers have been functioning within a single non-racial education system in a democratic South Africa. However, the long-awaited restructuring of education does not minimize the magnitude of the upheaval created by new policies and desegregated schools. Educators at all levels have to learn to cope with the new political, social and educational order. In particular, the development of positive attitudes among the teaching corps towards pupils from different ethnic, racial, linguistic and religious groups is essential if equal educational opportunities are to be ensured. While it is encouraging that respondents in this investigation rejected segregational measures as a solution in multicultural schools, the differentiation between the learning aptitudes of pupils from different groups and the attribution of learning problems to different causes underline the need for teacher education programmes aimed at changing negative feelings towards pupils from diverse groups and developing a positive disposition instead.

Note

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CONVERGENT TEACHING

IN MALI AND ITS IMPACT

ON THE EDUCATION SYSTEM

Samba Traoré¹

Introduction

Like many African countries, Mali undertook a thorough reform of its education system after independence in 1962. The system was no longer meeting its objectives, which included amongst others universal high-quality education. The reform consisted in introducing the use of national languages² in education as soon as possible. As Joseph Poth has said:

It is through the mother tongue [...] that a child will achieve mental takeoff in the early years of schooling. The mother tongue provides a basic factor of equilibrium without which the child's mind becomes atrophied. It enables him to express his thoughts in words and to fit in harmoniously with the world around him. [...] If the school system denies him the chance to use the familiar language medium that can meet his basic need for expression and creativity, it immediately places him in a regressive situation (Poth, 1988).

The French language, when used only for teaching purposes, has led and still leads to considerable educational wastage, high rates of exclusion, repeating and dropout

Original language: French

Samba Traoré (Mali)

Graduated at the *École normale supérieure* in 1976. Taught Russian at the *lycée* until 1982. After postgraduate studies at the A.S. Pushkin Russian Language Institute in Moscow, which led to a doctorate in 1987, he was transferred to the *Institut pédagogique national* (IPN) of the Ministry of Education of Mali in Bamako, where he still lectures. In 1994, he became head of the Literature and Human Sciences Division and is currently in charge of implementing convergent teaching in schools. He has co-authored two works: *Le russe à travers les contes et légendes du Mali: livre de lecture* (1991) [Russian reader: tales and legends of Mali (1991)] and *Guides du maître en langue nationale fulfulde: niveau I et II* (1993) [Teaching guides in the Fulfulde national language: levels I and II (1993)]. His activities are concentrated on the national languages.

and a psychological block on the part of learners. Language is a medium which conveys the socio-cultural values of the people who use it, and the French language in Mali refers to values and ways of thinking which are alien to local learners.

Aware of this fact and in the light of the language and teaching experience it had accumulated in the field of functional literacy in national languages, the second National Seminar on Education, which was held in Bamako (Mali) in December 1978, had already recommended experimenting with national languages in formal education.

In 1979, four experimental schools teaching in Bamanankan (the dominant language in Mali) were opened in the regions of Koulikoro (Kossa and Djifina) and Ségou (Banankoroni and Zanabougou).

The use of national languages quickly proved to be an excellent way of adapting the school to the learner's environment, of considerably reducing school wastage and of improving the quality of teaching. In 1982, then, three more national languages were introduced for teaching: Fulfulde in the Mopti region, and Songhoy and Tamasheq in the Gao, Timbuktu and Kidal regions. After starting in 1979 with four schools and one language, by 1991 national language teaching had spread to almost 800 schools and four national languages right across the country.³

In the light of evaluations, it was found that for the best results to be obtained from national language teaching, the teaching method had to be effective and the teaching material suitably adapted.

However, the teaching methods, teaching programmes and contents used in experimental schools were the same as those used in the traditional schools. The only difference was the teaching language. And those methods and programmes did not take account of the child's experience of language or of what he already knew when he began learning. On the teachers' side, there was also a problem of pronunciation in the transition from the mother tongue to French. The lack of an appropriate method for teaching national languages and suitable teaching material made it difficult to achieve the objectives pursued by the experiments in the use of national languages in formal education.

In order to overcome these difficulties, the education authorities in Mali decided to experiment with a new teaching method known as 'convergent teaching', and in October 1987 two classes were started in the town of Ségou on an experimental basis.

This article deals with the objectives and reasoning underlying convergent teaching: how it was planned, designed and tested in Mali. It also mentions the difficulties encountered when experimenting with the new method, its evaluation and its impact on the education system in Mali, and lastly the prospects for its development.

Principles and foundation of convergent teaching

WHAT IS CONVERGENT TEACHING?

The general aim of convergent teaching, which is an active method of learning languages, is to develop functional bilingualism in the child. Convergent teaching

gives priority to the child's own language, which serves at the same time as a means of communication and expression and as a tool for structuring thought and personality. The introduction of a second language should be contemplated only when the most important types of behaviour, especially those concerned with writing, have been mastered in the mother tongue.

In Mali, convergent teaching has been tried in the first cycle of basic education, with children between the ages of 6 and 14.

THE FOUNDATION OF CONVERGENT TEACHING

A child's mother tongue, in our view, is the only language that can develop in the child the behaviour, attitudes and aptitudes needed for all types of learning. It generates trust and harmony between pupils and their teacher and amongst themselves. It provides the children with a better opportunity to perceive and query the world around them. It frees them of their inhibitions and develops their imagination and creativity.

A child who has learned to read, write and calculate in his own language will use the same skills when learning a second language, which in turn will give him a clearer awareness of his own tongue, his culture and the world around him. This is why convergent teaching advocates as far as possible using a child's mother tongue for basic education, in order to give him the best chance of developing the aptitudes needed for a more proficient learning of reading, writing and mathematics.

According to convergent teaching, initial learning should start from the child's personal experience and should use his awareness of his socio-cultural environment as a reference. The opening to the outside world will occur gradually as the child progresses through school. This also enables the learner to incorporate the school as part of his daily life.

Convergent teaching advocates a differentiated teaching approach, which consists in relating learning tasks to the educational stages reached by children, either in groups or individually. It also allows the full development of the child thanks to favourable teacher/pupil relationships and to expression and communication techniques, which for convergent teaching constitute the basis of all learning.

METHODOLOGY AND TECHNIQUES USED

In schools that have adopted convergent teaching in Mali, the first year is devoted to learning the mother tongue. Spoken French is introduced in the second year, and takes up 25% of class time. In the third and fourth years, the proportions are reversed and 75% of the timetable is given over to learning French (spoken and written). In the fifth and sixth years, work time is evenly divided between the national language and the second language (French). The final allocation of the timetable, however, is left to the teacher, according to the needs of his class. He must make sure that his pupils achieve a balanced knowledge of French and of the mother tongue, so that by the sixth year they are proficient in both languages, that is, they achieve functional bilingualism. In the fifth and sixth years, all subjects are taught in both

languages. In the examination, pupils are tested in French and in the national language. Expression and communication techniques, which — as mentioned above — are the basis of all learning in convergent teaching, are activities that liberate and build up the individual. According to Wambach they encourage the physical and psychic liberation of the individual, allow self-fulfilment and socialization, favour the creation of mental images, develop creativity and foster harmony and serenity in relations with others (Wambach, 1997).

ORAL EXPRESSION

In convergent teaching, since oral expression constitutes the start of learning, national language and foreign language (French) teaching units cover the following activities in addition to expression and communication techniques:

Dialogue: The object of dialogue is to make children talk while they play and to facilitate the transition from oral to written expression. As the lines of dialogue are illustrated, oral expression is triggered by a succession of images related to the lines. A dialogue lesson is conducted as follows: the first stage is to identify characters and to view images, followed by an unspoken presentation of the images by the teacher. The latter then asks the children to start non-verbal dialogue role play, taken from the images they have seen and using only gestures and mimicry. After this initial form of expression, the teacher then gives a verbal presentation of the dialogue. As he speaks the lines, he should as far as possible imitate the various characters involved. This implies that his voice, his intonation and even his gestures must mimic the dialogue characters.

The next stage is verbal role play by the pupils based on the dialogue. In this exercise, verbal role play may not yet be perfect insofar as the children have not yet mastered the lines of dialogue. If so, the teacher will act as prompter. During the role play, the actors should give a good imitation of the characters they impersonate in terms of expression, movements, tension, etc. These two forms of expression (non-spoken and spoken role plays) develop oral expression, imagination and creativity among learners.

Oral expression: The purpose here is to make pupils able to tell a coherent story. It distances the child from immediate experience and entails a reorganization of expression in accordance with the overall structure of the text and the coherence of the ideas expressed, and leads pupils on naturally to the production of written expression. Oral expression is produced by the pupils on the basis of the dialogue or text that they have been through with their teacher. In order to help pupils produce good oral expression, they must first be given a notion of chronology. Stories (drawings) can be mixed up and learners can be asked to reorder them and then comment on the story that emerges. The teacher can ask each pupil to say one sentence on a particular subject. He then gives a rounded-up version. It should be noted that the first oral statements, whether in the national language or in a foreign language, are initially spoken by the teacher until such time as the learners have acquired the necessary language skill to do so themselves.

Written expression: This is the written summary of the dialogue. It constitutes a transition to coded text. The written statement is produced by the pupils and taken down by the teacher under dictation from the pupils in the course of a constant exchange, a game of toing and froing between the children and their teacher, discussing the choice of words and the chronological sequence of ideas. It will be drafted by the pupils as soon as they have the required language skill to do so. When the written statement is produced, the teacher must ensure that the rules of the written code are followed, that is, punctuation, use of capitals, the division of text into paragraphs, macrostructure, connectors and rules of grammar, which all entail rewriting sessions. The written statement can be produced individually or by the group and built up from one or more studied dialogues. The written statements will later be displayed and will constitute a class memory and a basis for learning reading. The best can be shown to other classes.

Reading is learned with exercises built up on those same written statements. Among the exercises, one might mention: exercises for the identification and recognition of words and phrases; exercises to reconstitute words and phrases (passages with gaps, words stuck together, mixed up letters of a word, words of a phrase mixed up), and exercises to check understanding (e.g. right or wrong, read the sentence and underline what has changed).

Story-telling: The purpose here is twofold. On the one hand, it enables pupils to 'live' the life of the characters, their joys, their worries, their successes and their disappointments. The characters' lives are portrayed in a world that appears real to the children. When he introduces the story, the teacher must place himself among the pupils and tell the story with the necessary expressiveness, pauses and intonations by adapting his voice, his look and his gestures to the events of the story. He must adopt an attitude that attracts his pupils' attention and gains their trust. When the story is told in that way, the pupils can relive the events and thereby free themselves of their fantasies and inhibitions (such as fear, shyness or disappointment).

On the other hand, listening to the story gives the pupils an idea of the general structure of the text, which is made up of an introduction, a main body with complications and unexpected turns of events, and an end-piece that concludes the story.

By learning the structure, the pupils will then be able to produce coherent oral and written statements. Unlike the dialogues, stories can be told without illustrations.

As story-telling can take many different forms, we recommend that teachers make liberal use of that feature in the development of oral and written expression.

Listening comprehension: This is intended to enable pupils to understand, by listening, either the general idea of a message (overall comprehension) or a series of specific, targeted data contained in the message (selective comprehension), or the full content of a message (fine comprehension).⁴

READING

Uncovered reading: The objective is to enable pupils to attach meaning to an unseen text and to perfect their rapid reading abilities. Uncovered reading texts are written

using two or more texts taken from the class memory to build up a new story with unexpected turns of events. They have to meet the following requirements:

- They must be well written;
- They must contain 80% of known words set in complex sentences according to the rules of the written code;
- They must be structured with an introduction, a main body with dynamic passages and a conclusion.

In a normal lesson, the text is written out carefully by hand beforehand by the teacher either on a large sheet of paper or on the blackboard, and then hidden from the class behind a curtain. During the lesson, it will be alternately disclosed and then hidden again. Each time the teacher uncovers the text, the pupils read it silently for a given time, then give their impressions of what they have seen as soon as the text is covered up again. They express ideas about the overall meaning of the text and about its structure. With the teacher's help, they gradually discover its meaning through a process of partial comprehension. At the end, one of the pupils sums up the text. During the activity, it is worth noting that interactions intensify between the children, who correct each other and help each other to understand the text. The teacher must remain in the background. He should intervene only to provide information that will take the story forward.

Rapid reading: The objective is to enable a child to read a text in a limited time and to extract useful information from it. Rapid reading sessions are conducted as follows: the text is given to pupils, who sight-read it for ten minutes. It is then withdrawn and replaced by a questionnaire, which they read for five minutes. When the questionnaire has been read, it is taken away and the text is given back to the pupils for a second five-minute read. After the second reading of the text the questionnaire is given back to the pupils, who then reply to the questions without the text.

Functional reading (project): The project is an activity chosen by the pupils among their daily concerns. Wambach (1997) defined the project as 'a task which has been chosen deliberately and decided by the group according to its motivations; it requires the participation and close cooperation of all members of the team; it must be related to real life, either in school or out of school; and it must lead to a useful achievement (object or service) for the group'.

In order to enable pupils to read and understand instructions, cards are prepared by the teacher and classified by subjects in a file. The cards are made out as follows: a word is carefully hand-written in capital letters on the front of the card and a drawing explaining the word is shown on the back. These cards will be withdrawn as soon as the pupils are able to read the instructions without help. Projects can be classified into three types: school projects, enterprise projects and learning projects.

- School projects include activities that concern life at school, such as spatial arrangements and school activities, or sharing of responsibilities. For example, the project may consider how the various corners of the classroom are organized and the list of duties allocated to pupils.
- Enterprise projects, which are major projects, require much more time to complete and involve a series of complex activities. Such projects might include

a visit to a tourist site, the organization of a school fête, the planting and upkeep of a school garden, small-scale breeding, creating an awareness of a clean environment in the community, etc.

- Learning projects concern group activities as part of the differentiated teaching method. The children are split into groups according to different levels, and they are given whatever tasks are required. These may be small learning projects undertaken by the pupils (do-it-yourself, food preparations, such as cough syrups, fruit salad, etc.) and individual activities as learning aids (mathematics problems, grammar and spelling exercises, etc.). Each stage of the work is evaluated and each group gives the other groups a written or oral account of what it has done. Since project activities are varied, the accounts produced will also be different.

Cartoon strips: These are intended to develop the children's imagination and their oral and written expression. They may be silent or spoken. Spoken strips are read out by the pupils, who then reply to questions or tell the story. Silent strips can be used to initiate pupils to writing. After carefully observing the pictures, they imagine the story and write it up.

Poems and nursery rhymes: These are often used as a phonetic exercise and for the phonetic learning of the language. At the same time they develop oral expression.

Documentary texts: These are existing texts used to teach awakening subjects (history, geography, sciences of observation, physical sciences and civic and moral education). These subjects are taught in the national language in the fourth year. In higher classes, however, the teacher may give them in both languages.

OTHER ACTIVITIES

Mathematics: This subject is taught through projects. Pupils discover the way to learn by solving real situations, while at the same time discovering the mathematical concept that the lesson is about. They report on the work they have done. Only afterwards can the teacher give additional explanations to help the pupils complete their knowledge of the day's lesson. The new knowledge is consolidated with exercises, done either individually or in groups.

Drawings: These are intended to develop oral and written expression, imagination and creativity among the pupils. The drawings can be free or directed. They are free if the choice is left to the pupils, and they are directed if the children are asked to illustrate a particular story, a report, a scene witnessed or to complete a cartoon strip. Directed drawings are followed up with an oral or written commentary.

Games: These are aimed at developing oral and written expression among pupils. They help them to acquire a mastery of grammar and spelling, and to enrich their vocabulary. This is teaching through playing. The games include word games (such as crosswords or word patterns), riddles, traditional games commonly played by the children, etc.

WRITTEN EXPRESSION

Familiarity with writing begins right from the first day of school, when the child learns to draw his family name and first name, which have been written beforehand by the teacher on a piece of paper stuck to his desk. This is a very important stage in learning to read and write. The pupils are brought into constant contact with small texts written on strips of paper stuck to the wall, which designate the different 'corners' of the classroom (the library corner, the do-it-yourself corner, weather corner, kitchen corner, list of pupils or class objectives), which are related to the life of the class. Each 'corner' has a set of rules regarding its use. The understanding of these rules is assisted with cards. These cards are designed as follows: the words are carefully handwritten in capitals. They are prepared by the teacher and classified according to the different 'corners'.

When they are being familiarized with writing, the pupils learn to identify words and phrases with recognition exercises. They learn to copy words and phrases, to reconstitute words and to complete phrases and texts. This stage is followed by the production of written statements.

Functional writing takes place in the projects. The pupils write about their experience and try to find solutions to real problems in real situations. The projects add diversity to the types of written statements, which may consist of writing a letter to the village chief about a planned visit to a tourist site, keeping a school log, making posters for a school fête, reporting on an activity by a group of pupils, applying for a job, submitting a request, etc. Each text has a particular style, and may be narrative, injunctive, argumentative or explanatory.

With functional writing, the status of the writer changes. He must have a clear idea of the person he is writing to, and he must look for the best terminology and style to ensure that the message produces the desired effect on the receiver. Time will be spent rewriting to make the message more effective. In the rewriting sessions, the pupils learn the characteristics of the different types of text.

All the above activities together make up the teaching unit. They may be used either to acquire the mother tongue or to learn a foreign language.

DIFFICULTIES ENCOUNTERED IN PRACTICAL EXPERIMENTS

The experiments conducted with convergent teaching in Mali concerned only Bamanankan. In other words, the question of the choice of teaching language never arose. On the other hand, the existing state of language research caused the experiment some problems.

In the first place, there was a lack of reliable scientific data to prepare the *teaching material* required to implement the project. This aspect had not been sufficiently taken into account during experimentation with national languages, and explains why their use in formal education was badly hampered by the poor state of research into our languages, especially where terminology was concerned.

When it came to the language training of teachers, this shortcoming was felt in the *content of materials produced in national languages* and the *actual quality of teaching*. Not enough research had been done to allow certain concepts and notions

to be easily conveyed in our languages. The documents prepared were very simple and did not raise the pupils' standard of language. The characteristics of the written code did not emerge clearly enough in the national language texts, so that the written code was practically indistinguishable from the oral code.

Another difficulty the experiment ran into at the beginning was the *failure to impart awareness of convergent teaching methods to the professional sectors of the community*. A major innovation of this kind should have been preceded by a continuous campaign of awareness among all social sectors in order to avoid reactions which could be detrimental to the experiment. As a result of this lack of information, many people (especially intellectuals), being unaware of the aims and principles of convergent teaching, had the impression that teaching in national languages just constituted a cheap form of education.

Even some of the teachers in Ségou itself had a negative response. In the schools applying convergent teaching, comments were often made by the teachers who were not involved in the experiment about the 'flute and drum school' or 'tom-tom and balafon classes'. These names were derived from the musical instruments often used to enliven the sessions. Some teachers predicted that the pupils would obtain poor results at the entrance examination to the seventh year. Fortunately, the results of that examination in the event proved the opposite.

The next point concerns *the way acquired learning is evaluated in the examination held at the end of the sixth year*. Convergent teaching is an active learning method, oriented more towards teaching objectives than to programme content. The method consists of an overall approach to language learning, whereby expression takes the form of a transfer of skills. The children should therefore be evaluated by tests which are more related to the method used to train them. At the end of the sixth year, however, the pupils of convergent teaching classes sit the same tests as their counterparts in the conventional system in the entrance examination to the seventh year. This distorts the results completely. How is it possible to train by one method and then evaluate with tests unrelated to the method? In the conventional system, evaluation concerns knowledge rather than aptitudes and attitudes. This type of assessment, however, is not at all in tune with the convergent teaching approach. The only compromise that was achieved was that the children, in addition to the conventional tests, should be assessed in tests specifically related to convergent teaching.

Because they are afraid of facing the conventional form of examination at the end of the first cycle, some teachers in convergent teaching classes simply go back to the conventional method when they start the fifth year, as they explain, in order to prepare their pupils for the other type of assessment, since parents also tend to judge teachers according to the number of pupils who pass the examination and not according to the quality of the end product.

EVALUATION

Despite these difficulties, some very positive results were observed in the two schools involved in the convergent teaching experiment by the Ministry of Education, assisted

by the *Agence de coopération culturelle et technique* (Cultural and Technical Cooperation Agency or ACCT) and the *Centre international audio-visuel d'étude et de recherches* (International Audiovisual Study and Research Centre or CIAVER).

A comparative study was made to that effect in August 1985 by the General Directorate of Education of Ségou.⁵ It may be remembered that the first experimental schools in Bamanankan opened in October 1979, so that the first intake of those schools was to sit the entrance examination to seventh year in June 1985. According to the study, out of an initial intake of 115 pupils in 1979-80 for the two experimental schools, 53 pupils, or 46.8%, reached the sixth year without repeating a class, and 26 of the pupils, or 22.60%, successfully passed the entrance exam to seventh year in June 1985. In the three conventional schools, out of an initial intake of 340 pupils for the same year, 24 pupils, or 7.05%, reached the sixth grade without repeating, while 14 pupils of the intake, or 4.11%, successfully passed the entrance exam to seventh year in June 1985. By comparing the results obtained by the two types of school, it is easy to see that the performances of pupils in the experimental schools were well above those of the conventional schools: 22.60% for the experimental schools compared with 4.11% for the conventional schools. This means that there can be no doubt regarding the importance of using national languages in education. Other evaluations of the impact of using national languages in education confirm this finding.⁶

Apart from monitoring and evaluation seminars, organized three times a year by the CIAVER and by the national team in charge of implementing the innovation experiment, convergent teaching has been subjected to internal evaluations, conducted at national level, and external evaluations, conducted internationally.

INTERNAL EVALUATION

Among internal evaluation, we might mention that conducted in June 1993 by the IPN and the results of the national entrance examination to seventh grade.

The aim of the first evaluation was to assess the cognitive performance of pupils in convergent teaching classes after six years of the experiment. The evaluation was based on two series of cognitive tests in Bamanankan and in French. These tests are related to sixth-grade learning objectives in general and assess not only the knowledge of the two languages, but also the knowledge acquired in all the subjects taught in these classes. In its conclusion, the report states that:

This evaluation shows very clearly that the objectives of French-language teaching were reached by pupils of the convergent methodology. More problems were encountered with the understanding of the written language than with understanding of the oral language, in the case of both the national language and French. National language teaching objectives were achieved very satisfactorily (IPN, 1993, p. 9).

While the evaluation of cognitive performance concerned only the pupils of convergent teaching classes, the entrance examination to the seventh year affected both types of school. In September 1993, convergent teaching pupils sat the same tests in French as those of the conventional schools, as well as specific innovation tests, in French and

in Bamanankan. The results showed that the best performances were achieved by the convergent teaching schools. Out of an intake of 48 pupils, 37 (77%) successfully passed the examination, compared with a national pass rate of 66.24%.

Within the framework of the PAQ (education quality improvement project) financed by USAID, an evaluation of convergent teaching classes was made in 1998 on the basis of 1996 data by the *Institut pédagogique national* (IPN) of Mali:

With regard to learning performance, the results show [...] that more than half the pupils in convergent teaching schools, or 51.2%, obtained an average equal to or higher than 100 in first year classes compared with 49.5% of pupils in conventional schools.

In second year classes, again more pupils in convergent teaching schools obtained an average equal to or greater than 100, namely 56%, compared with 44% in conventional schools (IPN, 1998, p. 43-44).

The national results for the entrance examination to the seventh year for the June 2000 session (the year when the intake of pupils affected by the widespread introduction of convergent teaching in 1994 sat the entrance examination to the seventh grade) definitely confirmed the better performance of convergent teaching classes.

Generally speaking, the results of evaluations have shown that the use of national languages, and of convergent teaching methods in particular, has reduced the rate of school wastage, has improved school performance and has established functional bilingualism among learners.

EXTERNAL EVALUATION

The external evaluation was financed by the ACCT and conducted by two education experts: Awa Sylla, didactician, assistant at the Department of Modern Literature at the Cheikh-Anta-Diop University of Dakar, and Michel Plourdre, resident Professor, retired from the University of Montreal. This evaluation mission took place in Bamako and Ségou in December 1994. The experts, who had prepared the evaluation parameters beforehand, met the members of the national team in charge of convergent teaching, the teachers of the innovation classes, teachers not taking part in the experiment, pupils' parents and officials of the Ministry of Basic Education. Those interviews were followed by class visits (first to sixth years), in order to observe the teachers' performance in the classroom.

It emerged from the various discussions that convergent teaching is a project which deserves support and encouragement. Special emphasis should be placed, however, on informing all the school partners about this very promising educational innovation. The words of Cidi Cissé⁷ are worth quoting in this respect:

Beyond the school, convergent teaching offers a significant potential for change which needs to be undertaken. It could be situated at the crossroads of measures covering the development of preschool education, literacy and the cultural promotion of the school environment.

Mastery of the mother tongue is generally recognized as the key factor in the development of the child's intelligence and personality.

It may therefore be assumed that the use of convergent teaching could have an even greater impact if it began to be applied already at the preschool level, subject to reversing the current tendency to introduce early learning of the French language in kindergartens and nurseries.

In accordance with the methods advocated by convergent teaching, the awakening and stimulation of preschool children would be conducted exclusively in the national language (mother tongue).

Before embarking on the study of French in school, sufficient fluency should be acquired in the national language (mother tongue). This will ease the child's entry into the formal education system [...]. Convergent teaching would be a plausible alternative for a form of intelligent, effective literacy. It would be the surest way of stimulating writing in the national languages, an activity which should not be restricted to school. It may be hoped that convergent teaching may soon spread into the field of literacy, now that literacy measures are increasingly concerned with school age children. Extending convergent teaching beyond the school would act as an input to the environment (Cidi Cissé, 1992).

The changes have been appreciated far beyond Mali's borders. It was thanks to convergent teaching that our country was awarded the Comenius medal by UNESCO on 6 October 1998.

THE IMPACT OF CONVERGENT TEACHING

The various evaluations show a fall in school wastage, a much higher advancement rate than in conventional schools, and better links between the national language and French, leading to the establishment of functional bilingualism in learners.

Experimenting with this new teaching method, we have observed an enhanced appreciation of national languages thanks to more intensive language research and more written output in those languages, and a better integration of the school within the living environment of learners, who become deeply attached to their own culture, while remaining open to other cultures and turned towards the future.

The experiment has created a new type of school, which places more emphasis on learning than on education. Schooling is removed beyond the limits of the school and brought into closer touch with the community.

Convergent teaching has brought about changes not only in the school itself, but also in the behaviour of learners and teachers and in teaching methods. Teamwork has helped to develop a sense of cooperation, responsibility, better self-knowledge and a better understanding of others. Teachers in convergent teaching classes have become the pupils' partners.

In the light of the various evaluations made (internal and external), which produced positive results, and of the positive reactions of parents, of teachers applying the new methods and of the delegations of friendly countries which visited the schools involved in the experiment, the Ministry in charge of basic education decided, in October 1994, gradually to extend convergent teaching to all schools in Mali and to take account of the other national languages. A steering committee has been set up to that effect.

Extending convergent teaching in Mali

SEVERAL STAGES

In view of the multilingual environment in Mali, and of current standards of language research and teacher training, the extension of convergent teaching to all the country's schools could only be achieved in stages. Teachers needed to be trained, language areas needed to be mapped out and teaching material had to be developed.

In the school year 1994/95, 67 experimental schools in national languages were converted to convergent teaching in Mali. Besides Bamanankan, the national languages Fulfulde and Songhoy were introduced. This first extension involved mainly monolingual localities, which already had some experience in the use of national languages in formal education.

In the following school year, the number of schools practising the new method was raised to 153, with the introduction of three more national languages: Soninke (in the Kayes and Koulikoro region), Dogon (in the Mopti region) and Tamasheq.

By 1996/97, a total of 196 schools were involved. That figure rose still further in 1997/98 to 244. A year later, two more national languages were introduced into the system: Syenara (Senoufo) in the Sikasso region and Bomu (Bobo) in the Ségou region. The total number of schools applying the new method rose to 309. At present, thanks to this strategy, convergent teaching has spread to 345 schools, involving over 1,000 classes, 45,000 pupils and 1,600 teachers and trained teaching counsellors.

CHOICE OF TEACHING LANGUAGE AND AVAILABILITY OF HUMAN RESOURCES

The gradual extension of convergent teaching to the whole country, however, has run into some serious snags.

In Mali's multilingual areas, the question of the choice of teaching language often arises, since each ethnic group is attached to its own cultural identity, even though its language may not be the most spoken. In order to avoid hurting the feelings of the communities, the steering committee holds broad consultations and informs the communities in order to encourage them to make a wise choice.

As far as human resources are concerned, for some languages there are very few teachers to cover the whole cycle. It would hardly be worth introducing them in the system in that case if they had to be withdrawn again within two to three years. Moreover, there are often cases of teachers who, preferring not to leave their homes for social or other reasons, have opted to teach in languages in which they are not fully fluent.

A socio-linguistic survey, conducted in 1999 among all principals and teachers of the first cycle of basic education, mapped the potential availability of teachers for each language and where they were located. It also showed which languages should be given preference when new teachers are being recruited.

PREPARATION OF TEACHING MATERIAL IN THE NATIONAL LANGUAGES

The experiment with national languages started in education in October 1979 was held back to a great extent by the shortage or even the complete lack of school textbooks in the languages concerned. Some of the experimental schools even had to revert to the conventional system as a result.

In Ségou, the convergent teaching experiment was less affected, because only one language was concerned (Bamanankan) and two schools. The teaching material, both in the national language and in French, was prepared in time to keep pace with the experiment's progress through the school grades by the supervisory team and by teachers in charge of the experiment.

The plan to extend convergent teaching to all languages and all schools in the country has revived the thorny issue of school textbooks in the national languages. Unlike French textbooks, these cannot be bought anywhere else and have to be designed by local talent. In order to ensure the extension of the convergent teaching method to all schools and to avoid the problem which the first experiment ran into with the national languages, the steering committee adopted a strategy which consisted in gradually producing textbooks as the classes progressed in each language. These textbooks are prepared by multidisciplinary teams at special workshops held each year.

Each language unit has its own team, which drafts textbooks according to the terms of reference drawn up by the steering committee, which includes among its members the first teachers to have been involved in the convergent teaching experiment.

Thanks to this strategy, it was possible to prepare a complete course in Bamanankan, Fulfulde and Songhoy. Textbooks for the first to fifth years are being developed for Soninke, Dogon and Tamasheq. Bomu and Syenara (languages introduced in 1998, therefore in the second year of schooling) already have textbooks for the first four years. The other three national languages which have not yet been introduced (Bozo in the Mopti region, Mamara in the Ségou and Sikasso regions and Khassonke in the Kayes region) also have teaching material for the first two years.

Where the development of teaching material is concerned, the main difficulties reside in the areas of illustration, production (printing) and distribution. They may be attributed largely to the shortage of computer equipment in the language units. Pictures play an important part in the convergent teaching method. The illustrators of the *Institut pédagogique national* (IPN) and the *Direction nationale de l'alphabétisation fonctionnelle et de la linguistique appliquée* (DNAFLA) have not been trained, however, to apply modern illustration techniques and do not have the necessary up-to-date facilities to do the job properly.

The printing presses of the IPN and DNAFLA responsible for printing the material produced in the design workshops need to be equipped to produce textbooks of sufficient quality and in sufficient quantities. In their present state, however, they are unable to fulfil this assignment. One solution which is being tried is to work with local printers.

TEACHER TRAINING

The training of teachers for the convergent teaching project is one of the key tasks of the steering committee in charge of overseeing the gradual extension of the method across the country. Each year, during the long holiday (that is, in July, August and September), training and retraining sessions are organized for all the actors involved in the educational reform extension, namely teachers, school principals, general education counsellors and basic education inspectors. The training is given by IPN and DNAFLA instructors and by pioneers of the convergent teaching experiment in Mali. The courses consist of a three-level module, each level being divided into two parts: the national language part and the convergent teaching part.

At level I, the teachers are introduced to convergent teaching and taught to transcribe and draft in national languages. At level II, they improve their ability to write in the national languages by producing texts and they are introduced to the teaching of oral French. Lastly, the level III course consolidates what they have learnt in convergent teaching and in the national languages. It is at level III that the teachers are given the information they need to conduct convergent teaching classes up to the sixth year.

Each level of courses lasts for 20 days, but quite clearly the training time allowed is insufficient.

It would probably be preferable from several points of view to introduce the new methods into initial teacher training. This would give teachers a better mastery of the techniques and would therefore improve their performance in the classroom, but they could also spread the method rapidly to all schools without going through continuous training, which in that case could be used rather for the retraining of teachers and monitoring of teaching performance.

MONITORING OF TEACHING PERFORMANCE

When it was found that teachers were insufficiently trained in convergent teaching, the steering committee decided to set up the monitoring of teaching performance on a permanent basis. It was in the course of their monitoring missions, in fact, that the committee had had occasion to observe the difficulties encountered by teachers in their teaching practice and to suggest solutions. Special emphasis will be placed on those points in forthcoming training sessions.

In order to make monitoring permanent and effective, the committee proposes the following strategy:

- Annual monitoring at national level. Each region receives a team made up of linguists and educators detached from national bodies (IPN, DNAFLA and the DNEF or National Directorate for Basic Education), personnel from the training division of the educational directorate of the region concerned and teaching counsellors from the basic education inspectorates concerned.
- Quarterly monitoring carried out at regional level. This monitoring is ensured by the regional education director and his assistants in charge of the various sections of his department.

- Monthly monitoring, for which the local level is responsible, that is, the basic education inspector and his general education counsellors.
- Daily monitoring, carried out by the school principal, who acts as direct adviser.

Thanks to this strategy, many teachers were able to have some points explained which they had not understood in training sessions. These monitoring missions also provide real data on the progress achieved with the gradual extension of convergent teaching.

Conclusion

In response to its constant concern for the quality of its education system, Mali is always looking for ways of improving it. One such way has been to introduce the use of national languages in education on an experimental basis. So far the new method has considerably reduced school wastage, while facilitating the acquisition of instrumental disciplines such as reading, writing and arithmetic, and ensuring a better link between the school and the learner's environment. It involved experimenting with a new teaching approach, namely convergent teaching.

This approach to teaching national languages and French, which is an active learning method focused on the learner, places special emphasis, as we have seen, on the learner's environment, of which the mother tongue constitutes one of the key elements, while bringing the learner into contact with the outside world through the learning of French, which is an international language. Convergent teaching has led to a renewal of teaching methods in schools with the aim of achieving full mastery in the learner's mother tongue and in French, while it has brought the school into closer contact with the surrounding community, which takes an active part in school life. With convergent teaching, schooling is no longer the preserve of education officials, but is open to everyone. This is very much in line with the decentralization policy currently pursued by Mali, which enables the Malian people to act on behalf of its own development.

Convergent teaching, which is being spread across the country, is a new concept of schooling which can give Malian schools a new purpose. This is to educate independent, creative children rooted in their own culture, yet turned towards the future. These will be the actors of tomorrow's society, of whom our young democracy is so very much in need. This purpose has currently been assigned to Malian schools by the Ten-Year Education Development Programme (PRODEC).

The educational reform experiment has been financially supported by many development partners. It started with only one national language and two schools. The extension of the reform, a colossal undertaking which began in 1994, is still continuing. It requires preparing teaching material in all the languages concerned in the educational reform project, as well as training courses for teachers in those languages. The schooling system needs human and material resources to implement this reform.

For Mali, convergent teaching offers a solution to a number of problems affecting schooling in the country. These include, amongst others, a high rate of school

wastage and low school performance. It is hoped that the country will be able to mobilize all the human and material resources it needs to extend convergent teaching to all the schools in the country and to all the national languages used in education.

Notes

1. This article by Samba Traoré is an abridged version, edited by the editorial team of *Prospects*, of Innodata monograph no. 6, *La pédagogie convergente: son expérimentation au Mali et son impact sur le système éducatif* [Experiments with convergent teaching in Mali and its impact on the education system], published in the series Educational Innovations in Action by the International Bureau of Education (Geneva, UNESCO: IBE, 2001).
2. The national language a child studies is its mother-tongue.
3. Mali, Ministry of Basic Education, Institut pédagogique national, 1993.
4. Pupils' listening capacity can be developed with exercises in expression and communication techniques, such as concentration, a game in which a ball passes from one child to another. One pupil throws it to another without looking at him/her. Any child who fails to catch the ball drops out of the game. Another exercise is listening to silence. The pupils keep quiet for a given period of time, then each one says what he heard. The teacher can also suggest the following exercise: he sketches out geometrical figures on the ground (such as circles, squares and triangles). He then places the children inside the figures. He attributes an intensity to each figure with the sound of a drum (for instance: strong intensity for squares, moderate for triangles and low for circles). The children listen carefully and identify with the figure occupied through the intensity. The teacher then produces different intensities and the children concerned begin to move. The teacher may change the order of the intensities.
5. Direction régionale de l'éducation, 1985.
6. Calvet, Louis-Jean, 1988 ; Sissoko Moussa et Sissoko Yamoussa Male, 1986 ; République du Mali, Ministère de l'éducation nationale, IPN, 1985.
7. Regional Director of Education in Ségou at the time of the convergent teaching experiment, currently retired.

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THE PERFORMANCE OF AFRICAN

PRIMARY EDUCATION SYSTEMS:

CRITIQUE AND NEW ANALYSIS

OF PASEC DATA FOR SENEGAL

Jens Naumann and Peter Wolf

What is PASEC?

The World Conference on Education for All, held in Jomtien (Thailand) in 1990, claimed that every child in the world should have basic education by the year 2000. That same year, the Ministers of Education of some French-speaking countries met in Bamako in order to discuss the possibilities of achieving the objectives put forward in Jomtien. Then, in 1991, the forty-third Interministerial Conference of Ministers

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of Education of Countries using the French Language (CONFEMEN) set up the PASEC (*Programme d'analyse des systèmes éducatifs de la CONFEMEN*—Programme of Analysis of the CONFEMEN Education Systems) in Djibouti.

The PASEC began to evaluate the primary education systems of its member states in 1993–94. Senegal's system was evaluated for the first time by the programme in September 1995 and in May 1996.

For the pre-test,² 1,876 pupils were covered in ninety-four different schools, while for the post-test 1,770 pupils were surveyed in ninety-nine schools. PASEC estimates the sampling error rate at about 1% (Barrier et al., 1997, p. 216–20).

For the study, performance tests in French and arithmetic had to be developed, as well as basic questionnaires for pupils, teachers, principals and school inspectors.

The analytical tools and the raw data of the studies carried out from 1995 to 1998, along with many of the initial analyses, were published in CD-ROM form. In order to improve its results, the PASEC secretariat welcomes comments and proposals. It would like to establish scientific exchange contacts with any person or institution interested.³

Starting point and objective of our new analysis

When we saw the PASEC results in 1997, we were immediately struck by their superficial and euphemistic approach to the problem of languages. Yet a study by the Senegalese Institute of Research in Educational Science concerning the knowledge of French and arithmetic among schoolchildren, conducted at the same time as the PASEC project (INEADE, 1998), and our own personal experience and research (Wiegelmann, 1999; Wiegelmann & Naumann, 1999) have shown that using French as the only teaching language constitutes a major handicap for most students, and especially for students in primary education.

The problems that arise from the relation between the schoolchildren's mother-tongues (in this case the African languages) and French, which is practically the only teaching language used in public education, are closely tied to the use of textbooks (in French) as support tools and teaching aids for teachers and students. The question of school textbooks has been much discussed in Senegal for some time. In recent years, as part of a major international project by the World Bank and other bilateral 'donor organizations', considerable sums have been invested in new editions and in improving distribution of school textbooks.

On the other hand, public debate about placing greater emphasis on (African) mother-tongues, i.e., 'national languages', in primary schools is still practically a taboo today. (For the last twenty years or so, there has been no 'experimental programme of primary literacy in national languages', nor any programme of 'parallel literacy in national and target languages'. There is also and even more so a lack of teaching methods based on the teaching of foreign languages with 'French as the teaching language'.) Owing to its euphemistic approach to the problem of language teaching and to its selective presentation of the results of its statistical

research, the PASEC study was unable to make any open or direct contribution to overcoming certain deep-rooted linguistic and educational taboos. With regard to educational policy practice in these countries, constant references were made to a simple correlation between the availability of school textbooks and school performance. By contrast, the PASEC results of multiple regression analyses had produced what was, to say the least, a surprising image of the (partially negative) contributions of school textbooks to school performance. Moreover, those 'irritating' results were insufficiently discussed and were not even aired in public (although it must be said—in defence of PASEC's academic honour—that at least the findings were published!).

We gained the impression that the variable chosen by PASEC to reflect the socio-economic situation of children and their families could be improved with a redefinition of basic data, and that it would be possible and reasonable to define another composite variable (in addition to the improved 'language' variable) to account for the home socio-cultural environment (we have called this the 'literacy' of the child's family).

In the third section below, concerning items and variables, we begin by describing and criticizing PASEC's items and variable construction, as well as the findings of its simple correlation analyses. We then go on to give a new definition of variables and their simple correlations (slightly improved).

In the following section—the fourth—we first describe PASEC's multiple regression analyses, followed by the multiple regressions of our new analysis and our 'improved variables'.

PASEC's constructivist approach favours 'direct plausibility' and does away with a prior factorial analysis; in this case, we accept the constructivist premises of the PASEC models. However, we think it is safe to say that our new analyses have a slightly better 'explanatory force' than those of the PASEC analysis, and that they are more plausible from the point of view of contents and lend themselves better to interpretation (which makes them more 'valid').

This is particularly true for the complicated causal link between the 'school performance' of students on the one hand and their home linguistic, economic and cultural environment on the other, and for the importance of the 'school textbook' variable (in French), that is, in relation to teaching and to organization.

We believe we can demonstrate that the 'school textbook availability' variable—taking into account the current types of textbooks and the way they are used—is not at all as important in teaching practice as people think. The taboo surrounding the question of the teaching language invariably hides the real problems behind the successes and failures of primary education. We do not feel that statistical or analytical proof of the theory can be related to the types of classes (since the sub-samples appear too small). Reliable results can only be obtained by multiple regression across all categories of classes (as demonstrated at the end of the fourth section).

In the final section, we shall briefly outline some further possibilities for a new analysis of the PASEC data.

PASEC items and variables: critique and suggestions for a new analysis

THE PROBLEM OF CHILDREN'S MOTHER-TONGUE

For the language analysis, primary schoolchildren were asked the following question: 'What languages do you speak with your parents at home?' The children were asked to circle yes/no replies against a list of seven languages. That meant that the only 'mother-tongue' which could be identified, or even the most fluently spoken language, L1, was that of children who had circled only one language.

The studies published so far hardly ever deal with the problem of languages or, when they do so, only superficially. One exception is French, which is used as an out-of-school variable to explain student performance. The other languages spoken in children's homes do not appear to be given any explanatory significance.

In order to take account of the question of languages⁴ sensibly in the new analyses, despite the problem of identifying mother-tongues with any accuracy, we propose an analytical approach based on the following linguistic characteristics:

- (a) Children who speak French and other (Senegalese) languages at home;
- (b) Children who speak only Wolof (which is then obviously the children's mother-tongue);
- (c) Children who speak Wolof and other (Senegalese) languages apart from French;
- (d) Children who speak neither Wolof nor French.

The bi-variable correlations (according to Pearson) between these linguistic characteristics and the results of French and mathematics tests are shown in Table 1.

TABLE 1. Dominant languages spoken in the child's family and average test results

	French & other	Wolof	Wolof & other	Other	Altogether
French: pre-test correlation	0.069**	0.089**	-0.014	-0.120**	
Number of pupils	90	881	267	502	1766
Average	7.71	6.66	6.04	5.26	6.21
French: post-test correlation	0.092**	0.099**	-0.014	-0.147**	
Number of pupils	88	881	242	480	1747
Average	16.66	14.34	13.24	11.63	13.50
Arithmetic: pre-test correlation	0.057*	0.112**	0.014	-0.161**	
Number of pupils	97	906	280	538	1844
Average	8.8	8.07	7.62	6.00	7.43
Arithmetic: post-test correlation	0.100**	0.112**	0.005	-0.192**	
Number of pupils	88	810	243	479	1746
Average	21.47	18.68	17.72	14.83	17.61

* The correlation is (doubly) significant above 0.05.

** The correlation is (doubly) significant above 0.01.

The results are remarkable. In the 'pre-tests' and 'post-tests', the children who also spoke French at home invariably obtained the best average performances, always followed by children whose only language was Wolof ('mother-tongue'). The latter were always followed by children speaking 'Wolof and one other (African) language' (this category includes those who have Wolof as their 'strong' language, spoken at home, and the majority, which is probably sizeable in this subcategory, for whom Wolof is not the first language spoken at home). The last group is children from homes where only African languages other than Wolof are spoken.

Correlation calculations between the results of the tests and this variable give the following coefficients:

TABLE 2. Correlation coefficients between test results and the language variable

	Language variable		Language variable
French: pre-test	0.138	Arithmetic: pre-test	0.163
French: post-test	0.174	Arithmetic: post-test	0.210
All values are significant above 0.01.			

From the second school year onwards, the relation between home language environment and school performance becomes more marked (this relation continues to the end of primary school and has been gaining in significance). The most structurally disadvantaged children are those from homes where neither French nor the vernacular Wolof are spoken—at least as L2 or L3.

MEASURING THE SOCIO-ECONOMIC STANDARD OF PUPILS' FAMILIES

In order to measure the socio-economic standard of families, pupils were given a list of eighteen 'objects',⁵ for which they had to tick the ones used in their household. The socio-economic standard of a pupil's household was then defined as the unweighted sum of objects ticked. Even the PASEC study admits that this index is not the ideal tool for measuring a family's economic standard (Barrier et al., 1997, p. 16). On average, second-year pupils ticked 8.8 objects.

The PASEC list contains a good many objects that presuppose a medium to high socio-economic standard. These include refrigerators, electric and gas ovens, TV sets, tape recorders, cars and armchairs. If these objects are ticked (i.e. in household use), it gives a fair idea of which families enjoy a 'comfortable', high or very high average standard of living. But in order to identify the great majority of families that are very poor, poor or that belong to a 'lower' stratum on average, the only indications available are items such as the 'oil lamp', the 'charcoal oven', the 'plough' and the 'cart' in the given list. That having been said, since the plough and the cart constitute rather production goods of a rural nature, their possession indicates only that the family concerned lives in rural surroundings; it does not really differentiate between a very poor, a poor or a reasonably well-off standard of living (bearing in

mind that the latter category of households will have no electrical utensils if there is still no electric power in their area).

What we have tried to do is to rearrange the objects of the PASEC study into typical groups, in order to construct a 'differentiated' index. We therefore divided the objects into three groups. The first group included: electricity, tap, TV, refrigerator, armchair, electric or gas oven, flushed toilet, video recorder, car, scooter and radio. The second group included the cart and the plough, i.e. objects used by relatively poor families and more in a rural environment. The third group included the oil lamp and the charcoal oven, objects typically used by poor or very poor families.

Apart from splitting the objects into three groups, we felt that access to electricity and running water in the household establishes a clear differentiation apart from income or living standard. As our socio-economic variable for the new analysis, we propose the following five sets of objects, ranging from level 1: 'extremely poor', to level 5: 'wealthy'.

TABLE 3. Effects of the socio-economic variable

	No. of objects in group 1	Electricity or tap/flushing toilet	Cart or plough	Oil lamp or charcoal oven	Percentage of pupils' households
Level 1	< 3	No	No	Yes	9.9
Level 2	3-6	No	Yes	Not applicable	20.5
Level 3	2-6	Electricity or tap	Neither	Not applicable	33.4
Level 4	> 6	Electricity or tap/toilet	Not applicable	Not applicable	30.1
Level 5	> 9	Electricity and tap/toilet	Not applicable	Not applicable	6.0

The simple correlation between the modified socio-economic variable of our new analysis and the PASEC variable stands at 0.855, which is quite high.

The simple correlation between the two variables and the results of second-year tests gives the following results:

TABLE 4. Correlations between second-year performance tests and socio-economic variables

	PASEC	New analysis
French: pre-test	0.108	0.133
French: post-test	0.190	0.208
Arithmetic: pre-test	0.168	0.169
Arithmetic: post-test	0.191	0.221
<i>Note:</i> All values above 0.01 are significant.		

The comparison shows that the values of our new analysis are always more closely correlated with the test results than those of the initial PASEC variables. As we had occasion to observe with the correlation analysis between the language variable and

test results, it turns out in this case again that post-test correlations are higher than pre-test correlations.

The following table shows the average values of tests undergone by the children, who, according to the information they provided, were classified according to the characteristics of the socio-economic variable of our new analysis.

TABLE 5. Socio-economic standard and test averages (second school year)

	Socio-economic standard					Total
	1	2	3	4	5	
French: pre-test						
Average	5.33	5.65	5.85	6.90	8.03	6.21
No.	160	336	550	507	103	1656
French: post-test						
Average	10.87	12.10	12.56	15.30	16.90	13.41
No.	143	326	509	477	92	1547
Arithmetic: pre-test						
Average	6.34	6.11	7.14	8.55	9.15	7.41
No.	165	351	582	529	105	1732
Arithmetic: post-test						
Average	13.95	15.73	17.12	19.60	21.09	17.53
No.	142	326	509	477	92	1546

Practically without exception, the test average increases in relation to the rise in socio-economic standard (the only exception is the level 2 maths pre-test); unlike the original PASEC version, this applies particularly to the children of 'well-to-do' and 'wealthy' families (levels 4 and 5); this 'social-class effect' or 'stratum effect' is more marked at the end of the year (post-test) than at the beginning.

LITERACY OF PUPILS' FAMILIES

Success in school depends on the family's appreciation of 'knowledge' (and particularly of standard school usage) and thus on the degree of motivation a student can work up in order to appropriate a given item of knowledge. This 'appreciation of knowledge' is transfused by the students' socio-cultural background, which is initially built by the family, at least until the end of primary school (more so in rural than in urban areas). These socio-cultural characteristics of a family might include, for instance, its religious or ethnic ties, its position within religious, ethnic or political hierarchies or the level of education of family members.

As this brief list shows, socio-cultural background is a complex matter and any accurate measure of its components is difficult and time-consuming. It would be possible to arrive at a first approximate classification by identifying the religious and ethnic ties of the parents or their level of education. In the first study (1995-96),

only fifth-year pupils were asked if their parents could read. Similarly, students in the preparatory course (CP) and first-year intermediate (CM1) were asked whether they had access to a dictionary, a blackboard, newspapers or books at home (Barrier et al., 1997, p. 244).

The PASEC evaluations concentrated on the literacy of the father and the mother: 75% of fifth year pupils in the year 1995–96 replied that their fathers could read, while 45% described their mothers as able to read. Other analyses showed that pupils received more parental aid with homework if both the father and the mother could read (Barrier et al., 1997, p. 20) and that parents in multi-grade classes were less often able to read than parents in the three other types of class. This is probably due to the fact, as we mentioned earlier, that multi-grade classes tend to occur more frequently in rural areas, where the literacy rate is distinctly below what it is in urban areas (*ibid.*, p. 71). Pupils whose father or mother could read obtained above-average results in the French and maths tests (*ibid.*, p. 53). If the father could read, there were often also newspapers, a dictionary and books present in the pupil's home (*ibid.*, p. 23). Although these cultural objects were included in the multiple regression calculation for fifth-year pupils, that aspect was not studied in detail in the commentary.

Unlike the PASEC, we shall not restrict our new analysis to the literacy of the father and the mother, but we shall try to construct a variable that can measure pupils' contact with the literacy present in their family environment. Apart from the parents' literacy, we also take account of the information supplied by pupils regarding the presence of dictionaries, books or newspapers in their families. Since these data were not collected in the basic questionnaire of the 1995–96 second-year surveys, we have used the data extracted from the basic questionnaire of the 1997–98 consecutive (longitudinal) survey. At that time, most of the students were in CE2 (the third school year), but the pupils repeating CE1 (second year) were also included. Using these data for the 1995–96 study is justified, since the added variables are taken from the basic household environment, which remained practically unchanged over such a short period of time. There is still a problem, however, insofar as the later surveys have no data for many of the (weaker) pupils of the 1995–96 year, who had already left school two years later (accounting for a substantial 40% of the initial sample of 1,766 pupils!). This means that 40% of the second-year samples are not included in the statistical calculation given below (in most cases children with low school performance, from homes which are probably mostly poor or very poor, with few or no family members able to read and write). In other words, the statistical relations suggested by the partial sample which is available will tend to underestimate the influence of literacy.

The characteristics of the composite literacy variable and frequencies are defined in Table 6.⁶

Generally speaking, the test averages increase as the composite literacy indicator values increase. However, the average values of NL 7 and NL 3 are not significantly higher than the averages for NL 6 or NL 2.

TABLE 6. Definitions and N values of the composite literacy variable

	Father or mother able to read	Presence of a dictionary or newspapers in the household	N	%
NL 1	No	No	177	16.8
NL 2	Father or mother able to read	No	249	23.7
NL 3	No	Dictionary or newspapers	26	2.5
NL 4	Father and mother able to read	No	195	18.5
NL 5	Father or mother able to read	Dictionary or newspapers	102	9.7
NL 6	Father and mother able to read	Dictionary or newspapers	212	20.2
NL 7	Father and/or mother able to read	Dictionary and newspapers	92	8.7
Total			1052	100.0

Table 7 shows simple correlations between our composite literacy variable and test results:

TABLE 7. Correlations between the composite literacy variable and test results for French and mathematics

	French: pre-test	French: post-test	Arithmetic: pre-test	Arithmetic: post-test
Literacy variable	0.156	0.179	0.142	0.200

Note: All values are significant above 0.01.

Table 8 shows test averages for different N values of the composite literacy variable:

TABLE 8. Composite literacy level and test averages (second year)

	NL 1	NL 2	NL 3	NL 4	NL 5	NL 6	NL 7	Total
French: pre-test	6.01	6.33	6.19	6.64	7.73	8.18	7.96	6.99
French: post-test	13.07	14.16	14.32	14.38	16.29	17.00	16.67	15.06
Arithmetic: pre-test	7.64	7.71	7.50	7.56	9.19	9.67	9.73	8.38
Arithmetic: post-test	17.37	17.83	18.86	17.65	21.16	21.88	21.26	19.23

MULTIPLE REGRESSION CALCULATIONS

One of the key objectives of the PASEC study was to measure the influence of the type of class (traditional, double flow, multi-grade or pilot) on the performance of pupils. Using multiple regression, the PASEC team tried to determine whether any systematic differences emerged between the different types of class (the results of a multiple regression for the full sample, i.e. including all categories of classes, were not published).

Four basic statistical models were therefore calculated, one for each of the four types of class. In each of these four basic models, the dependent variable to be explained was post-test French and arithmetic. The independent or explanatory vari-

ables used were context variables, i.e. personal, family and school. Personal and family variables included age, sex, number of languages spoken, out-of-school activities, whether pupils revise and prepare their courses at home or not, whether they are helped by their families with their homework or not, or whether they regularly have breakfast or not. School variables—apart from the type of class used as a base model—were taken to include the number of years a pupil spends in school (duration of schooling) and whether a pupil possesses a French or arithmetic textbook.

In the (published) analyses, context variables which could have been constructed on the basis of teachers' and principals' survey items were not taken into account. They include, for example, teacher training or school equipment in terms of school furniture and teaching materials (Barrier et al., 1997, p. 72).⁷

The explained variance of the PASEC multiple regression analysis came to around 35% (multigrade classes, French test, CM1 or fourth school year) and 73% (multi-grade classes, CE or second school year). In all cases (except multi-grade classes in fifth-year arithmetic), the respective pre-test (base level at the beginning of the year) originated about 80% of the explained variance of end-of-year test results. That item alone, therefore, explains between 28% and 58% of total variance. All other variables explain less than 8% of total variance.

The instability of the B values of many variables in the four different models is due in general to the fact that the samples for the different types of class are not all representative to the same degree.

The instability could very well be explained also by the fact that specific variables do not—for various reasons—measure what they intend to measure.

Lastly, there is also the case of valid specific variables (for example, individual availability of school textbooks) to which unstable and implausible (i.e. negative) effects are attributed, in calculations of the multiple relational analysis, because they 'reflect', and even 'offset', part of the influence of other variables, which are either not clearly specified, or which have a limited validity (e.g. the language or socio-economic situation, or the socio-cultural environment). The intention with our reformulation of basic variables was to overcome that difficulty.

In the end, fixing 'too many' 'explanatory variables' (in relation to the size of samples and the quality of measurements) can give rise to unstable relational estimates which can no longer be interpreted (i.e. only apparently plausible, or even implausible).

Thus the results of the multiple regression analyses of the PASEC study are extremely disappointing from an analytical point of view, but especially from the educational and organizational point of view, and from that of education policy. This is especially true and particularly obvious insofar as the lack of interpretable relations in the multiple regression analysis calls for greater caution when it comes to interpretations of bivariable analyses or simple correlations. Yet, that is exactly what has happened with the PASEC study: educational and policy arguments have been put forward on the basis of 'theoretically' appropriate bivariable analyses, the suitability and relevance of which are not confirmed in the detailed analysis of the PASEC study using multivariable methods.⁸

In the next stage, we calculate multiple regressions in relation to the whole survey population. If no more account is taken of the difference between classes, the sample becomes substantially larger in relation to the method of calculation. This means we improve the chances of obtaining more reliable results. Firstly, we calculate multiple regressions by using PASEC variables (see Table 9). Then (Table 10), we replace the language variable and the economic index of the PASEC study with the variables introduced in Chapter 3, while we keep our literacy variable. For these two calculations, we operate first without the pre-test as an explanatory variable, though this is later reincorporated in the calculations for Tables 11 (PASEC) and 12 (new analysis).

TABLE 9. Multiple regressions (PASEC model): second school year.

French: pre-test	Regression coefficient	French: post-test	Regression coefficient	Arithmetic: pre-test	Regression coefficient	Arithmetic: post-test	Regression coefficient
Explained variance	0.08	Explained variance	0.10	Explained variance	0.11	Explained variance	0.11
Constant	27.72	Constant	43.00	Constant	2.78	Constant	6.33
Reading book	5.07	Reading book	5.39	Reading book	6.30	Reading book	1.32
Breakfast	-4.17	Economic index	0.76	Out-of-school activities	-1.04	Economic index	0.24
Out-of-school activities	-0.95	Breakfast	-3.44	Breakfast	-2.52	Breakfast	-3.49
Studies at home	5.59	Studies at home	8.91	Economic index	0.51	Studies at home	8.34
Maths book	2.18	Age	-1.74	Age	1.22	Boys	3.39
Duration of schooling	-1.04	Maths book	2.75	Studies at home	5.42	Out-of-school activities	-0.69
Economic index	0.13	Out-of-school activities	-0.64	Maths book	2.33	Duration of schooling	-1.85
Age	-0.34	Duration of schooling	-1.50	Boys	1.81	Number of languages	1.18
Receives help	-1.15	Boys	-0.81	Duration of schooling	0.71	Maths book	0.87
Boys	-0.61	Receives help	-1.21	Number of languages	0.57	Receives help	-1.39
Number of languages	-0.05	Number of languages	0.27	Receives help	0.26	Age	0.10

From an overall point of view, the multiple regression results are now more stable and plausible in relation to the signs and influence of the explanatory variables. This is true for the PASEC model and for our new analysis. Although the reformulation of

a few variables in our new analysis only marginally helped to eliminate the contradictions and lack of plausibility of the multiple analysis results according to the type of the class, the 'broader sample' would make a significant difference.

TABLE 10. Multiple regressions (new analysis): second school year

French: pre-test	Regression coefficient	French: post-test	Regression coefficient	Arithmetic: pre-test	Regression coefficient	Arithmetic: post-test	Regression coefficient
Explained variance	0.09	Explained variance	0.11	Explained variance	0.12	Explained variance	0.13
Constant	23.89	Constant	39.80	Constant	1.57	Constant	27.68
Breakfast	-4.05	Reading book	4.91	Reading book	6.12	Reading book	7.70
Reading book	4.71	Breakfast	-3.24	Out-of-school activities	-0.84	Literacy	1.31
Literacy	0.92	Literacy	0.91	Breakfast	-2.37	Boys	5.00
Out-of-school activities	-0.76	Studies at home	8.49	Literacy	0.58	Languages	2.34
Studies at home	5.36	Age	-1.71	Age	1.22	Breakfast	-3.02
Maths book	1.79	Economic index	1.27	Languages	1.14	Economic index	1.61
Languages	0.75	Languages	1.19	Boys	2.40	Studies at home	7.47
Duration of schooling	-1.09	Maths book	2.50	Studies at home	5.14	Duration of schooling	-1.88
Receives help	-1.94	Duration of schooling	-1.54	Maths book	2.28	Receives help	-2.99
Age	-0.27	Out-of-school activities	-0.32	Duration of schooling	0.76	Out-of-school activities	-0.18
Economic index	-0.16	Receives help	-2.19	Economic index	0.39	Maths book	0.32
Boys	0.06	Boys	0.24	Receives help	-0.13	Age	0.14

The variance explained by the models (R^2) never exceeds much more than 10%, while the explanatory force of the new analysis models is not much better.

The reading and maths books show constantly positive signs, both in the PASEC and in the new analysis, the influence of the reading books being about twice as great as that of the maths books (the level of significance is also higher).

The 'breakfast' and 'out-of-school activities' variables have constantly negative signs in the PASEC and in the new analysis. The 'studies at home' variable is always positive, while the 'duration of schooling' shows mostly negative signs in both model groups (except for the two arithmetic groups: the arithmetic pre-test analysis).

The economic index always shows positive signs in the PASEC. This is also the case for our reformulated variable in three of the four models. The 'receives help' item shows mainly negative signs in the PASEC and always negative signs in the new analysis. The fact that 'studies at home' is positive in all the models, while 'receives help' with homework shows practically only negative signs, appears plausible in the sense that it reflects the interpretable consequences of widespread social practices with their positive or negative effects on school performance. The first of the two items concerns mainly the student's independent efforts at home, while the second reflects the educational efforts of other persons in the household. These efforts produce negative consequences, because—according to our theory—the teaching method applied in Senegalese social practice (even more rigidly at homes than in schools) is typically based on rigid exercise principles, such as learning by heart, and is far from promoting understanding, independence and exploratory learning.

In the PASEC, the gender variable gives the boys an advantage in both arithmetic models and is unfavourable to them for the two French models, although they come out best in all models in the new analysis. The 'age' variable shows negative signs in the PASEC and the new analysis for French tests, while for arithmetic tests the signs are positive. The 'number of languages' of the PASEC study shows mainly positive signs, and the 'combination of languages' is constantly positive in the new analysis. Our 'literacy' variable is constantly positive in the new analysis, with a high significance.

After that we calculate multiple regressions for post-test French and maths, in all types of class, including pre-tests as an explanatory variable (see Table 11 for the PASEC variation and Table 12 for the new analysis with our reformulated variables).

Using the pre-tests applied at the beginning of the year as an explanatory variable in the multiple regression for the post-test values at the end of the year immediately leads to a substantial increase in the explained variance (by 36% or even 46%), with no difference between the PASEC models and those of the new analysis. It would be interesting to know what would be the consequences, arising from consideration of the 'pre-test' as a powerful predictor, for the stability and influence of the other explanatory variables derived from generally acceptable and plausible calculations, regardless of class category.

Independently of the question of whether the pre-tests are not taken into account as an explanatory variable (Tables 9 and 10) or whether on the contrary they are taken into consideration (Tables 11 and 12), it is true to say that, for both the PASEC and the new analysis:

- The influence of the economic index is always positive, as is the influence of the 'studies at home' variable; similarly, the gender advantage remains unchanged (positive for boys in the new subject analyses; positive in mathematics, negative in French in the PASEC);
- The variables 'receives help' with homework, age and '(regular) breakfast' always retain their negative influence.

A few changes appear for the variables:

- 'Duration of schooling': when the pre-test is included, invariably negative influence (PASEC and new analysis), initially mainly negative;
- 'Number of languages' and 'combination of languages': with pre-test included, always positive influence (PASEC and new analysis), stronger for the new analysis model.

The results for the availability of a 'reading book' or even a 'maths book' are remarkable and need interpreting:

- The B values for reading books remain positive when pre-tests are included, and quite high for results of French and arithmetic tests, but substantially lower in the calculation models without pre-test;
- The B values for maths books are again lower than the reading book values and show a positive sign for the results of the French test. On the other hand, they are negative for the maths test (for both the PASEC and the new analysis). Is that a plausible result or is it a mechanical effect arising from the calculation which is not open to interpretation?

TABLE 11. Multiple regressions (PASEC model) of post-tests including pre-tests: second school year

French: post-test	Regression coefficient	Arithmetic: post-test	Regression coefficient
Explained variance	0.36	Explained variance	0.46
Constant	26.41	Constant	31.13
French: pre-test	0.60	Arithmetic: pre-test	0.80
Economic index	0.68	Reading book	3.49
Age	-1.54	Economic index	0.53
Studies at home	5.57	Duration of schooling	-2.42
Reading book	2.35	Boys	1.94
Maths book	1.45	Breakfast	-1.47
Breakfast	-0.94	Studies at home	4.00
Duration of schooling	-0.87	Age	-0.88
Boys	-0.45	Number of languages	0.72
Number of languages	0.28	Maths book	-0.99
Receives help	-0.52	Receives help	-1.60
Out-of-school activities	-0.08	Out-of-school activities	0.14

In order to assess the plausibility of the direction (or sign) and the degree of influence of explanatory variables, one has to take account of the fact that the economic index, the language variables and the literacy variable are ordinal variables with five to seven effective values (from low to high), while several of the other variables or items (including textbooks as well as 'breakfast', 'studies at home', etc.) have only two states ('yes', i.e. 'present', or 'no', i.e. 'not present'). This means that the B values of the socio-economic and linguistic-cultural context variables, which at first sight were fairly low, indicate 'accurately' or plausibly (positive sign) and in combination with a greater weighting the learning opportunities for children from

privileged backgrounds (and hence—conversely—the greater difficulties encountered by children from disadvantaged backgrounds), which, subsequently and additionally, are confirmed by the ‘availability’, or even more so by the ‘possibility of productive use’ of school textbooks (in French), in the event and to the extent that the children have already acquired the appropriate basic skills. Nation-wide, depending on the regions, between 40% and 60% of pupils in beginners’ classes seem to have reading books and between 20% and 40% maths books (in the survey sample, 49% of pupils had reading books and 28% maths books). The ‘independent purchase’ of maths textbooks by parents is especially strongly correlated with their socio-economic situation, i.e. their privileged status. This is why the proportion of books received as gifts in relation to the total number of books available in the home is distinctly higher in the case of maths books than in that of reading books. Quite probably the negative B value for the ‘availability’ of maths books in relation to performance in arithmetic is due to that situation.

TABLE 12. Multiple regressions (new analysis) of post-tests with pre-tests included: second school year

French: post-test	Regression coefficient	Arithmetic: post-test	Regression coefficient
Explained variance	0.36	Explained variance	0.47
Constant	25.66	Constant	26.44
French: pre-test	0.59	Arithmetic: pre-test	0.79
Age	-1.54	Literacy	0.86
Economic index	1.37	Boys	3.11
Studies at home	5.32	Languages	1.44
Reading book	2.13	Reading book	2.88
Literacy	0.37	Duration of schooling	-2.47
Languages	0.74	Economic index	1.30
Maths book	1.44	Out-of-school activities	0.48
Breakfast	-0.84	Age	-0.82
Duration of schooling	-0.90	Receives help	-2.89
Receives help	-1.04	Studies at home	3.42
Out-of-school activities	0.13	Breakfast	-1.15
Boys	0.20	Maths book	-1.47

The gap between availability as such and the probability of use of school textbooks by pupils on the basis of minimum linguistic comprehension skills is even more marked in the case of arithmetic. As a result, the availability (again as such) of maths textbooks shows up as a negative effect on test results in the multiple regressions.

It is worth pointing out that the negative sign of the ‘(regular) breakfast’ variable in all the models is an outcome which runs against any sort of intuition, and which is irritating and worrying from both an analytical and a policy point of view: oddly enough, breakfasting regularly always has the effect of reducing the children’s scores! The PASEC does not comment on the result, and like them, we do not see any explanation.

Conclusions

We undertook our new analysis because of the confusing, untidy results that emerged from multiple regression analyses concerning the role and weight of textbooks as an explanatory variable for test results of pupils in different types of class.

As they stand, the results in no way justify the priority given by the World Bank and the PASEC to the importance of teaching and learning materials (because, didactically speaking, they are completely insensitive to the mother-tongue situation of the children).

So a 'more of the same' approach, that is, the large-scale promotion of the distribution and 'use' of the traditional type of textbooks, will contribute next to nothing to the improvement of learning. In future empirical research, there is rather the risk of finding once again (as at present with the maths books) a negative effect for reading books.

The high priority given to school textbooks in educational policy is 'plausible' and will amount to an 'effective' strategy only if we look at the same time for the educational means of taking better account of the 'mother-tongue' in relation to the 'teaching language' or 'target language'. So far, the 'modern Koranic schools', which are much less well equipped than public schools, seem to be meeting this challenge with more success than the latter (Wiegmann & Naumann, 1999).

By redefining the language variable and the economic indicator and by introducing a literacy variable, we were hoping to find a more plausible distribution of the role and weight of the explanatory variables.

The aim is to be able to demonstrate the clearly positive influence of teaching and learning tools, which can be affected by policy decisions, as part of a better understanding of the importance of the socio-economic and socio-cultural background and of the educational and practical relevance of the language issue.

In the analyses we have undertaken so far, that objective and that expectation have been achieved to a limited, though undeniable, extent. While it is true that our redefined variables and models do not improve the 'total explanatory force' of the regression models, in our opinion the significance attributed in our model to the different 'explanatory variables' seems to turn out more stable, plausible and valid:

- Our redefinition of the language variable (taking the combination of languages used in everyday life instead of the number of languages spoken at home, as in the PASEC) produces a much higher partial regression coefficient.
- Similarly, our redefined economic indicator (taking a qualitative combination of 'objects' instead of the simple sum of 'objects' ticked per household, as in the PASEC) produces a significantly higher partial regression coefficient.
- Introducing a 'composite literacy variable' in our new analysis, as a means of better characterizing the socio-cultural environment of households, gives quite a high partial regression coefficient.

Attributing greater significance to variables characterizing both the background socio-cultural environment and the classes to which the pupils belong leads to:

- A reduced positive influence of school textbooks;
- Similarly, a reduced positive coefficient for the 'studies at home' variable;
- A slight decline in the negative coefficients for the 'age' and 'breakfast' variables, coupled with an increase in the negative coefficient 'receives help with homework', while the 'duration of schooling' coefficient remains unchanged;
- An indication of a greater structural advantage for boys compared with girls (especially in arithmetic) and a slightly higher positive influence of 'out-of-school activities'.

At the same time, we are hoping to show, with our comments and new analyses, to what extent the results of statistical analyses and, as a natural consequence, their interpretability depend on the one hand on the validity of initially selected items and, on the other hand, on the assumptions of the constructivist models of analysts and research routines applied in this type of work.

Thanks to the support of the World Bank and other northern sponsors, a pioneer series of school performance studies has been undertaken in the last ten years in many southern countries, including the one we have been discussing in this article. The structural problems that arise are always the same: most of the experts involved come from northern research institutions and are not sufficiently supervised by colleagues from their countries who are familiar with empirical statistical methods. The consequence is that studies are produced whose findings—in relation to the schedules and expectations of the commissioning parties—turn out to be biased in their presentation and interpretation.

The PASEC team has always been and is still aware of these limitations, and it has actively tried, from the beginning, to establish working contacts with scientific circles. Such efforts have so far not proved very successful, however, because the PASEC is unable to offer grants or traineeships and because there are still not enough suitable sponsoring facilities among the northern academic institutions (e.g. in the form of specialized grants or post-graduate studies).

This is why one of the aims of this contribution was to draw the attention of those concerned to the range of modest or more far-reaching options available for new analyses and new research projects.

We felt it was important to point out that the Senegal study (as in the case of a few other countries) was longitudinal (i.e. unfortunately including only pupils who remained in the system and excluding those who left).

This has opened up some methodically and theoretically worthwhile prospects not only for research projects of the 'socialization theory' and 'socio-structural stratification' type, but also for projects more oriented towards the paradigms of organizational sociology, of 'school theory' or the treatment of school subjects.

At this juncture, the question arises as to whether it would be worth:

- Analysing for all PASEC countries the relations between school performance, teaching language (if used in a didactically reasonable manner), African mother-

tongue and school textbooks (whether suitable or not from a language-teaching point of view), along the lines of the recently completed new analysis;

- Undertaking a detailed analysis of groups of typical 'wrong replies' to individual items used in the tests available for identifiable pupils (in the case of a longitudinal study, over several years). This would be a means of checking whether there are any typical learning problems (related to teaching) connected with the mother-tongue, which need to be consciously taken into account from a teaching point of view in the classroom, and even in textbooks. It is worth remembering that local counting systems are not necessarily based on the decimal system and that the grammatical structures of African languages are different from those that govern Indo-European languages.

Furthermore, in view of the distinct cultural or socio-cultural selectivity of African education systems based on the use of French, it would be preferable to avoid using the data produced by the PASEC and other studies of the 'formal education sector'. It is best also to be aware of the limitations of any analysis of the 'higher grades' of primary schooling (CM1 and CM2), because at that level the structural challenges of 'basic education' may no longer arise, since the great majority of children from poor and very poor sectors of the population do not even reach that stage.

Notes

1. We wish to thank Craig Naumann for assisting with the French version of the text.
2. The five schools of the Ziguinchor region could not be visited at the time of the pre-test.
3. CONFEMEN, PASEC, *Les facteurs de l'efficacité dans l'enseignement primaire: données et résultats sur cinq pays d'Afrique et de l'Océan Indien* [Efficiency factors in primary education: data and findings for five countries of Africa and the Indian Ocean]. (CD-ROM, March 1999 version). Website: <http://www.confemen.org>. Postal address: Secrétariat technique permanent, B.P. 3220, Dakar, Sénégal. Tel.: (00221) 821 60 22; Fax: (00221) 821 32 26. E-mail: confemen@sonatel.senet.net.
4. In Senegal, among some twenty spoken languages, seven are officially recognized as 'national languages'. In addition to Wolof, which is the first language spoken by 40% of the population, other languages are: Pulaar, Serere, Mandingue, Diola, Soninke and Hassani.
5. The objects were: electricity, tap, TV, refrigerator, armchair, electric or gas oven, flushing toilet, tape recorder, car, scooter, radio set, cart, plough, oil lamp, charcoal oven, cooking pot, bed and bicycle.
6. When we were developing the literacy variable, we noted that there was no significant relationship between the results of tests and the presence of books in pupils' families. This is due to the fact that a surprising number of pupils (about 75%) reported the presence of books in their households. It is more than likely that these books, in the event, would be either the Koran or the Bible, since the holy scriptures are often kept in households even when their members cannot read. For this reason, we no longer took account of the 'books' item in the definition of our own literacy variable. In subsequent surveys, a distinction should be drawn between religious and lay books in households.

7. Although in the PASEC study teachers' data were not directly related to pupils' test results, it does nevertheless identify 'typical' teacher profiles (see Barrier et al., 1997, Chapter 6, p. 163–70).
8. It must be recognized that the authors and publishers of the PASEC study have shown great scientific honesty by not attempting to hide (quite the contrary) the contradictory nature of their results, and, what is more, by immediately making their raw data available to the scientific community.

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LEARNING TO LIVE TOGETHER

NEW CHALLENGES TO
EDUCATION AND RESEARCH
IN A GLOBAL ECONOMY

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In a world that in economic affairs is oriented by the keyword 'globalization', not only are economic conditions themselves undergoing changes, but also the conditions for education and research. This is especially true with regard to the connection between education and research, that is, the system of academic education. It is legitimate to ask whether this system is educating adequately, considering that local education must satisfy global needs and because work, including scientifically distinguished work, is becoming scarce and professional profiles are changing under the influence of economic and technological developments.

The usual key concept in this connection is 'practical orientation' and includes as a rule, at least in Germany, the reproach that the academic system has taken too little heed of just this requisite in its educational structures. According to a stubbornly assertive prejudice, the educational system still displays the architecture of

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ivory towers and produces for itself and for our society a new generation that knows a great deal and can do very little; that is inadequately trained for the working world, especially for one in a process of rapid change; and that is not ready for the tough climate of a professional system that places strong demands not only on the quality of education but also on the transformation of knowledge into ability, that is, on the conversion of 'theoretical' knowledge into 'practical' performance. Indeed, theory and practice are still—though in a much less ideological sense than in the socio-political debates of the 1960s and 1970s—the key concepts that orient the current discussion about the proper academic educational system and the conditions conducive to technological innovation.

It is possible that the form this discussion takes actually passes on the prejudice that the academic system itself, and thus its educational forms, is connected to theory, not practice—as if learning were not something extremely practical. In other words—and this is intended as an early warning against conceptual sloppiness—the boundaries between theory and practice do not run between textbook and profession, but rather arise in all forms of work, both in academic (including academic educational forms) and in professional forms. It is these forms of work that are designated by the title 'new challenges to education and research in a global economy'. Under this heading I would like to make three points with some brief elucidation about globalization, research and education.

Globalization

In a global economy it is not only economic structures that change but also social structures. Institutional isolation dissolves. This development affects both education and research.

There are some words that saunter up on velvet paws and then whip out their claws. Globalization is one such word. It means, as we all know, the free transfer of raw materials, commodities, capital, services and labour across all geographical and political boundaries. The concept of internationalization, on the other hand, indicates a growing proportion of international trade and its increasing interlocking. It also denotes the movements of capital, labour and know-how between different national economies and their economic agents—and in this sense is a concept derived from national relations. In contrast, such limitations disappear in the case of globalization. What is global is not derivative, but rather given first; economic and political boundaries, which thus far have determined at least the 'beginning' of economic action, are dissolving.

Furthermore, the concept of globalization is not merely an economic concept or one of economic policy, to the extent that these concepts refer only to economic activities from the perspective of competition. The truth is 'that globalization entails more factors than were observable in earlier stages of development and that our entire social and institutional fabric will change fundamentally. Even if globalization [. . .] is economically induced, the consequences extend far beyond this area and have thus far been little understood—especially in their significance for us in

our social relations and organizational structures' (Steger, 1996, p. 4). In this sense the concept of globalization also includes the new information and communication technologies, which are largely not subject to local control, the rise of supra-national political institutions (key concept: 'globalization of the political'), and the increasing homogenization of education and research structures. Not only is an economic and political dimension defined but also general social and cultural dimensions. Globalization 'harmonizes consumption patterns, labour organization, and institutional preconditions; creates new polarities between highly efficient globally operating enterprises and local "backward" organizations (including state administrations) and occupational groups; induces ecological long-range effects through growth dynamics and the spread of "non-enduring" consumption patterns; evades traditional control instruments of the social balance of power (from cartel legislation to the jurisdiction of national parliaments); further reduces the predictability and planability of developments; and continues to accelerate technological development' (Steger, 1996, p. 5).

If this analysis is right, as it seems to be, then globalization is the keyword for a multidimensional transformation process of modern society into a rather imprecisely determined future. Not only are enterprises in the traditional sense being dissolved by becoming 'virtual' enterprises, that is, by being replaced by a network of regional independent entities, but the same holds for social structures, which up to now have been defined essentially by stable aspects of the nation and culture. Among these are education and research.

Research

Research, up until now, has mainly been defined by the distinction between basic research and applied research. This distinction is now less apt. Today, all research forms have a dynamic relationship with one another, forming a kind of research triangle.

Science is now being drawn into applications and developments, due not only to the process of globalization but also to inner-scientific developments. Earlier science defined itself, in accordance with the ideas of truth and pure knowledge, almost exclusively through the concept of pure (or basic) research. Things have become somewhat more complicated today, in spite of the retention of the old and cherished distinctions and evaluations. In particular, the old distinction between basic research and applied research, in which basic research was considered science and applied research more or less business, is ever less appropriate to the real situation of science at the level of development of modern societies under the impact of globalization.

This does not mean that pure basic research no longer exists. It can be identified as such whenever there are no recognizable practical applications. Typical research fields of this kind are high-energy physics and cosmology, for instance, the development of a unified theory for all non-gravitational particle interactions or the connection of the theory of elementary particles with the theory of gravity. In these

cases, questions of application have no sense, not even predictive sense (besides, of course, as fodder for science fiction). Thus, this type of research can safely be considered pure basic research. What we might call application-oriented basic research is somewhat different. This is a type of research from which we expect applications in the long term, but not of the kind that could be directly marketed or developed within the normal planning time spans of industrial enterprises. Examples of this would be high-temperature superconductivity, synergetics (non-linear thermodynamics) and the foundations of information sciences. In these cases application is intended even though the paths from research to application are unclear and are themselves in need of intensive research. A third type should be distinguished from these two, namely what we might call product-oriented research. This is research that takes place either with a view to particular application or that promises such application in the near future. Examples would be materials research, environmental research or medical research (e.g. AIDS research). In such cases the paths between research and application are short and are constitutive parts of the research programmes.

These three types of research are often mutually supportive in concrete research programmes both in and outside the university; they interlock and intermingle when focusing on a problem. Application-oriented basic research, alongside product-oriented research, is becoming more and more the norm. This also means that the goals of science, in as much as these are expressed by such ideals as truth and knowledge, are becoming more and more joined to the goals of a world that is less inclined to admire than to apply the results of science. In fact, neither the Greek mind, to whom we owe the idea of science, nor the modern mind, which created the modern world, cautioned science in its cradle to stay away from application. Nonetheless, with growing closeness to application, the responsibility of science and the scientist also grows. In our world, governed by a global economy and its social and institutional consequences, it has become more difficult to be a good scientist. For a new concept of research that is neither empty (because without distinctions) nor ideological (because linked to an obsolete concept of basic research), this means that we are dealing with an (equilateral) triangle of research, the corners of which are pure basic research, application-oriented basic research and product-oriented research. I maintain that this triangle is also the essential form of research from the perspective of globalization and technological innovation.

Education

With the globalization of the economy and the unrestricted movement of research in a research triangle, (academic) education must move out of its disciplinary boundaries. The future of research and learning, that is the future of (academic) education, is problem-driven transdisciplinarity.

Now that the archaic simplicity (sometimes simple-mindedness) of the affairs of research has become a complex interlocking of interdependent research directions, (academic) education, too, has to change. Up until now, education has been

directed towards fields and disciplines. This overlooks the fact that particularly urgent problems that research and a good education are supposed to help us solve do not do us the favour of defining themselves in terms of fields and disciplines. These would include issues concerning the environment, energy and health. There is an asymmetry between the development of problems and the development of disciplines, and this asymmetry is growing as disciplinary development is increasingly determined by specialization. There are problems 'for which we have not yet found disciplines' (see Krüger, 1987, p. 119). Perhaps we never will, against the background of the increasing specialization and atomization of branches of learning. Therefore, the opposite path, the return to broader disciplinary and interdisciplinary units, seems the most promising alternative. Environmental problems offer a good example of complex issues that can only be solved through the co-operation of many disciplines.

Interdisciplinarity, however, should not be conceived of only as a repair measure that is necessary when problems outgrow the limits of a discipline. On the contrary, interdisciplinarity, properly understood, serves to enable us to view things scientifically and facilitates the recognition of problems and problematical trends before they appear or become critical. What is involved is a competition for (scientific) problems. Disciplines enter into this competition—and even compete with the world, which has problems of its own. Whoever looks only at objects, as is often the case within a discipline, can easily overlook the fact that we do not just live in a world of objects, but also in a world of appropriation, needs and an increasing loss of direction. This, too, is an element of globalization.

Interdisciplinarity is not the expansion of a system in which the number of problems with which one can deal becomes smaller and the lack of creativity among academics greater, but rather the expansion of our capacity to deal with existing problems and to anticipate future ones. Understood this way, it is not enough to conceive of interdisciplinarity as a need for scientific organization.

Interdisciplinarity, rather, has to begin at home, in one's own mind. It is connected with an ability to think 'laterally', to question what others have not questioned, to learn what is not known within one's own discipline. To rely solely on lofty organizational activity in science is to squander the prospects of interdisciplinarity to further science and (academic) education.

Interdisciplinarity, furthermore, does not move back and forth between the disciplines or hover above them like the Hegelian Absolute Spirit. On the contrary, within the context in which disciplines are historically constituted, interdisciplinarity helps to overcome the splintering of disciplines whenever these are in danger of losing their historical consciousness. Actually, this is what I call transdisciplinarity. One could also say that the last word in science, research and (academic) education is not interdisciplinarity but transdisciplinarity. And this is also true with respect to a growing global economy, to a new concept of research that fits the needs of a changing society under the impact of globalization, and to the conditions of technological innovation that lie at the roots of economic and social progress.

Conclusion

Education must meet the new challenges of a global economy. Globalization presents increasing demands not only on knowledge and ability but also on the environment of knowledge and ability. Globalization does not mean simply to homogenize the economy, markets and culture but rather to deal with differing environments. To act on a global scale entails being very familiar with local situations. Therefore, in almost all branches of learning, education must prepare the educated for changing demands. We do not leave the haven of school to enter a world to which we are accustomed. This holds true, especially for a world that is globalizing itself. The research triangle and transdisciplinarity are answers to this situation.

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LEARNING TO LIVE TOGETHER

FALLACIES AND OBJECTIVES

REGARDING THE USES OF

NEW TECHNOLOGIES

IN EDUCATION

Clotilde Fonseca

Gradually, the allocation of funds to socially—and particularly educationally—oriented technological programmes has ceased to be looked upon as an expense and has come to be accepted as an indispensable investment for the future, which may be said moreover to affect the balance of power between nations. The key role played by education in the dynamic of economic development is nowadays readily recognized. Businessmen, industrialists, academics and politicians alike are aware of the very close connection between education, technology and growth. Unfortunately, this recognition is marred by glaring contradictions. Every day the gap widens

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between the demand for highly qualified human resources and the output generated by education systems. In practically all countries, endemic dissatisfaction with these systems is the rule.

Because of the central role that the new information and communication technologies (ICTs) play in society, and because of the hopes they have aroused in education, educational authorities and leaders have come to consider them as either a cure-all or an unachievable dream. Incorporating them—which is essential in order to achieve equity and to improve the quality of learning—has been no easy task for the educational community. Despite the great expectations awoken by multimedia, interactive databanks and the communication and exchange platforms offered by the Internet, considerable problems arise when it comes to introducing them into the education system, because of financial, technological and logistic limitations and more especially on account of the inadequacy of educational ideas and proposals.

It must be admitted that there is a surprising degree of ignorance regarding quite basic aspects of the technologies we are concerned with. In 1990, for example, the Minister of Finance of a Latin American country gave his views about a programme of new technologies in Costa Rican schools in the following terms: 'I find this programme of yours wonderful. It is a real asset. You install machines. The children learn. Teachers are dispensed with. The State payroll shrinks. And best of all you do away with strikes altogether [...] A perfect case of State restructuring!' The minister's appreciation, which is as revealing as it is spontaneous, offers us some clues about the fallacies that prevail in this respect. Simplistic views and prejudices often determine not only people's understanding or lack of understanding of the phenomenon but even the decisions taken. Their persistent influence hampers any real exploitation of ICTs as resources that facilitate new types of learning and educational environments. The underlying culture in which these fallacies are rooted must be superseded. This is why a large part of this article is devoted to explaining them. The first part outlines the fallacies which have been most frequently encountered throughout a decade of professional activities in this area. The second part of the article suggests which objectives we should pursue to eradicate the fallacies and to successfully manage the process of change, using ICTs as resources for learning.

Ten fallacies: a way of reconsidering ICTs in education

These are the ten fallacies that recur most frequently when the question arises of introducing new technologies:

FALLACY NO. 1: A LINEAR VIEW OF EDUCATIONAL DEVELOPMENT

One of the greatest obstacles to the introduction of computing and telematics in education is the linear view of educational development that currently prevails in the world. It starts from the belief that development occurs as a steady progres-

sion, the stages of which are accomplished one by one, without any possibility of leapfrogging to levels of greater complexity or quality. The effect is to disregard the possibilities new technologies offer for achieving qualitative jumps in persons, social groups, education systems or countries. There is no perception of the potential value offered by ICTs for accelerating change and for redefining the roles of the actors involved in education (students, teachers, parents and educational authorities).

It is mistakenly held that, before consideration is given to incorporating new technologies, countries must solve all their educational problems (such as literacy, coverage, dropout, quality or curricular relevance), overlooking the fact that it is extremely dangerous to deny a society, on the grounds of its poverty and limitations, access to the very technological and cultural resources which could provide it with the necessary boost to overcome its disadvantaged condition. It is as if earlier generations had waited for everyone to have shoes before they began to build roads! It is not fair, therefore, to condemn countries already suffering the most stringent limitations to bear the consequences of the digital gap, which now in addition implies a widening of the cultural and socio-economic gap.

FALLACY NO. 2: HIGH COST AND LACK OF EVIDENCE OF IMPACT

We are all familiar with the argument, repeated endlessly by the consultants of financial organizations, that investments in technology are very costly and must be deferred for the time being, because not enough research has been done into or evidence produced of their effectiveness. The cost/benefit ratio, according to them, is unfavourable, especially in the least developed countries. Before such investments could be considered worthwhile, evidence would be needed that they produce quantitative improvements in output and basic indicators. Advance proof is required of the positive impact of ICTs, even though great tolerance is shown towards the attempts to undertake economic experiments which are potentially likely to affect the social fabric and overall well-being of countries to a much greater extent. Moreover, a double standard applies. The impact evidence required of developing countries is curiously forgotten in the case of industrialized countries.

We are facing a real, far-reaching emerging culture. One is all the more astonished, therefore, at the myopia of those who appear to ignore this fact (in the case of non-developed countries) and who are unable, as a result, to grasp the opportunity cost and very high risk implied for countries that exclude their populations from this fundamental revolution. Furthermore, there is in fact a great deal of evidence already at hand of significant qualitative changes resulting from the introduction of ICTs in education, which have been duly documented and which are derived from educational projects of the most different kinds. Gradually also tell-tale signs are appearing of increasing foreign investments, business activities and changes in systems of production resulting from the systematic, large-scale introduction of these technologies in education.

FALLACY NO. 3: TECHNOLOGY AS EDUCATIONAL INNOVATION

We have to beware on the other hand of succumbing to naive but unsubstantiated enthusiasm. Merely ushering information and communication technologies into the classroom is no guarantee of a significant improvement. We must avoid indulging in wishful thinking. The introduction of multimedia and the Internet will not solve all educational problems of access and supply by a stroke of magic. For these technologies to yield a benefit, there has to be an educational plan that makes them work.

Seen in historical perspective, the introduction of new technologies in education systems has clearly occurred within the framework of extremely traditional educational attitudes. Generally speaking, reductionist approaches based on educational paradigms of the past are still the rule. Typically it is always a question of 'incorporating' or 'integrating' technology in course programmes, rather than of transforming the latter radically by redefining the teaching/learning process in technology-oriented environments. Paradoxically, we the educators tend to be the worst offenders when it comes to imposing the shackles of the past on the new dimensions of learning that wise use of ICTs would open up. We apply nineteenth-century educational methods to the potential offered by technological and cognitive resources of the twenty-first century.

We ignore or disregard the very significant epistemological developments of recent decades now available to education, many of them based on research into artificial intelligence. Despite this, many educators are still fascinated by the old-fashioned teaching methods and therefore dream of texts rendered in electronic format and high-tech systems that perform the teacher's most traditional functions. They are hoping for indefatigable machines which can endlessly repeat exercises and practices, concepts and problems. In these cases, ICTs are no more than a symbol of modernization lacking any genuine transforming content. *Novelty* should never be confused with genuine *innovation*.

FALLACY NO. 4: THE INABILITY OF TEACHERS

The words of the Latin American Minister quoted above clearly reflect the tendency to place teachers at the source of the educational problem rather than to consider them as an essential part of its solution. A great deal of negative prejudice is entertained regarding any real possibility that teachers can ever meet the requirements of new technologies in a stimulating, creative and pedagogically valid manner. They are simply considered unable to cope.

It is no use hiding the poor opinion which people have of teachers. Nevertheless, those of us who have worked with ICTs in schools have appreciated their potential, even in the case of rural schoolmasters and marginal areas. What really matters is the approach. A suitable interface must be generated between the teacher and technology, taking advantage of the teacher's strong points and clearly aiming at assisting the learning process and enriching educational methods for both students and teachers.

Despite what those who have helped to propagate this fallacy may believe, contact with new technologies in fact encourages teachers to open up their minds to new ideas and gives them a different, better understanding of the educational process. This makes them more prepared to initiate significant cultural and organizational changes within their teaching practice. Of course, such a transformation will not occur on its own. An investment must be made in training and monitoring, starting from a new approach and a new praxis.

FALLACY NO. 5: COMPUTER LITERACY

Another very widespread fallacy consists in making 'computer literacy' the number one priority when introducing ICTs into the educational system. The problem arises from an eminently utilitarian view of education and constitutes one of the major obstacles to the modernization of educational activity. The tendency is further reinforced by the importance given to the role of ICTs in employment and the mistaken idea that the priority for education is to train labour.

Although these notions are not entirely wrong, in their reductionist, unilateral version they do not even achieve what is intended. If it is overly simplistic, the pragmatic approach to education produces virtually no tangible results. It emphasizes the use of 'the machine' and the acquisition of computing skills through the purely theoretical handling of production tools, such as word processors, spreadsheets and databases. It leaves aside such a vital element as the full development of the individual in the pursuit of human development, while ignoring the need to stimulate the individual's best capabilities and the fact that these will determine his/her contribution to social and economic development. It presumes, moreover, that the new technologies should be made available only to secondary school students, who are nearest to entering the labour market.

Unfortunately, the skills which young students usually acquire on these courses facilitate neither their entry into the labour market nor any real understanding of the digital culture and its implications. If we were to draw a parallel with the world of reading and writing, we might say that 'teaching computing', as some claim to, would be equivalent to giving 'pencil classes', rather than teaching students how to draw, to make plans, to write essays, poems, letters, musical scores, etc.

On the other hand, equipment rapidly becomes obsolete, while computer programmes and applications (software) are constantly outdated. The only regular feature of the new technologies appears to be the idea of the latest 'version'. Learning how to use a given programme out of context is certainly not the best way of preparing ourselves for the labour markets of the future—and possibly not even for those of the present. It is not surprising that, in recent years, the manufacturers of computer applications and software programmes have been stressing the importance of understanding the architecture of their systems rather than the mechanical operation of specific products. They themselves indicate that what is essential is understanding interfaces, having the knowledge of rules and standards and understanding the regulatory principles of the new computer platforms, always from the point of view of user needs.

Attention also has to be drawn to the enormous risk, for education founded on human development, entailed by the sort of labour determinism that is implicit in the most reductive views of computer literacy. Computer courses tend to be based on the short-sighted belief that all that is needed is to start training 'computer workers', that is people possessing basic technological skills which allow them to generate income through the 'mechanical processing of data'. They encourage the training of passive rather than productive users. This approach usually disregards the development of cognitive, creative, expressive and critical abilities, which are essential and indispensable not only for successful job performance, but also for personal fulfilment in social and productive environments.

FALLACY NO. 6: ACCESS

Whenever new technologies are mentioned, the issue of access is invariably raised as the indispensable response to concerns about equity and balanced social development, particularly on behalf of communities excluded for socio-economic, ethnic or gender reasons. Unfortunately, the problem is stated in the form of a general principle and what is really understood by access is virtually never explained.

Providing 'access' is not a question merely of installing so many computers in a school or a college, or of inaugurating a telecentre in the old community. In addition to ensuring the physical availability of technology, guaranteeing access, means making the necessary arrangements for effective hours of use and training. Colle, Roman and Yang (2000) share this concern and point out that access must be approached from a multidimensional point of view, since it requires the development of abilities, an opportunity of access, a set of technical and teaching support services, monitoring systems, and mechanisms to ensure sustainability. Without all these, the physical availability of technology is of little value and access becomes a term which may be politically profitable but which remains purely rhetorical.

FALLACY NO. 7: CONNECTIVITY AS A SOLUTION

Some people think that it is enough to provide connectivity to set in train an educational and technological revolution. Obviously connectivity is a necessary condition, but it is not sufficient in itself to initiate the transformation of learning processes and the creation of new educational environments, particularly those related to the Internet. It is no good just dreaming about an ever-available universal library and the unlimited potential of databanks.

Navigating on the Internet and on the internal network systems of educational and research organizations and institutions (Intranets) no doubt offers extraordinary cognitive opportunities. Nevertheless, their mere availability is no guarantee of real benefit. Education needs in addition a teaching method which will help develop this resource in the context of new learning environments and strategies. We need knowledge and understanding of the multimedia and hypertext phenomenon, strategies for navigating, searching and synthesizing, as well as criteria for

selecting. And this in turn requires a process of training, that is, friendly, critical and timely human mediation. And this mediation also requires proper training and preparation.

Some very prestigious academics and consultants have rightly criticized policies that place excessive emphasis on the potential offered by connectivity for educational reform. The interconnection of computers, schools and educational systems must be accompanied by the production and availability of teaching resources, along with contents prepared in the student's own language and in tune with his/her culture. This can only be achieved through a complex process of research, development and valuation, that is with human resources and a considerable economic investment.

FALLACY NO. 8: INFORMATION AS KNOWLEDGE

One of the most recent fallacies arises from the mistaken assumption that information is knowledge. Presumably this is not simply a rhetorical statement. The problem arises from a serious cognitive mistake. What we mean by information is not at all the same as what we mean by knowledge. When we refer to knowledge we have to take account of understanding and the ability to benefit from and apply that knowledge. Hence the importance of having cognitive networks and associations based on meaning, and not on a mere linear alignment of isolated data or information, or on a flood of contents which are too vast for us to order or assimilate.

Information will never be sufficient to overcome the ignorance and poverty which afflict the most deprived populations on our planet. The problem of poverty is infinitely more complex and multidimensional. The comments made nowadays about the 'info-rich' and the 'info-poor' must be seen as merely rhetorical or symbolic unless they arise within a serious cultural, educational, epistemological and technological framework. The problem is not just one of 'access to information'.

The digital age is imposing a series of requirements on populations. To mention but one aspect, it presupposes an adequate standard of reading, understanding and writing. Even though we may be fascinated by the power of ICTs, we must not forget that universal education is an essential factor of development. Without it, all the access in the world will never produce any impact or result. This was pointed out recently by *The Economist* (19 August 2000). There is a substantial difference between access to what we might term the physical reality of information and 'access' to the cognitive dimension required to understand the knowledge implicit in the information provided, to give it meaning and to be able to apply it. Virtuality is complex. As Esnault and Zeiliger (2000) say, navigating the global information highways requires preparation, training and special cognitive and technological tools.

FALLACY NO. 9: COMPETITIVENESS

The positive effect of ICTs on competitiveness is a fundamental argument in favour of introducing them into the education systems of developing countries. It is not

hard to see, however, that in our day and age, too much importance has been attached to global competitiveness. Although the argument may be useful from a political point of view, there is no doubt that this fallacy hides a basic error that cannot be ignored. Competitiveness depends essentially on productivity, as Krugman (1998) has brilliantly demonstrated. It is technological change, and not global competition, that determines growth and socio-economic development. What is essential for development is productivity. This is what the progress of nations is built on. Moreover, productivity, as we know, nowadays depends to a considerable extent on technological innovation. Hence what is vital for the purpose of development, overcoming poverty and enhancing welfare is to increase personal productivity. This undoubtedly implies a need to universalize the appropriation of new technologies and the ability to adapt to technological change.

FALLACY NO. 10: NORTH OVER SOUTH AND PRIVATE OVER PUBLIC SUPERIORITY

It is often said that the new technology programmes of northern countries are superior to those of the south. The same type of comment is made about private institutions in relation to what is done in the public sector. These value criteria tend to be associated with an over-dimensioning of the technological component, and with the greater possibility northern countries and the private sector have of acquiring costly equipment and keeping it constantly up to date. The basic issue, however, as we have had the occasion to point out, hinges on the underlying educational approach. Success depends much more on the ability and creativity shown in the innovative use of resources in the pursuit of specific educational objectives than on the amount invested.

Unfortunately, the less-developed countries, like public education systems, tend to suffer from a kind of 'inferiority complex', which is not always justified. To be successful, a project has to deal with aspects related just as much to learning processes, that is epistemological and pedagogical components, as to training, logistics and sustainability. Many countries and educational institutions, whether public or private, unfortunately tend to remain at the mercy of the companies supplying computer goods and services. They capitalize on the need to satisfy parents or businessmen eager for 'technological novelty'. Nevertheless, there are some experiments being conducted in non-industrialized countries at present which are in no way inferior to the projects of industrialized countries or to those of private institutions, which are often much better publicized.

Overcoming the fallacies and defining objectives: a new approach

It is particularly satisfying to note that consideration has recently been given quite explicitly to the role of ICTs as media *for learning*. This change of attitude reflects a greater awareness of the potential of ICTs for the cognitive and creative experi-

ence of students and teachers, and therefore of their implications for social transformation and, more ambitiously, changes in production methods. Those of us who initiated work in this field more than a decade ago are extremely pleased at this change of appreciation, which no doubt originated in the visionary outlook which Papert (1980, 1996) has been depicting for more than two decades and which is finally beginning to be more fully and broadly understood.

The limited perception of computers simply as machines *for working*, which was widespread until recently, is now being overtaken. The tendency to consider computer literacy as a way of preparing for employment is becoming outdated and whatever lingering support for that view still found in business circles or among parents is beginning to give way to new, more intelligent demands.

The same could be said about the view, related to computer-assisted teaching, of computing as a resource *for teaching*. Although that approach implicitly reflected a concern for more educational aspects, the tendency in general was to adopt a very traditional attitude, centred on the mechanical transmission of contents, frequently within a context devoid of areas which might facilitate an understanding or the effective application of the resources.

Introducing new technologies into education in the end is meant to create situations and environments *for learning*, derived from epistemological and psychological frameworks which respond better to more evolved learning methods and which take account of individual differences and the different styles and cognitive inclinations of recipients, whether students or teachers. What we need to do, therefore, is to put forward a set of essential objectives, without which the fallacies described in this article will never be overcome. Unless proper thought is given to the matter, it will not be possible to arrive at a new working framework for projects involving ICTs as learning media.

Overcoming techno-centrism

In order to be able to make use of ICTs as learning resources, it is essential to overcome the techno-centric attitudes so typical of most of the educational projects of this kind. The key aim should be to concentrate on personal development. We must therefore create equitable conditions of full access to these technological resources and open up opportunities for the development of the abilities and talents of students and teachers alike. New learning environments and new methodologies must be designed and introduced, to allow a significant interface with the new technologies. In other words we must focus on the individual, that is provide the setting for real *empowerment*, particularly for the new generations.

Overcoming technological reductionism

We must at all cost avoid a situation where the use of ICTs is limited by traditional educational culture, centred on the relatively inefficient teaching and transmission of curriculum contents. We cannot allow their use to make what we did badly even

worse. As Zuboff (1988) says, ICTs offer us an opportunity to change old power structures, to oust old practices and to favour more horizontal power structures, where the intellectual and creative capacity of individuals is considered much more important than the brute force and mechanical, reiterative discipline that characterized the industrial stage. In education, achieving this kind of change in power systems represents a huge challenge. All learning processes have to be rethought in the light of a new approach.

Emphasis on educational change

In order to achieve this, a special space must be created to facilitate a fundamental transformation of educational culture. This challenge is far from being simple or feasible in the short term. ICTs can encourage the adoption of strategies for change by helping teachers to develop more open-minded and flexible attitudes. The new technologies allow the creation of learning environments and situations which are much enriched by the multimedia and hypertext dimension and which can also be linked by means of networks. This opens the way to more co-operation, overcoming the usual limitations of distance and rigid timetables.

The new resources also allow an approach centred on the development of projects linked to the curriculum and facilitate more personalized attention to students. When properly used, ICTs favour the integration of knowledge derived from different disciplines and research. This avoids reducing teaching to the linear processing of pre-set contents. It also encourages learning on demand and learning 'just in time'. Learning by doing and learning by design and exploration, which are valuable tools for stimulating the development and consolidation of new educational areas, are offered excellent opportunities with this new approach.

Some experiments have already been made. A few countries, such as Costa Rica, have opted for a constructionist approach, based on Papert's theories, for the use of ICTs in education, from preschool to secondary. The key idea is to use technology to stimulate the development of intelligence, the ability to solve problems, creativity and technological flexibility (Fonseca, 1999a, 1999b). The main aim consists in developing productive capacity and avoiding the passive, routine use of computer applications.

Developing new abilities and skills

Quite clearly the pace of change in the world of culture and employment is accelerating. Education systems are facing increasingly complex and exacting demands. The knowledge society nowadays needs *symbol analysts* and service providers more than routine workers (Reich, 1991). In the new generations, right from the early stages and in addition to traditional skills and abilities, we must therefore strengthen a critical capacity, a pro-active attitude, a creative drive, independence, familiarity with technology and a knowledge of languages, and we must develop their personality and the skills required to express, expound and present ideas.

As a result of a growing awareness of this trend, more attention is being given, among other things, to activities which are personally significant and which stimulate independence and a 'self-managed' educational culture. The focus of interest has shifted from secondary to primary education. This has been in response not only to considerations regarding the average number of years of schooling and the need for those completing primary studies to have already gained some ICT experience. The main reason for the change lies elsewhere. In fact, the development of the above-mentioned attitudes, skills, abilities and values, if it is to be effective, must begin from the earliest stages of formal and informal education.

In this connection, particular attention is given to the process itself, even though the end products are considered desirable, since these do not always reflect the real cognitive and personal value of experience. We must find new ways of identifying and dealing with different types of intelligence and cognitive inclinations and of identifying and appreciating different types of performance.

Pedagogic method

The measures introduced to use technologies to strengthen learning processes should rest on a clear methodological and pedagogic method, serving different communities in accordance with their particular requirements and characteristics. A proper educational plan drawn up early on will save a great deal of time and effort at the implementation stage. It should also be ensured that the pedagogic methods proposed are made explicit and operational, in order to provide a clear understanding of objectives and the effective implementation of programmes.

Teacher training as a key factor

In any new technology programme, on no account should the human factor be left aside. The fact that an educational programme may exist in digital form or may be presented in a novel and attractive technological medium is no guarantee of its effectiveness for the purpose of learning. On the other hand, the preparation of teachers is crucial. Hence the overriding importance given in these programmes to the role of *facilitator*. This factor cannot be ignored without considerable risk.

Training teachers in this respect cannot be seen simply as incorporating a new feature in traditional practice. On the contrary, the novelty associated with ICTs must be used to foster a change of educational culture, a gradual shift in daily practices. This will open the way to change of a more systemic nature. In this process, teachers must rethink their roles, particularly by seeing themselves as *learners* and as active participants in the learning process of their students.

Particular attention should be paid to analyzing and understanding the cognitive and epistemological aspects related to the teacher's activities. Experience has shown that the real challenge in teacher training does not lie in introducing teachers to the use of technology, but in giving them the right awareness and training to create new learning environments and to be able to observe the cognitive processes

by which their students succeed in acquiring skills and knowledge. The real challenge lies in the efforts to transform educational culture thanks to the use of ICTs. Hence the importance of setting up training as a systemic and ongoing undertaking, as has been done in countries such as Costa Rica (Anfossi & Fonseca, 1999). Unfortunately, the great majority of projects provide only for limited introductory, chiefly technical, training.

Barring a few major exceptions, it is worth noting the excessively conservative attitude of many teacher training establishments when it comes to using ICTs. For historical though somewhat obscure reasons, they have tended to move very slowly, retaining a traditional, instructional type of approach. We must therefore work hand in hand with the establishments, training future teachers in order to ensure that they are not left outside the innovative educational tendencies linked to the new technologies.

Equity and meaningful access

As the researchers at the Inter-American Development Bank (Birdsall & Londoño, 1997) and the World Bank (Ravallion, 1997) have repeatedly indicated, the greater the inequalities in any given country, the fewer are its chances of achieving sustainable economic growth and of speeding up the decline of poverty. It is no good thinking of closing the digital gap or of really making use of the full development potential of ICTs unless measures are taken to ensure equitable conditions of use. If ICTs are properly introduced, they will have the effect of reducing inequality, but once they have been introduced, their impact on social life will further reinforce that tendency.

The personal and social significance of the process can be a source of great benefits from the point of view of equity. Actions must therefore be directly related to the activity, capacity and context of students. Both students and teachers must also generate an overall understanding of the digital phenomenon and must acquire what is commonly referred to as 'technological flexibility', that is the ability to grasp principles, in order to initiate a process of permanent adaptation to the constant changes generated by the ICT environment.

A generous timeframe must be allowed for the use of ICTs in schools and communities, so that students have plenty of time to explore, to make mistakes, to investigate their mistakes and to arrive at solutions. One essential factor in this respect is the plentiful availability of the telecommunications component. Connectivity must not be understood as referring to some kind of wired system, since what it really means is building human exchange networks offering what the Canadians have called 'connectedness', that is the development of links, bonds and virtual communities with personal and social meaning. This will favour productive relations in both the individual and the economic sphere.

Balancing national and international aspects

Each country and each education system must define the strategies that are best adapted to its resources and idiosyncrasies. At the same time, an effort must be made to foster exchange and learning based on useful experience gained in other parts of the world. Unwholesome nationalistic tendencies that try to reinvent everything from scratch, merely for the pleasure of attaching a 'home-made' label, are to be strictly avoided. A great deal of time is required to introduce teaching facilities adapted to the new technologies and hurried attempts usually turn out ineffective.

A national, interdisciplinary team of high-level professionals needs to be set up, linked to discussion meetings propitious to an exchange of experience. A lot can be learned from what has been done by others and it may prove extremely useful to incorporate *critical success factors* in other programmes and experiments. It is always good to rely on discussion networks. It may also be very useful to set up national and international analysis groups to encourage joint reflection.

Formative, systemic and continuous evaluation

It is extremely useful to establish strategies and methodologies that facilitate the monitoring and formative evaluation of initiatives whenever ICTs are introduced into the educational environment. Unfortunately, daily practice reveals a lack of suitable methodologies for measuring the impact of technology and applying qualitative monitoring. This is a broad and complex field that requires a real systemic approach and where there must be an exchange of ideas and results. Considerable sensitivity is required as well in order to detect positive but unplanned outcomes and changes. Monitoring processes are vital for success, especially when results can be fed into subsequent processes of rectification, planning, design and execution.

Organizational and financial sustainability

If learning processes supported by ICTs are to be introduced successfully, a long-term view must be adopted and sufficient resources must be allowed in order to ensure that projects can remain active for long periods, which is essential for worthwhile results. Thoughtless enthusiasm of the kind that leads to the sudden start-up and equally quick demise of initiatives is best avoided. A basic organizational and financial structure must be set up to ensure the survival of projects and the possibility of introducing modifications effectively, expeditiously and sustainably. In this respect, management groups imbued with vision and leadership are indispensable.

Final considerations

In order to introduce ICTs into the learning processes of new educational environments, the short-term approach, pursuing immediate quantitative results, is to be

avoided. It may yield quick political dividends but will produce few substantive effects in terms of facilitating educational change, better access or better quality of learning. What is needed is a systemic approach that enhances the role of teachers and uses the potential of technology in new and stimulating ways to improve students' ability to learn.

Due consideration must be given to concern for equity and for the special needs of marginal, rural and urban communities. Experience has shown us that children, young people and teachers respond with alacrity and are skilful at assimilating technology. The problem now is not a shortage of abilities but a lack of opportunities. Hence in order to narrow the technological and educational gap between rural and urban communities, between private and public sectors, between national and international systems, between generations and between advantaged and disadvantaged groups, a system has to be set in place that can deal simultaneously with pedagogic, logistic, technical, financial and political aspects. This cannot be achieved without sufficient investments in terms of equipment, and even more so in terms of training, human resources, organization and sustainability. And these investments must not be made merely in response to the enthusiasm of governments or institutions. They must be based on real state policies or organizational strategies that will be maintained independently of changes of management.

The fallacies related to the use of ICTs in education must be superseded. At the same time, our analysis of these stereotyped, superficial views should not induce a sceptical and passive attitude. The opportunity cost for countries and communities is at present very high. Success may depend on careful thought about how the task is to be undertaken. Many may feel, without reason, that it is so big and so urgent that it is insurmountable. We have reached a critical crossroads, which inevitably implies a serious risk for anyone remaining on the sidelines of this process of change or for any investors who may be guided by reductionist or techno-centric assumptions.

The technology gap nowadays creates a gap in equity and a gap in human and economic development. We must concentrate not so much on the technological aspect as on educational, social, political and economic choices and decisions. Building a pedagogic model that makes use of the huge potential of technology to enrich learning constitutes one of our greatest challenges. Fortunately, there is plenty of rich and promising experience around to show us the way ahead and help us compare models. There is also a clear awareness nowadays of the need to pursue this objective and to allocate whatever economic and professional resources are needed to achieve it. In the history of humankind, there have been few times when the extremes of inactivity or thoughtless action have been as detrimental as in this case. The risks are immense. The task is extremely complex, but the medium- and long-term returns are worth the effort, because, as André Malraux once said 'If you think that education is expensive, try ignorance'.

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NEW CHALLENGES FOR SCHOOL AIDS EDUCATION WITHIN AN EVOLVING HIV PANDEMIC¹

Inon Schenker

HIV/AIDS, as a major life-taking pandemic, strikes us with the epidemiological figures of the infected, ill and dead. The numbers are frightening: over 36 million infected world-wide, of whom 50% are 15- to 24-year-olds; over 22 million have already died and the rate of new infections among young people is growing by the minute.

These overwhelming numbers represent women, men and children. They are the sad human dimensions of the AIDS pandemic: every number is a person, with family and friends, with relatives and colleagues, with needs, emotions, thoughts and rights. Statisticians are concerned with numbers. Schoolteachers and educators must, however, go beyond the numbers and be alert to the impact HIV/AIDS has on the education system. Meanwhile, they should acknowledge the tremendous impact the education system may have on the future course of the epidemic. School leaders must not only be knowledge conveyors but also community leaders in the fight against HIV/AIDS.

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Schools are key contributors to our ability to halt the spread of HIV infection. To succeed, they must reach children and youth in a timely manner to reinforce positive health behaviours, while altering risky ones. Schools cover most children between the ages of 5 and 18, and have excellent resources for delivering effective education: skilled teachers, a long-term interactive educational process, various learning opportunities and the potential of good parent involvement.

'Education about HIV may be most appropriate and effective when carried out within a comprehensive school health education programme that establishes a foundation for understanding the relationship between personal behaviour and health' (CDC, 1988). Nearly fifteen years after this statement was written, its message is still valid. In combating HIV infection, the crucial responsibility of schools is how to base HIV-related policies on the most current scientific knowledge about HIV and AIDS, and to teach young people how to avoid HIV infection or transmission. In doing so, schools are capable of significantly improving the quality of health education for youth world-wide.

This paper, therefore, will describe the evolution of school-based HIV prevention programmes and their theoretical frameworks, as well as present barriers to their implementation. Examples of several best practices will highlight the key role of the education sector in mitigating the impact of HIV/AIDS. The paper concludes with an innovative suggestion for the establishment of a new profession: the AIDS educator.

The evolution of school AIDS education programmes

Since the mid-1980s, school AIDS education has been evolving from fear-driven and local to well co-ordinated and transnational. Its content has evolved from information-based to theory-based. Today, the fifth generation of the programme is characterized by three inter-related strategies aimed at reducing the impact of HIV/AIDS on the education system :

1. Effective school health programmes that provide school health policies to reduce the risks of HIV infection and related discrimination; a healthy, safe and secure physical and psycho-social environment conducive to risk reduction and the prevention of discrimination; skill-based health education that enables students to acquire the knowledge, attitudes, values, life skills and services needed to avoid HIV infection; and school health services with linkages to other relevant services to reduce risk and provide HIV-related care, counselling and support.
2. Formal and non-formal HIV/AIDS prevention programmes that address sexuality, reproductive health and substance abuse, especially in schools without effective health programmes, in areas of high or increasing incidence of infection, and in settings available to youth who do not attend school.
3. Co-ordinated school/community HIV/AIDS prevention programmes that increase access to information, resources and services in forms that are likely to be

appealing and acceptable to young people (students and non-students)—peer education, distance learning, anonymous learning and new technologies for learning.

Education policy-makers and planners must therefore embrace health promotion activities to achieve their goals. Schools must not only be centres for academic learning, but also venues for the provision of essential health education and services.

The FRESH approach

A new initiative—Focusing Resources on Effective School Health (FRESH)—was launched at the World Education Forum in Dakar, Senegal (April 2000). This partnership, sponsored by UNESCO, UNICEF, the World Bank and the World Health Organization, signals their commitment to help national governments to implement school-based health programmes in efficient, realistic and result-oriented ways. There is a core group of cost-effective activities which, implemented together, provide a sound starting point for intensified and joint actions (Barthes-Hoffman, 2001):

- Clear school health policies on HIV/AIDS discrimination;
- A healthy environment;
- Skill-based education for the prevention of HIV/AIDS;
- School-based counselling and health clubs for HIV/AIDS.

Expected outcomes are:

- *Delay of first sex in adolescence.* Examples from Senegal (UNAIDS, 2001) demonstrate that this goal is achievable. Senegalese women in their early 20s did not have sex until they were almost 19 or older. For their mothers' generation, the median age was closer to 16.
- *Encourage abstinence.* In Uganda, the proportion of 15-year-old boys or girls reporting that they had never had sex rose from around 20% to around 50% from 1989 to 1995 (ibid.).
- *Promote condom use.* The '100% Condom Use' campaign in Thailand (ibid.) resulted in a drop of 90% in 'non-use' of condoms among young people.

School AIDS education: theories

An artificial separation of frequently used theories about behavioural changes is as follows (UNAIDS, 1999a):

- Theories that focus on the individual's psycho-social processes;
- Theories that emphasize social relationships;
- Theories discussing structural factors explaining human behaviours.

A summary of these theories can be found in *Life skills approach to child and adolescent health development* (Mangrulkar et al., 2001) and a recent review by UNAIDS (1999b). They include: social learning theory (Bandura, 1977, 1994); health belief model (Becker, 1974); problem-behaviour theory (Jessor & Jessor, 1977); social influence theory (Howard & McCabe, 1990); multiple intelligences theory (Gardner, 1993); resiliency and risk theory (Luthar, Cicchetti & Becker, 2000) among others

(Ajzen & Fishbein, 1980; Prochaska et al., 1994; Rogers, 1983; Fisher & Fisher, 1993).

School AIDS education: effective practices

The vast experience gained internationally over the last decade and a half in developing and implementing interventions and programmes to educate schoolchildren on HIV prevention has yielded a well-established set of at least twelve essential considerations.

PARTICIPATORY AND SKILL-BASED

For education on HIV prevention to achieve its goals, teaching methods must evolve from ordinary teaching, in which teachers lecture to their students, to participatory methods, in which students play an active role in the learning processes. Teachers, in the same way as pupils, need to realize that AIDS classes are different. Participatory methods in education are the key to moving from information-based programmes to skill-based ones.

The set of skills for HIV prevention has been under debate for several years, and is value-based. When assessing the essential HIV prevention skills that should be taught and practised in every school the following are recommended: communication skills, value clarification, decision making, negotiation, goal setting, self-assertion and stress management skills.

In conservative communities, there is wide acceptance of the notion that condom-use skills are absolutely unnecessary, while in most other communities these skills are regarded as essential. This is just one example of our need to develop culturally appropriate interventions that would gain wide acceptance.

WELL-TRAINED HIV/AIDS PREVENTION EDUCATORS

HIV prevention and anti-discrimination are complex issues. They demand well-trained, experienced educators with particular characteristics that may allow them to be effective behaviour-change agents in schools. Not every schoolteacher is a 'good' school AIDS educator. In recent years various groups have promoted peer AIDS education, based on selected high-school students, trained to provide AIDS education to their schoolmates. Little consideration, however, is given to the characteristics of schoolteachers or peer educators.

Four key virtues of an effective AIDS educator, as desired by students, were reported (Schenker & Greenblatt, 1993): wealth of knowledge about HIV/AIDS, openness, sincerity and a sense of humour. These examples highlight two key elements in the preparation of effective AIDS educators: first, the need to pre-select them according to criteria that have yet to be defined; and second, the severe lack of pre- and in-service training.

Human resources are central to capacity building for school AIDS education world-wide. There are plenty of examples demonstrating the enormous influence a

few well-trained and capable individuals can have on large student populations (Schenker et al., 1998, Kirby, 1995). The training of AIDS educators can begin during teacher training, and is followed up by in-service training for sub-populations within the education sector (e.g. curriculum developers, senior policy makers, inspectors).

DISCUSS CONTROVERSIAL ISSUES

Teaching HIV prevention and anti-discrimination in school presents several challenges to every educator. A primary one has to do with the ability to discuss controversial issues openly with pupils in class. Educators who feel comfortable with their sexuality, adhere to human rights values and respect their students are better at discussing important controversial issues related to HIV/AIDS in class, such as disclosure of HIV status, pre-marital sex and homosexuality, (Janz & Zimmerman, 1996; Basch, 1989). Crosby (1996) adds that development of an open and honest atmosphere and a caring relationship between teacher and students is critical.

PROVIDE MULTIPLE SESSIONS THROUGH MULTIPLE MEDIA

For school-based AIDS education to be effective, it must not be based on a quick-fix approach. Successful programmes suggest that at least four class sessions should be essential for achieving a minimal effect on students' knowledge, attitudes and behaviour-change intentions; ten to fourteen sessions are better.

Classes on HIV/AIDS should be different. Employing multiple media (e.g. stories, role-play, lectures, self-tests) provides an opportunity for engaging students actively in the learning process (Ragon et al., 1995). Effective repetition of basic AIDS messages requires clarity, consistency and sufficient variety to hold learners' interest over time. Co-operative learning also provides an opportunity for active learner participation, enhancement of social skills, increased retention and enjoyable learning.

Haffner (1996) asserts that AIDS education should not be the responsibility of any single sector of the community. Designing local programmes should involve parents, community opinion and local religious leaders, teachers, school administrators, community and youth agencies, health organizations and the adolescents themselves to ensure that it is culturally relevant and consistent with religious and social values (Siegel et al., 1996).

Soliciting participant involvement into all phases of the AIDS prevention intervention supports its marketability, enhances its credibility and helps participant learning and behaviour change. The parent community could also participate. Parents' self-efficacy as sexuality/AIDS educators for their children can be enhanced if schools involve them during AIDS education activities, while teachers should provide parents with guidelines for home discussions on health topics.

In addition, positive, non-judgemental attitudes on the part of school personnel, using a combination of communication strategies, are essential in maintaining parent involvement in school activities (Hahn et al., 1996).

RELEVANCE TO ALL PUPILS

As a sexually transmitted disease, HIV should be taught in contexts that are gender-sensitive and gender-appropriate, taking into account the fact that more than 75% of infections world-wide are due to unprotected heterosexual intercourse. Schools will often provide separate sex education classes to boys and girls. This should not be encouraged in HIV/AIDS education. Recent studies provide very little evidence to support the contention that sexual health and HIV education promote promiscuity. Of sixty-eight reviewed reports, twenty-seven reported that HIV and sexual health education neither increased nor decreased sexual activity, while twenty-two showed a delay in the onset of sexual activity, a reduced number of sexual partners or reduced unplanned pregnancies and sexually transmitted infection rates (Grunseit et al., 1997). Teaching HIV prevention to boys and girls should encourage them to talk about HIV and sexuality among themselves.

CULTURALLY SPECIFIC AND LINGUISTICALLY APPROPRIATE

Prevention efforts should consider community norms and sensitivities. Working closely with the target group of young people and key elements from the community during development, planning, implementation, evaluation and redesigning of a school-based AIDS education curriculum provides an opportunity for them to assume ownership of the problem and solutions to it (Levy et al., 1995). In addition, paying attention to the norms, values and traditions of the target population will allow for wider dissemination of the messages. It is advisable to combine vernacular with formal terminology to ensure understanding of important concepts in HIV prevention, support and counselling.

SOCIAL AND PEER INFLUENCES AND PRESSURES

From a survey of thirty-seven projects on successful approaches and barriers to AIDS prevention programmes in the United States, Janz and Zimmerman (1996) report that providing unique forums for open discussions of health-promoting information increases group norms supportive of safer sex and diminishes drug use behaviours. Open discussions give participants increased control and may reduce pluralistic ignorance (the belief that one is alone in one's beliefs or experiences). It was shown that teachers are able to create a safe physical space for children and adolescents to engage in candid discussions. Unlike mere lecturing, open discussions get children involved (O'Hara et al., 1996).

REINFORCING BEHAVIOUR AGAINST UNPROTECTED SEXUAL BEHAVIOUR

Group norms and behaviours are key factors in adolescents' development. The contribution of the social environment in supporting healthier behaviour represents a key component in maintaining that behaviour. Group pressure can effectively support

an individual's decision to act in a given way, and group support is necessary to reinforce responsible actions (Basch, 1989).

By using social influence approaches (O'Hara et al., 1996), a social consensus model, peer education and small-group discussions (Cenelli et al., 1994; Janz & Zimmerman, 1996) desirable group values can be achieved. Given the nature of HIV and the controversy surrounding its discussion, targeted interventions could be complemented by reaching out to a wider audience than those considered at risk, and changing the social consensus of the larger communities in which youth are embedded.

LINKAGES WITH PARENTS, HEALTH AND COMMUNITY SERVICES

The 'triangular model', developed as part of the 'Immune System Approach to AIDS Prevention' (ISYAP), provides an important assertion (Schenker, 1988): school-based AIDS education should focus on the pupils at school, but in close linkages with their parents and the community at large. These linkages will strengthen, on the one hand, the protective influences on the young people, coming from both school and home, and on the other better inform parents of HIV infection and its prevention.

The need to strengthen the links between the education and health sectors is best presented in the FRESH approach (Barthes-Hoffman, 2001).

TEACH LIFE SKILLS AS A COMPONENT OF A SKILL-BASED APPROACH

In addition to imparting accurate information and knowledge, and dispelling AIDS fears and misconceptions, the theoretical frameworks developed in recent years emphasize what several authors had already identified at the beginning of the 1990s (Bosworth & Jadora, 1993): AIDS education curricula should provide learners with problem-solving skills, decision-making skills, and communication, refusal and negotiating skills, as well as skills helping them avoid alcohol and drug use. Ogletree et al. (1995) suggested that published AIDS education curricula in the United States have increasingly focused on building general personal and social skills, though specific skills, such as conflict management and refusal skills, still need greater attention. Developing self-efficacy may help individuals to act on their motivation (Ashworth et al., 1992).

INTEGRATION WITHIN COMPREHENSIVE HEALTH EDUCATION

Integrating AIDS education as part of a comprehensive health education programme that begins in the early years of elementary school and continues until high school has been favoured (Majer et al., 1992; Ogletree et al., 1995). Several other authors affirm that success of HIV/AIDS prevention programmes is possible when AIDS education is comprehensive and integrated with other risk reduction issues (such as drugs and sexuality) and with anti-discrimination (O'Hara et al., 1996; Zacccone-Tzannetakis, 1995).

PEER COUNSELLING AND PEER SUPPORT

Peer education has been cited as a most promising strategy for delivering AIDS education to children and adolescents (Cenelli et al., 1994; Siegel et al, 1996). Trained peer educators serve as role models in reducing misconceptions about HIV risk and for initiating communication about protective behaviour. Peer educators can be effective messengers of AIDS education and effectively contribute to AIDS awareness in the school population (Arnold, 1995), provided that they are carefully selected and properly trained. This approach still needs to be properly evaluated.

Barriers to skill-based AIDS education in schools

The elements distinguishing school-based programmes from other interventions for youth are clearly the supportive structural aspects played by schools and teachers, and the interaction between school, parents, pupils and the community at large. However, AIDS education in school is often denied to children and young people because of barriers that are identified at three levels: the community level, the organizational level and the psychological level. At the community level, the following barriers have been identified:

DENIAL OF THE HIV/AIDS PROBLEM

The infection rates of HIV in the most-affected countries make it impossible not to recognize its enormous effects on the community. Nevertheless, denial of HIV/AIDS as a problem prevails among communities and leaders in these countries. In countries less affected by the current wave of the HIV/AIDS pandemic, it receives low priority on national agendas.

Schools do not exist in isolation. Community attitudes make their way into policy-making processes, both in the individual school and at the national education system level. In societies where there is denial of HIV/AIDS as a public health problem, schools find little support in developing policies on prevention.

The social environment is also the repository of social meanings and norms for behaviour, including the behaviours relevant to avoiding health risks (Mann et al, 1988). However, if the socially shared values of the community are in conflict with the principal messages of HIV/AIDS prevention, there may be a strong barrier to delivering AIDS education in schools. Basic discrepancies between the beliefs and opinions of decision-makers and the epidemiological and social realities of a country may constitute important barriers to the implementation of effective preventive campaigns.

AIDS IS A HEALTH SECTOR RESPONSIBILITY

The initial conception that HIV/AIDS is a health sector issue hampered the education sector's response. Ministries of education and other sectors of society felt less urgency in responding to the epidemic, arising partly out of early erroneous expect-

tations that, although catastrophic, the disease would spread much more slowly than has in fact been the case. Likewise, for many governments, responding to security needs received higher priority than dealing with the pandemic.

NEGATIVE PARENTAL ATTITUDES

Varying from country to country, parents have a lot to say about the education of their children. Organized structures (e.g. parent/teacher associations, governing bodies, parents' briefings) allow parents to influence the content, structure and length of the education their children receive at primary and secondary schools. Involving parents in the process of development, implementation and monitoring of school-based AIDS education may be a good strategy to diminish or manage potential conflicts with parents (Schenker & Yechezkiyahu, 1991). Unfortunately, this strategy is seldom used (Haignere et al., 1996; Schenker & Greenblatt, 1993).

ABSENCE OF A HIV/AIDS EDUCATION POLICY FOR SCHOOLS

When a clear, binding, evidence-based and culturally appropriate policy on school-based AIDS education is developed, schools receive enormous support in implementing effective programmes.

In the early years of the epidemic, model policies were unavailable. For example, in an assessment of 232 American School Health Association members, Kerr, Allensworth and Gayle (1989) showed that 71% of the respondents reported a need for model policies on appropriate levels of AIDS education within school settings, while 66% indicated a need for model policies on confidentiality relating to the HIV status of students. Since then, wide ranges of policies have been developed internationally (Closen, Sy & Schenker, 1995; WHO, 1992; UNAIDS, 1999b), nationally (CDC, 1988,) and locally. Yet, there is a gap between policies and implementation, especially adaptation to the evolving facets of the epidemic. In many developing countries, however, there are still no policies at all.

Within schools, questions remain unanswered as to whose responsibility it is to teach about AIDS. Where in the school curricula should the topic be taught? And how will schools recognize, assist and support teachers' commitment to preventing HIV/AIDS through education?

A clear understanding as to who (if at all) in the school community should know that a child is infected with HIV deserves more attention (Ballard et al., 1990). Some 20% of the respondents in a pre-service teachers' population stated that no one should know; 30% felt all school personnel should know. One-half of respondents suggested that only the principal, nurse and teacher need to be informed.

LACK OF PRE-SERVICE AND IN-SERVICE HIV/AIDS TEACHER TRAINING

The emergence of school programmes on HIV/AIDS was not planned. In many cases individual, often local, initiatives started the 'snowball' process of national action. Thus, many teachers are not prepared to teach HIV/AIDS prevention in the recom-

mended context of school health education or as a topic in human sexuality. The simple reason is that this subject, as well as active teaching methods necessary for effective behavioural education, is not included in the curricula of most teacher-training colleges (Haignere et al., 1996). The authors suggest that lack of materials and lack of time, as well as difficulty in adapting traditional classroom structures, are creating barriers to using alternative teaching strategies, such as role play and small-group discussions. This leads to differences in the quality of teaching among teachers in the same town, or even in the same school (Siegel et al., 1994; Gingiss & Basen-Engquist, 1994).

This perceived lack of knowledge, skills and self-confidence among teachers hinders effective delivery of AIDS instruction in the classroom (Ballard et al., 1990). Teachers cannot be expected to adapt well to new roles without adequate training and time for practice and reflection, which too often is not available (Basch, 1989). High rates of teacher and administrative turn-over, reassignments, competition from other lessons, lack of teachers' commitment and reluctance of less innovative teachers are other barriers (Gingiss & Basen-Engquist, 1994). This striking factor has only recently been addressed through a collaborative effort by Education International and several United Nations agencies, aimed at providing new dimensions to teacher training in facilitating skill-based AIDS education in schools (Strickland, 2000).

LACK OF PROPER AGE-APPROPRIATE CURRICULA

In most countries, we note a process in which curricula were first developed for high-school students, followed by modifications to meet the needs of younger pupils, out-of-school youth and, lately, students with special needs. Only a few examples exist (e.g. Uganda, Israel) in which the direction was upward from the start: age-appropriate curriculum development from primary to secondary schools to university level.

Reviews of current school curricula in various countries merit the following observations (DiClemente et al., 1993; Van Oost et al., 1994; Gingiss, 1992; Holtzman et al., 1992; Aggleton et al., 1989; UNAIDS, 1997).

- Curricula are often not developed to be appropriate for the intended student audience.
- Many existing school-based HIV-prevention programmes offer brief interventions that may not be sufficient to motivate adolescents to adopt HIV-preventive behaviours, particularly among younger adolescents.
- Teachers tend to devote a considerable amount of time to providing basic information on sex and drugs education, rather than on preventing AIDS.
- Critical risk reduction skills for young people when they may most be needed are often not addressed.
- School-based HIV-prevention lessons that emphasize didactic instruction may severely restrict interaction among students. Most teachers prefer verbal teaching methods (recitation, lecturing) to active, participatory teaching techniques, such as role play and group work, which are important for securing attitude and behaviour change.

- Not enough time is dedicated to exploring peer pressure, and practising resistance and refusal skills.
- Most teachers providing AIDS education are self-taught and use self-developed teaching materials owing to lack of resources.
- Lack of standardized AIDS education curricula may result in education of unstable quality and quantity.
- International guidelines and modules are not disseminated globally, owing to either a lack of dissemination strategies or a lack of funds to translate good materials into other languages.
- The preparation of materials, modules and exercises does not follow basic rules in developing health education materials (e.g. focus groups, pre-test, needs assessment).

At the psychological level the following barriers have been identified:

TEACHERS' FEARS

Teaching AIDS prevention is a tough job. It demands excellent and updated knowledge of the specifics of immunology, behaviour change, epidemiology and clinical aspects. It also asks one to look into one's own beliefs, attitudes, conceptions (and misconceptions) and sexual behaviours, substance (ab)use, human rights concerns and inter-personal relationships. For many teachers this is too demanding.

Surveys of teachers' attitudes reported a lack of comfort discussing homosexuality, bisexuality, death and partner communication about AIDS, correct condom use and explicit sexual behaviours (Haignere et al., 1996; Kerr, Allensworth & Gayle, 1989).

For others, there is a simple fear of HIV/AIDS. Ballard et al. (1990) surveyed pre-service elementary teachers' opinions about school-related HIV/AIDS issues. The authors found that 44% of their respondents indicated they were afraid to think that they would one day have a student with AIDS in their class; 30% indicated that they would feel personally threatened by such a situation. One-fifth indicated that they should have the right to refuse to have a child with AIDS in their classroom. Strouse and Phillips (1987) affirmed that teachers have refused to instruct HIV-infected students.

While these reports come from less affected countries, they alert us to the need to study, think of and appropriately address the fears of teachers in many countries when trying to overcome existing barriers to the implementation of effective prevention programmes in school.

FALSE SENSE OF SECURITY

HIV/AIDS is a latent disease. Because of the long incubation period, infected individuals continue to function and appear healthy for many years before succumbing to the disease. This creates a false sense of security. As AIDS became a chronic disease, its impact was diluted by detrimental effects being experienced in piecemeal fashion. Only lately has the cumulative effect of this steady, constant erosion of human resources drawn attention to the urgent need for national action.

LIFE SKILLS AS PART OF SKILL-BASED AIDS EDUCATION

In preparing students for the twenty-first century, schools cannot simply equip pupils with basic literacy and numeracy. More advanced skills are required. Skills for living are critical, particularly in regions where no one but schoolteachers can convey them in a meaningful way.

Based on research and on theories of human development, three key skill categories were identified (Vince Whitman et al., 2001):

- Social or interpersonal skills;
- Cognitive skills;
- Emotional coping skills.

These skills may be used simultaneously. The interplay between them is what hopefully produces powerful behavioural outcomes. In HIV/AIDS/STI prevention, these skills may be further refined. Within the social skills domain, we may include:

- Communication skills: effectively expressing a desire to delay the initiation of intercourse; influence others to practise safer sexual behaviours and to prevent discrimination against HIV/AIDS victims.
- Negotiation/refusal skills: refusing sexual intercourse or negotiating the use of condoms.
- Interpersonal skills: be caring and compassionate when interacting with someone who is infected; practise healthy dating and relationships.

Within the cognitive skills domain the following skills may need to be addressed:

- Decision-making skills: seek and find reliable sources of information about sexual anatomy, puberty, conception and pregnancy, sexually transmitted diseases, HIV/AIDS, local prevalence rates, alternative methods of birth control; analyse a variety of potential sexual situations and determine a variety of actions that may be taken and the consequences of such actions.
- Critical thinking skills: analyse myths and misconceptions about HIV/AIDS, gender roles and body image perpetuated by the media; analyse social influences regarding sexual behaviours.

Within the emotional coping skills we may wish to include:

- Managing stress;
- Seeking services to help with sexual issues, such as unplanned pregnancy;
- Increasing internal locus of control;
- Establishing a personal value system that is independent of peer influence.

The debate on what 'life skills' mean in practice is not over. There are several sets of proposed skills defined by various stakeholders. What is essential is to note that skill-based school AIDS education is a must for programmes to achieve their goals. There is an urgent need to develop curricula that will include an agreed (locally) set of skills, which pupils should know and practise.

Several national examples

Given the absence of a vaccine and the inability of medical science today to contain the AIDS virus, education is one of the most effective ways to combat the pandemic. It is unanimously recognized that education has a key role to play, not only as a means of passing information, but also as a means of changing attitudes and behaviour concerning AIDS, both as a disease and as a social phenomenon. In exchanging information on best practices, Member States of UNESCO are able to learn from each other.

UGANDA

Uganda may serve as a very good example of a country where political commitment at the highest level was translated into action-yielding results. HIV infections in Uganda are declining. In one site in Kampala, the HIV prevalence rate among urban pregnant women, aged 15–19, was 29.5% in 1992. It declined to 14–10% in 1996 and stagnated thereafter (Malinga, 2000). An increase in the age of first sex, a reduction in the number of casual sex partners and an increase in general condom use, especially between casual sex partners, were documented in surveys conducted by the Ministry of Health. This less risky behaviour among young people may well be correlated with the responses to the epidemic by the education sector in Uganda dating back to 1986.

Uganda was one of the twelve first countries to implement a comprehensive school AIDS education. In 1986, the Ministry of Education launched a major campaign (SHEP) that included the development of school curricula for primary and secondary schools, seminars, training workshops for teachers, AIDS drama shows and, above all, the inclusion of HIV prevention education into national policy-making. Two educational programmes on HIV/AIDS in Uganda gained wide publicity:

Straight talk is a widely distributed newsletter, targeting secondary school students (15–19), as well as young adults in colleges and universities (20–24). It advocates safer sex, including abstinence, masturbation, non-penetrative sex and condom use. Its counterpart for younger people, *Young talk*, is aimed at upper primary school pupils and young adolescents aged 10–14. In primary schools, teachers are encouraged to use *Young talk* as a teaching tool. An evaluation in 1995 found that that 8% of the 1,682 adolescents surveyed cited *Straight talk* as their main source of information on HIV. (Radio was ranked first at 43%.)

Madarasa AIDS Education and Prevention Project (MAEP) was implemented by the Islamic Medical Association of Uganda (IMAU) and UNICEF. Its objectives are to provide HIV/AIDS education to young people in Muslim religious schools and to teach young people both to empathize with persons living with HIV/AIDS (PLWHAs) and to help victims in their own communities. MAEP works with 350 Madarasa schools, informal schools attached to mosques that teach young people up to 15 years of age Islamic culture and behaviour. Madarasa teachers are Imams

or Assistant Imams, and some are members of the Uganda Muslim Teachers' Association. Classes include in-school as well as out-of-school children. They are taught how to care for HIV/AIDS patients and are encouraged to help them in their own communities. Parents and guardians are encouraged to talk to their children about HIV/AIDS. The curriculum includes the following subjects: understanding adolescence; adolescent friendships; peer pressure; understanding sexuality; facts and myths about HIV/AIDS; Islamic teachings on safe sex; responsible healthy living; breaking the stigma; peer counselling; building positive dreams; and discussing HIV/AIDS with parents. IMAU gives training in the use of the HIV/AIDS education curriculum to Imams in each district. Overall, 20,000 Muslim children have been given HIV/AIDS education in Madarasa schools since 1995.

ISRAEL

Israel was also one of the first countries to introduce a comprehensive AIDS education programme into its school system, starting in 1986 with primary schools and scaling up to university and non-formal education. It is now ranked among the lowest on the scale of HIV incidence and prevalence, with fewer than 100 new reported cases a year.

The Jerusalem AIDS Project (JAIP) is a volunteer-based, national and international NGO. In Israel, since its inception in 1987, JAIP has specialized in school-based AIDS education, developing two curricula for elementary and high schools. It has also initiated peer AIDS education programmes in which medical students are trained as AIDS educators for schoolchildren and out-of-school youth. These programmes make use of self-contained and self-explanatory AIDS educational kits, which are based on the Immune System Approach (ISYAP) Model (Schenker et al., 1998; WHO, 1987). JAIP also conducts five-day workshops for teachers, physicians and nurses. So far over 3,000 people in Israel have been trained as AIDS educators by JAIP. JAIP has also been involved in AIDS education training projects in twenty-five countries of Asia, Eastern Europe, Latin America, Africa and the Middle East (Erbstein, Greenblatt & Schenker, 1996). This unique feature of an NGO with a strong local/national arm and, at the same time, a second strong international arm created vast opportunities for experimenting with cross-cultural transfer of HIV/AIDS messages, campaigns and school curricula. It is estimated that more than 600,000 pupils have been taught to date by the modules developed by JAIP, based on the ISYAP approach.

In 1995 JAIP initiated a Middle East regional project which promoted the establishment and on-going functions of a regional network of AIDS educators from the Middle East countries. Remarkably, the participants came from communities hostile to each other. JAIP has demonstrated that the common combat against HIV/AIDS can be a bridge for peace (Schenker et al., 1998).

THAILAND

The decline of HIV infections in Thailand represents a major national achievement. Prevalence rates in 1995 were 34.91 per 100,000 and in 1999 they were 29.84. New

infections were reduced each year in Thailand from almost 143,000 in 1991 to 29,000 in 2000 (Thai Working Group, 2000). It is notable that in Thailand there is active involvement by every level concerned: government, academic institutions, NGOs, the private sector and families as well as individuals (Cleesuntorn, 2000).

The multi-sector and multi-disciplinary strategy to raise awareness was further complemented by high-level co-ordination (prime minister level), the formation of extensive networks to reach every community and a special budget allocation for HIV/AIDS prevention activities.

The early recognition of AIDS as a national problem has enabled Thailand to respond to it effectively. HIV/AIDS education was integrated into the national curriculum at all levels as early as in 1987.

As the epidemic evolved, so did the approaches used to tackle it within the school system. At first, HIV education was introduced as a single subject within health education classes. This was followed by content to develop more responsible attitudes and behaviours. Later on came the application of real-life issues and a greater emphasis on sex education. In recent years, a new concept was introduced into the curricula: 'living with HIV/AIDS'.

To strengthen efforts by the education system, co-ordinated campaigns were launched involving the mass media, non-formal education, indigenous learning networks and the national training of community leaders and government officials.

CANADA

Skills for Healthy Relationships (SHR) is a curriculum providing AIDS education and prevention for junior-high school students. Initiated in 1990, it aims at delaying sexual activity, increasing protective measures taken by sexually active youth, creating compassion for persons living with HIV/AIDS (PLWHAs), improving communications and negotiating skills, and combating homophobia. It is funded by Health Canada and the Council of Ministers of Education. The curriculum was designed to meet the needs of Grade 9 students (mostly 14-year-olds) and fit with the curriculum objectives for this grade level.

Workshops for teachers to introduce the curriculum were provided. Funding was provided to the Northwest Territories Association for School Health to develop a specific aboriginal adaptation of the curriculum.

The programme also included a two-phase evaluation. The implementation evaluation comprised feasibility assessment and implementation monitoring. The impact evaluation sought the stakeholders' reactions to the programme through focus groups, interviews and questionnaires. The outcomes evaluation assessed not only outcome behaviours but also the extent to which factors such as relevant attitudes, knowledge and motivational supports and skills enabled students to act in a health-conscious manner.

An evaluation of the project indicated that the SHR programme was very well received by participants (students, teachers, parents, administrators). Two years after participating in the programme, a majority of the demonstration group students

reported that they had gained in assertiveness, compassion, confidence and comfort in talking about condoms and personal rights.

A new profession: HIV/AIDS educator

A new concept in developing human resources is required in order to handle the crises of HIV/AIDS. I would like to suggest that education systems rethink about engaging ordinary schoolteachers in teaching about HIV prevention and anti-discrimination. Teachers, when properly trained and provided with the appropriate materials, are able to conduct effective skill-based AIDS education, but their other responsibilities might distract their work. In scaling up our fight against HIV/AIDS, we need a specialized group of 'AIDS educators', whose only task will be to ensure 100% coverage of schoolchildren and young adults with AIDS education. The 'squad concept' may be helpful in systematically reaching that goal. Teams of 'AIDS educators' will assume responsibility for covering, one by one, schools in rural and urban areas, using a pre-tested, culturally appropriate and well-defined curriculum, over an effective period of time that will allow knowledge acquisition and behavioural change in the target population.

The 'AIDS educators squad' can be composed of schoolteachers and people from other professions (e.g. social work, nursing, public health). We may even wish to consider using well-selected and trained medical students to perform this task. This concept may be challenged by the following questions:

- Who will train AIDS educators? How?
- What kind of rapport will they have with the pupils, being outsiders to the school?
- Will a new structure be needed for co-ordinating this effort, or could existing structures be used?
- What will be the incentive for the new profession? Why should it be supported?
- Is this going to be cost-effective in comparison with teacher-based approaches?
- What effect will the development of the profession have on the new approaches for strengthening skill-based and life skills education? Can it complement and strengthen these efforts?

This discussion is beyond the scope of this paper. The International Conference on Education (September 2001) may be a first platform to debate this concept, within the framework of living together in the twenty-first century.

Note

1. This paper is based on research work carried out between 1992 and 1999, and on a presentation given at the UNESCO Senior Experts Meeting, held in Elmina, Ghana, in March 2001. The views expressed in this paper are solely the responsibility of the author, and do not necessarily represent the views or opinions of the World Health Organization.

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EDUCATION AS A VEHICLE FOR COMBATING HIV/AIDS

Carol Coombe and Michael J. Kelly

On every commercial aeroplane flight, cabin staff remind passengers about safety procedures shortly before take-off. Their presentations always include information about the use of oxygen masks in the 'unlikely event of a sudden drop in cabin pressure'. They advise adult passengers to secure their own masks first before helping children or others to secure theirs. If they are to offer protective assistance to their children, parents must first protect themselves. In the same way, educational systems must first secure themselves against the onslaught of HIV/AIDS if they are to help those they serve reduce the incidence of the disease.¹

There has been 'a sudden drop in cabin pressure'. At the opening ceremony of the World Education Forum, held in Dakar in April 2000, Joint United Nations Programme on HIV/AIDS (UNAIDS) Executive Director Peter Piot reminded us that

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'AIDS constitutes one of the biggest threats to the global education agenda. What HIV/AIDS does to the human body, it also does to institutions. It undermines those institutions that protect us' (UNESCO, 2000, p. 22). In seriously affected countries, as many as 20% of adults in their most productive years are infected by HIV. Unless there is a radical change in the availability of low-cost effective drugs and in the medical infrastructure needed for their delivery and monitoring, almost all of these individuals will die within a decade. In southern Africa, there may be as many as eight million AIDS orphans by 2010. In South Africa alone, perhaps 10% of learners will be orphans. Throughout the region, millions more will be affected in some social, psychological or economic way by this disease; still others will be at substantial life-risk. As a result, the learning process in affected areas will become substantially more random. Learner preparation will be unpredictably diverse. The needs of learners of all ages will grow far more complex. And educators will face demanding challenges as they seek to meet these needs.

The most visible consequence of HIV/AIDS in southern Africa is the increase in the deaths of young adults. The peak mortality age for women is between 25 and 35; for men, it lies between 35 and 45. Women and men are dying at ages when under other circumstances they would be rearing children. One result, as we have already noted, is the rapid increase in the number of orphans. Regardless of their social status, these orphans are very vulnerable. Those from more impoverished backgrounds may be almost totally without social support. The assistance they receive from their communities or surrogate families may be inadequate to enable them to exercise their basic human rights to education and other services. A significantly large number may have financial and custodial responsibilities for younger siblings. Many cannot attend school because they cannot afford tuition fees or because they must work to generate the income their families need for survival. Others attend school, but at the same time must work to support themselves and their younger siblings.

Despite the stresses HIV/AIDS imposes on the education system, the system can also help societies respond to the HIV/AIDS crisis. Thus, as stated in the final report from Dakar, 'a key objective of an international strategy [for meeting the challenge of HIV/AIDS] must be to realize the enormous potential that the education system offers as a vehicle to help reduce the incidence of HIV/AIDS and to alleviate its impacts on society' (UNESCO, 2000, p. 23).

Protecting the education system in the face of HIV/AIDS

The first and most crucial contribution that an education system can make to reducing the incidence of HIV/AIDS is to take the steps needed to protect *itself* from the ravages of the disease. Protecting HIV/AIDS-threatened education systems so they can continue to provide quality education and training requires efforts directed at stabilizing these systems and mitigating the pandemic's potential and actual impact on all learners and educators.

RESPONDING CREATIVELY THROUGH A POLICY AND MANAGEMENT FRAMEWORK

Responding to the HIV/AIDS assault on education includes creating a policy and management framework that can bring about effective changes (Coombe, 2000b).

Key components of such a framework should include:

- *Committed and informed leadership*: politicians, senior education department officials and senior international agency staff must be knowledgeable and committed, convinced that the situation is grave, and must recognize that learning structures are being steadily undermined.
- *Collective dedication*: broad-based multisectoral management partnerships must be established with other government sectors, non-governmental organizations, religious groups, community groups and the private sector.
- *Policy and regulatory framework*: a framework of common understanding about the nature of the pandemic and its potential impact on education must be developed, along with guidelines, regulations and codes of conduct which interpret policies for the educators responsible for implementing them.
- *Strategic and operational planning*: commonly endorsed and understood strategic principles must be elaborated and used to underpin realistic and realizable operational plans.
- *Effective management*: senior, full-time, mandated HIV and education managers must be appointed at all levels until the situation stabilizes. A commitment must be made not only to react to the HIV/AIDS crisis but also to anticipate its consequences and harness resources pro-actively to address it.
- *Appropriate capacity*: procedures and structures must be established that will ensure that planned responses to HIV/AIDS-related challenges actually take place, build appropriate responsive capacities at all levels and provide for personnel training and replacement.
- *Research and monitoring*: a research agenda must be developed, along with research principles, priorities and resources for collecting, storing and sharing information, and a set of benchmarks and crisis indicators—alarm bells indicating trouble—that can be monitored over time.
- *Streamlined funding*: adequate budgetary provision must be made for governmental and non-governmental partners within the education sector, if necessary through mechanisms that hold and administer funds in trust.

REFORMING PEDAGOGY AND CURRICULUM IN RESPONSE TO NEW LEARNER NEEDS

Reforming pedagogy and curriculum is one of the most important tasks education systems must undertake if they want to respond effectively the HIV/AIDS crisis. They need to educate students, teachers, staff members and others about the nature and dynamics of HIV/AIDS; but they need to do more than this. Education ministries have been concerned primarily with the integration of education about HIV/AIDS and

related health issues into the school curricula. Indeed, all students need skills-based health education that will help them to adopt and sustain healthy lifestyles throughout their lives. To meet the challenge of HIV/AIDS, however, curricular and pedagogic reform must do more than develop the knowledge, attitudes, values and life-skills needed for making positive health-related decisions. Education systems must:

- replenish the skill bases being lost by affected societies because of the premature deaths of skilled and qualified adults;
- transmit skills to young people when the practitioners who would otherwise do so are no longer alive; and
- prepare very young people, many of them only children, immediately to assume adult economic responsibilities as heads of households or within the framework of households headed by elderly relatives.

In anticipation of the loss of skilled human resources, the industrial sector is already increasing the number of operatives that it trains.

Particularly in rural areas, the loss of middle-aged people to AIDS is blocking the acquisition by young people of knowledge and skills relating to planting, fertilizing, weeding, harvesting, storing crops, caring for animals, fishing, identifying and maintaining alternative food sources, pottery, basketry, building houses and other activities crucial to survival. Under normal circumstances, young people would learn informally about these activities by working alongside experienced older people. Sickness, death and the time dedicated to health care, funerals and mourning have greatly reduced the potential for intergenerational learning about these activities. There is strong evidence that where the prevalence of HIV/AIDS is high, the time given by rural households to productive activities has declined, and with it the ability of older people to provide younger people with the wide-ranging informal education their predecessors received. In Ethiopia, for instance, AIDS-affected households spend between 11.6 and 16.4 hours per week in agriculture, compared with a mean of 33.6 hours for non-AIDS-affected households (Joint UNAIDS-UNECA, 2000). If families and communities can no longer transmit vital skills across generations, education systems must either do so directly or equip those they serve to acquire these skills in non-conventional ways—whether inside or outside formal educational settings.

At all levels of the education system, learners in a world affected by HIV/AIDS need to develop flexibility; adaptability; resourcefulness; the ability to incorporate and take action in response to what they learn through the print or electronic media; and the sensitivity that will enable them derive the knowledge and skills they need in the course of day-to-day experience. The HIV/AIDS pandemic has highlighted, yet again, the importance of 'learning to learn' through what is taught and how it is taught.

Current curricula do not respond to the needs of learners affected by loss or those for whom immediate income-generating work is not a hypothetical abstraction but a compelling survival imperative. While all students need literacy, numeracy, health and critical thinking skills, young people who must enter the world of work at an early age also need a repertoire of entrepreneurial and vocationally oriented skills. It would clearly be very difficult for the system to equip these

students with specific and immediately applicable vocational skills (and trying to do so could needlessly limit their ability to take advantage of later academic opportunities). But it is certainly possible to make existing curricula more practical, though school systems must, of course, take into account the insights gained as a result of earlier efforts to increase the practical aspects of educational programmes. A practical focus is a crucial element of any adequate educational response to the HIV/AIDS crisis.

DELIVERY SYSTEM ADJUSTMENT

Addressing the HIV/AIDS crisis creatively and flexibly means adjusting educational delivery systems. This entails establishing broad principles governing relevant timetables and education and training calendars while allowing schools, colleges and communities to regulate scheduling in ways that respond to locally experienced needs. But more than this is necessary. There may be—and often are—too few teachers in AIDS-affected communities. Children may not be able to attend school because of costs or demands at home—at least not until they are older. The needs of students of different ages, and the needs of girls and boys, may differ widely and require age- or gender-differentiated responses. A traditional educational system, centred on a physical structure and conceived in a relatively rigid and hierarchical way—with one teacher in charge of a class of forty or more students—may have difficulty creating and maintaining appropriately flexible delivery systems.

Among the alternative educational delivery systems currently being explored is the use of interactive radio. The appointment of itinerant teachers, based at central schools, who oversee tutors engaged by community groups is another. Recognizing that the standard formal school system is not adequately equipped to meet the needs of all children, some communities have established their own schools, with their own teachers, curricula and management structures. A community-based school may be able to respond very rapidly to community and learner needs and may benefit from the commitment fostered by local ownership and control. But community-based schools run the risk of becoming second-rate educational institutions serving only the poorest students. There is the especially troubling possibility that governmental education authorities may view the establishment of such schools as absolving them of responsibility for the education of the communities they serve—and thus for some of those most in need of public assistance.

ADJUSTING FOR TEACHER LOSS

HIV/AIDS-related teacher morbidity and mortality together place substantial burdens on education systems. Since the disease has an impact on teacher trainees and trainers alike, the simple solution of expanding teacher training capacity is insufficient. In the absence of other measures, institutions may well be left short of teachers, lecturers and trainers. Alternative measures include a more systematic and extensive use of multigrade teaching (provided this is supported with

necessary resources, training and supervision); greater reliance on educational broadcasting; more use of community members as supervisors—and even as teachers in areas where they have some expertise; greater use of untrained teachers in conjunction with a system of on-the-job training; the treatment of certain curricular topics in the context of co-curricular activities managed by senior students; and more extensive provision for peer education (with some teacher supervision and monitoring).

COMMUNITY BACKUP

Community responses to the HIV/AIDS pandemic already include self-sacrificing home-based care for the sick and the matter-of-fact integration of orphans into already stressed extended families. Community participation—which would be vital to social development whether or not there were an HIV/AIDS crisis—must also be central to the transformation of the education delivery system in response to the challenges of HIV/AIDS.

Zambia's draft HIV/AIDS strategic plan for education provides a concrete example of approaches to encouraging community participation in addressing problems related to HIV/AIDS. The plan calls for all schools and colleges to participate during the coming year in home-based care and other forms of response to the AIDS-related needs of their communities (Zambia, 2001). Similarly, in Botswana close links are emerging between learning institutions, local NGOs and religious organizations and social and health workers.²

Using education to protect against HIV infection

Despite the absence of a medical vaccine against HIV infection, society has at its disposal a 'social vaccine', the vaccine of education (Vandemoortele & Delamonica 2000). In Zambia, for instance, the decline in the prevalence rate for 15-to-19-year-old women in Lusaka was more marked for those with secondary and higher levels of education than for those who had not proceeded beyond the primary level (Fylkesnes et al., 1999).

This finding is in striking contrast to earlier evidence from Zambia and several other severely affected countries. This evidence suggested that levels of HIV infection were higher among the more educated and well-off. It pointed to a positive correlation not only between levels of education and the probability of engagement in high-risk sexual behaviour but also of actual infection (Ainsworth & Semali, 1998; Hargreaves & Glynn, 2000). The subjects whose behaviour was documented in these studies had all, however, become sexually active in the comparatively early stages of the epidemic when the behavioural correlates of HIV/AIDS infection were less understood and relevant information was less widely available. Information about the behaviour of people who have become sexually active in more recent times, such as those in the Lusaka study, suggests that the more educated are now less vulnerable to HIV infection.

HOW DOES EDUCATION PROTECT AGAINST HIV INFECTION?

Does education protect against HIV infection through the health skills and disease-related information it transmits to learners, or is there something inherent in the very process of becoming more educated that helps people protect themselves against infection? Vandemoortele and Delamonica (2000) note that existing evidence does not allow us to draw exact conclusions about how the 'education-vaccine' against HIV works. While they are clearly right to argue that the increased knowledge, information and awareness that education provides are important protectors against infection, we believe the general impact of education in and of itself may be the most significant factor.

This conclusion is supported by the change in the positive correlation between levels of education and HIV infection or high-risk behaviour *even among those whose formal education included little, if any, health skills and AIDS education*. Indeed, few of those attending school prior to the mid-1990s were exposed to HIV/AIDS education programmes. During this period, life-skills and reproductive health programmes were implemented on a sporadic basis; teacher knowledge, understanding and commitment were limited; and educational strategies reflected little sensitivity to the real experiences of young people (Gachuhi, 1999; Kippax, Smith & Aggleton, 2000; UNECA, 2000). Nonetheless, the infection rates for individuals educated during this period is declining. Improved educational programmes and materials as well as revised teacher preparation systems now becoming more widespread will undoubtedly accelerate this favourable trend. But education itself tends to enhance the potential to make discerning use of information and to plan for the future and to accelerate favourable socio-cultural changes.

ENHANCING THE POTENTIAL TO MAKE DISCERNING
USE OF INFORMATION

Becoming literate is arguably the most basic change that education effects. A literate person can garner and internalize information from a wide variety of sources. Moreover, mastering basic literacy and numeracy skills requires many years of close attention to data sources and helps people develop the ability to analyse and evaluate information. In turn, the intellectual skills developed in acquiring basic literacy and numeracy help people assess information related to HIV/AIDS.

ENHANCING THE POTENTIAL TO PLAN FOR THE FUTURE

Empirical knowledge about HIV/AIDS does not automatically lead to changes in behaviour that will protect people against infection. Knowledge must be complemented by attitudes and values that will lead to appropriate decisions. And the hidden curriculum of institutional culture and organizational milieu makes a deep and lasting impression on students' attitudes and values. The routines and procedures of school life help students develop valuable habits that will shape their behaviour after they leave school.

The very fact of attending school encourages students to become better disciplined. From prolonged experience of the almost military routines of school life, students learn to defer gratification, to apply themselves even when naturally reluctant to do so, to endure constraints and hardships in the expectation of long-term future benefits, and to take their future well-being into account in the present. They emerge from school having acquired a measure of poise and a considerable sense of direction and capacity for self-control. These qualities can equip and motivate them to protect themselves against HIV/AIDS infection.

EDUCATION ACCELERATES FAVOURABLE SOCIO-CULTURAL CHANGES

Education changes the socio-cultural climate within which people live and behave. Even in the absence of any concerted effort to bring about change, education modifies certain aspects of the family and community environment. Some practices become unacceptable while new ones are introduced. As education becomes more widely diffused in a community, it becomes more acceptable for women and girls to become more involved in decisions affecting themselves—and thus affecting their sexual and social lives. Although changes may occur very slowly, power relations and gender relations undergo subtle improvements. The incidence of traditional practices that may place people at high risk of HIV infection declines. The growth in knowledge that accompanies education, the orientation of educated people towards the future, and the greater prosperity that frequently accompanies higher levels of education all conspire to create a social climate more friendly to behaviour directed towards HIV prevention.

Educational institutions can contribute most effectively to appropriate social and cultural transformation when their staffs, their environments and their procedures and regulations support positive social change. Too often institutional environments, including classrooms, hostels and leisure areas, are battlegrounds. They are not safe places, especially not for female educators and learners. Too often, abuse, harassment and violence are tolerated. Behaviour change is constrained—and vulnerability to HIV infection continues unchecked. Immediate policy and management decisions that all places of learning *must* be places of safety for learners and educators, where there is no tolerance of abusive behaviour of any kind, are essential for creating climates favourable to informed decision-making and substantial behaviour change.

The overarching importance of realizing Education for All goals

If education is a critical factor in the control and management of HIV, a number of important conclusions follow. First, every child must have access to quality primary education, in compliance with the Jomtien and Dakar Education for All goals. These children must enrol and remain in school. Although some institutions are still high-risk environments, education will give young people at least some measure of protection (Kelly, 2000*b*; George, 2001). And the longer people stay in school, the greater

the likelihood that they will be protected against HIV/AIDS by the 'education vaccine'; while any schooling is better than none, the beneficial effects of education are most pronounced for those who have studied at the secondary or tertiary levels.

Second, it is important that educational institutions be well managed, places where orderliness and normality prevail and where high expectations for the behaviour of everyone are articulated. In the disturbed environment of a severely AIDS-affected community, 'school' may be the only normal situation a child encounters (although even here sickness and mortality among teachers, fellow students and family and community members may cast a pall). A key goal of educational managers should be to ensure full scope, within secure environments, for vitality, happiness, hope, energy and play. Education systems must ensure that those affected by HIV/AIDS can work and learn in caring institutional settings where the safety and human rights of all are respected. Education systems must be rendered fully and patently inclusive, providing for the most extensive possible participation by persons with HIV/AIDS.

Schools and communities must be closely linked, so that students are not caught in dangerous conflicts between what they learn from teachers and what they observe in their communities. Schools can gradually contribute to greater gender equity, increased female empowerment and more substantial human rights protections within the communities they serve. In particular, they can help to eliminate all forms of AIDS-related stigma and discrimination.

Education and schooling provide almost the only known antidote to HIV infection. Making this antidote universally available implies making education universally available. Commitments to education for all made at Jomtien, renewed repeatedly throughout the 1990s and reaffirmed at Dakar, have become even more vital because of the need to respond to the HIV/AIDS pandemic. In the words of Nelson Mandela at the close of the XIIIth International HIV/AIDS Conference in Durban, 'the time for action is now and right now'.

Conclusion

We want to depart from academic tradition by concluding with a direct appeal to our readers. We implore everyone who reads these words and who is in a position of authority to do two things: first, to become better informed about HIV/AIDS and its actual and potential effects on education, and second, from this standpoint to provide informed, committed leadership that encourages the actions and provides the resources required for managing and controlling this devastating pandemic.

We also want to make a further appeal to all readers: recognize that for twenty long, hard years we have lived with this epidemic, which is causing unspeakable human suffering, entrenching poverty, subjugating women and unravelling development efforts. Recognize that we know what to do. Recognize that we know how to protect our education systems. Recognize that if these systems are protected, they can stem the further spread of the disease and help individuals in coping with its

consequences. Recognize that action is vital—and take what steps *you* can to encourage and assist appropriate action.

Thank you for your support as we join together to fight for our educational systems—and thus for our children and our future.

Notes

1. The authors are indebted to Helen Craig, International Institute for Educational Planning, for highlighting this parallel.
2. Field evidence from on-going work on the impact of HIV/AIDS on the Botswana education sector, Abt Associates Johannesburg, 2000–01.

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PROFILES OF FAMOUS EDUCATORS

MARGARET MEAD

(1901–1978)

Wilton S. Dillon

When we look about us among different civilizations and observe the vastly different styles of life to which the individual has been made to conform, to the development of which he has been made to contribute, we take new hope for humanity and its potentialities.

Margaret Mead, 1930

The centennial of the birth of Margaret Mead (1901–78) offers parents, scholars, educators, diplomats, public servants and all other citizens a rich opportunity to project hope into the twenty-first century. Mead's legacy compels us to revisit questions raised by her and her cohorts and to form 'clusters' aimed at gaining knowledge about human learning.¹ Although Mead was a great individualist and celebrated individual uniqueness, she also advocated (and practised) group effort—thus the leitmotif of her centennial commemoration: 'Never doubt that a small group of thoughtful, committed citizens can change the world.' The vast collection of Mead

Original language: English

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Senior Scholar Emeritus, Smithsonian Institution. An anthropologist and educator who studied at Columbia University with Margaret Mead and at the Musée de l'homme in Paris with Claude Lévi-Strauss. Having spent three years as a civilian on General MacArthur's staff in Tokyo during the Occupation, Dillon became interested in Ruth Benedict's *The chrysanthemum and the sword*. Mead encouraged him to build on that interest with fieldwork in France. The result was *Gifts and nations: the obligations to give, receive and repay* (1968). He has also written on African education, particularly the role of universities in nation building. Associated with Mead for the last thirty years of her life, he serves as secretary to the international honorary committee for the Mead Centennial, chaired by Lévi-Strauss.

manuscripts and memorabilia in the Library of Congress in Washington is a monument to her intellectual debts to others and of interdependent inquiries into human potential.

Mead often used the Ancient Greek term *plastikos* (capable of being moulded) in referring to the capacities of humans to grow and change and adapt within (and sometimes beyond) the range of their biological and cultural inheritance. The nature/nurture dichotomy was a chimera to her. Her systems approach to knowledge demanded inclusion of all variables. Her web of thought, available in writing and film, remains seamless.

As her one-time student, mentored by her for the last thirty years of her life, and as a friend and collaborator, I was privy to and an admirer of her insatiable curiosity. Her curiosity can still be contagious in a new generation. Her enormous intellect and powers of synthesis and observation were intact until sedatives and death stilled her in the cancer ward of New York Hospital on 15 November 1978. The *New York Times* editorial mourning her death called her 'grandmother to the world'. Fellow scientists visiting China noted that she did 'not go gentle into that good night'. She was a participant-observer doing an ethnographic study of the process of dying as a part of living. She resented death's rude interruption of her work, and she never said 'good-bye'.

What can we learn in this new century about her own education and how she learned to study the continuities and discontinuities in what one generation transmits to the next? From her infancy in Philadelphia until her death, Mead's life revolved around education. Pointing out her role as the most famous anthropologist in the twentieth-century world and as a one-person UNESCO is only one way of identifying the elements that make her an enduring educational force. The ongoing debates about her legacy are in themselves 'educational'. Debaters are forced to think more clearly, to reshape their questions, to keep alive a sense of wonder about who we are as humans, where we come from and where we are going. They are forced to question how we fit into the animal kingdom and the larger universe and how we can learn to make the ethical choices to protect all species and a fragile planet from human predators. Mead was a responsible and caring scientist, humanist, citizen, parent, grandparent and teacher—roles that were sometimes fused.

The education of Margaret Mead

Mead's autobiography, *Blackberry winter: my earlier years* (1972),² tells us about herself, her educator parents and her ancestors—school superintendents in nineteenth-century Ohio. Her life story gives us many clues about what influenced her approach to anthropology, a form of 'disciplined subjectivity'. For Mead, being 'objective' includes revealing what can be learned about the observer and the interactions between the observer and the observed.

She writes in the prologue to her autobiography: 'In this book, I have tried to describe the kinds of experiences that have made me what I am, myself, and to sort

out the kinds of experiences that might become part of a way of bringing up children and of seeing the world that includes the past and future as aspects of the present—the present of any generation.’ Early on in the book, Mead writes that she ‘was the first child, wanted and loved’ (Mead, 1972).

Her self-revelation would have enabled her friend, Erik H. Erikson, to write an insightful reconstruction of her life, just as he did in unravelling the tapestry of the lives of Martin Luther and Gandhi and then re-weaving the threads. While he did not write a psychological history of his friend, his writings and Mead’s reflect what they learned from each other about perspective on time, namely, discovering the benefits of counting in ‘biological time’—i.e. measuring the flow of time in twenty-five-year generations. This kind of counting contrasts with measuring time in, say, fiscal years—based on when institutions collect budgets and spend money. One of the advantages is the easier avoidance of the idea of a ‘quick fix’—naively expecting hasty solutions to problems. Mead regularly reminded us that the dissemination of a new idea or an invention could take twenty or more years. She even cautioned new United States presidents about trying to implement campaign promises within the first hundred days of office. Nevertheless, Mead was impatient to move herself and others to action on a number of fronts, from child-rearing to an end to warfare. Her education turned her into both a practitioner and a prophet (Toulmin, 1984).

Mead’s perspective on time has profound implications for understanding education as the selective transmission of culture, the elements of which are changed in each generation. Counting in biological time serves also as a useful corrective to the current, and much debated, United States government reliance on test scores as measures of learning or as definers of ‘education’. Mead’s life and mentoring legacy steer her followers toward taking a longitudinal view of a child’s unique gifts, interests and talents, toward a focus on developing curiosity in young people. This curiosity can endure for a lifetime, irrespective of the temporary mastery of a set of facts and a predetermined choice of a career. While focused and disciplined, she personified the Prince of Serendip from Horace Walpole’s fanciful book, *The three princes of Serendip*, which has provided science with a beautiful metaphor for discovering the unexpected. Serendipity is good for science; literalism can kill curiosity.

Mead’s childhood was important in developing in her a respect for individual difference (and its long-term development). Her mother, Emily Fogg Mead, adapted to and cherished the uniqueness of each of her four children, who were exposed to the contrasting personalities of their parents and benefited from living in a three-generation household. They, in turn, drew different lessons and followed different career paths. Decades later, the influences of her mother can be found in Mead’s university classrooms. She required students to submit brief biographies along with photos of themselves in order to learn more about ‘faces in the crowd’.

At the time of Margaret Mead’s birth, her mother accepted, in principle, the advice of I. Emmet Holt and his son, who from 1894 on authored many books on child care. They advocated, for instance, scheduling for bottle-fed babies. ‘She read the book,’ Mead wrote,

but she nursed her babies. She accepted the admonition about never picking up a crying child unless it was in pain. But she said her babies were good babies who would cry only if something were wrong, and so she picked them up. Believing that she was living by the principles of modern child-rearing practices, she quite contentedly adapted what she was told about children in the abstract to the living reality of her own children (Mead, 1972).

Mead, like her mother, expected children and adults to respect rules but to be imaginative in adhering to them, without hurting others. From parental and sibling influence, she learned early to look for value in one's individual acts rather than regarding the act as a means to an end, enjoying the process of moving sequentially from one good deed to another without forcing oneself to meet some blue-printed goal.

The education of Margaret Mead never ended. Out of her family relationships, including a professor father who taught finance at the University of Pennsylvania, and her early embrace of writing poetry, acting in pageants and studying psychology, Mead 'found her voice' in anthropology as a holistic framework for integrating the humanities and the sciences. These evolutionary steps are beautifully described in her autobiography, which her daughter, Mary Catherine Bateson, recommends as the best personal account of how she evolved as an educator.

Her autobiography reveals a pattern of learning that endured for her seventy-seven years. Frequent moves by the family left her alternating between home schooling and attending traditional schools, which her parents often criticized for their emphasis on rote learning or memorization. Much of her early learning was at home through the influence of her mother and with the help of her grandmother, who was a teacher and who gave her 'lessons'. Mead's mother was a pioneer sociologist who conducted ethnographic studies of Italian immigrants. When she went out to interview Italian families, she took young Margaret along with her. Note-taking was to become an essential part of her career as an anthropologist. As the eldest child, she even took notes on the development of her younger siblings, long before reading Jean Piaget. (Her siblings were eventually sent off to a progressive school in Fairhope, Alabama.)

Drawing on what she had learned from her experiences, changing schools and communities around Philadelphia, she developed an approach to education with a strong experiential component that bore some resemblance to John Dewey's model of 'learning by doing'. She learned not only with her head but also with her hands—engaging in handicrafts, needlework and carpentry. (She seemed disappointed in me, decades later, when she discovered how poor I was at carving a duck for a Christmas dinner at her house in New York.) Her extraordinary verbal skills were honed by conversations at the family table and eventually through college debating. Television interviewers were astonished by how she could expand or shorten her spoken thoughts according to minutes or seconds available.

Her life experiences helped her in her fieldwork in Papua New Guinea, where she was able to observe patterns of education that emphasized a different set of gifts—those unlike what would be expected from American school children. Howard Gardner, the Harvard psychologist, takes note of these perceptions in his new preface to Mead's *Growing up in New Guinea* (Mead, 2001b [1931]).

Following upon formal and informal learning at home and in private schools in Pennsylvania, undergraduate studies at DePaul University in Indiana and at Barnard College, and graduate studies at Columbia University, Mead made a dramatic entry into anthropology with her still debated 1928 book, *Coming of age in Samoa*. In preparation for this book, the 24-year-old Mead, mentored by Columbia University anthropologists Franz Boas and Ruth Benedict, launched a study of adolescent Samoan girls. Her book became an immediate best-seller, coinciding with the receptivity Americans in the 1920s were giving to the ideas of Sigmund Freud. Its critics claim that her alleged 'cultural relativity' helped to loosen American morals. But to many readers anthropology and its holistic vision became a part of the American ethos, spawning both friendly and unfriendly cartoons and caricatures of Mead, currently exhibited as part of the Library of Congress centennial exhibition: *Margaret Mead, human nature and the power of culture*.

Fifteen years after Samoa, Mead made five field trips, focusing mostly on Bali and New Guinea, studied eight different cultures, generated a large corpus of professional and popular works and became a favourite on television interviews and as a witness before congressional committees. The anthropologist Robert Murphy reports in *The body silent* (1987) that it was difficult to have an opinion of Margaret Mead because 'she was like the air we breathe'.

From her tower office in the American Museum of Natural History, her home base for more than half a century, Mead combined her curatorship of Pacific ethnography with her career as a teacher and public intellectual. This included adjunct professorships at Columbia University's Teachers College and Graduate School of General Studies, and visiting professorships in psychiatry at the Menninger School and the University of Cincinnati's School of Medicine. She influenced the start of urban anthropology at New York University and enthusiastically met students at the new Manhattan campus of Fordham University near the Metropolitan Opera in order to understand first generations exposed to higher learning. She greatly respected Jesuit contributions to education, and enjoyed having as a colleague Father Ewing, who chaired the anthropology department on the Bronx campus of Fordham University. (Her daughter, Mary Catherine Bateson, also taught anthropology at Ateneo, a Jesuit university in Manila.) But her largest 'classrooms' consisted of readers of popular journals and television viewers.

In her earlier career, before becoming a household word, Mead sometimes wrote two versions of the same materials, one for the academy and the other for the general public. For example, *Coming of age in Samoa* was followed by *The social organization of Manu'a*. Like St Paul speaking to the Corinthians, she adapted her material to her audiences, also a form of cross-cultural communication.

Personal perspectives

Professional evaluators of educational 'outcomes' prefer quantitative rather than qualitative evidence. Nevertheless, inspired by Mead's use of herself as data, I shall serve up some personal stories or 'outcomes' of my being a part of the educational

process influenced, but not generated, by Mead. My story is but one of the scores of case studies that can be written regarding the life-long intellectual residues of exposure to Mead as a teacher and collaborator. In my case, this entails 'civic betterment' based on anthropology rather than joint fieldwork. The first residue is a recurring, Mead-inspired belief that knowledge constantly needs testing, challenging and revision. Like Albert Einstein, Mead welcomed proof or debate that she might be 'wrong'. Furthermore, she was more polite to people she thought might not be worth arguing with.

In an unpublished reminiscence about Mead, 'The old turtle', delivered to the Literary Society of Washington, I described my first encounter with her in February 1951. I had come to Columbia from Berkeley to follow Alfred Kroeber, who had retired from the University of California. Mead's Columbia course, 'Cross-cultural communication', being held at her museum, attracted me because of my earlier work in Tokyo with MacArthur's Civil Information and Education staff. I dutifully filled out some biographical forms to accompany my student photograph. Mead, who spoke with an accent that I associated with Eleanor Roosevelt, noticed me and, suspecting that I had read Benedict's *The chrysanthemum and the sword* (1946), invited me to come to her office for a consultation. She began the conversation by asking me what I thought of Benedict's work, especially the distinctions she makes between Japanese conceptions of shame and guilt. She was interested in the class I was taking with Kroeber, 'Value systems and national character', in which he was speculating on similarities between the Scots and the Yurok Indians of California. She quickly understood that I was interested in the study of cultures in industrial, literate nation-states, including the American Indian tribal cultures of my native Alabama and Oklahoma. My mother's birth on a covered wagon entering Indian Territory (now Oklahoma) in 1898—three years before Mead's own birth—was to become, years later, a frequent point of reference in her discourse on women pioneers. She was interested in exploring what they brought with them and what they left behind.

Early on in our conversation Mead learned that I was the eldest of six sons, that I had become head of the family upon the death of my father in 1946, and that I had brought my widowed mother and four youngest brothers to live with me in Tokyo. She asked about the curriculum in the Tokyo American School and what young Americans were learning about Japanese language and history. She was an excellent interviewer, or rather, conversationalist. She spoke about being the first-born herself and mentioned some of the psychological literature on birth order. I found myself being addressed as a colleague rather than a student being sized up by a professor for grading purposes. She was interested in gathering from every person she met clues about kith and kin, and gender and diversity in American culture. For her, students from overseas provided a rich resource of additional insights and clues. She maintained that they knew things she did not know. Everyone she met contributed to Mead's quest for knowledge of humans as one species with many cultures.

Upon learning that I was heading for Paris after only one semester at Columbia, Mead opened doors for me that changed the course of my life. My nearly two years

in Paris, and a brief sojourn in Leiden, were greatly enriched by her sending letters of introduction for me to Alfred Métraux, UNESCO anthropologist; Geoffrey Gorer, the British anthropologist with a keen interest in English, French, Japanese and American cultures; and Clemens Heller, economic historian, son of Freud's Vienna publisher, and founder of the Salzburg Seminars in which Mead and other American intellectuals met with European counterparts shortly after the war. Heller was to become the academic entrepreneur *par excellence* in Paris, founding the Maison des Sciences de l'Homme and numerous academic journals dealing with European, African and Asian cultures. He and his then wife, Paris-born American Mathilda Mortimer, opened their apartment on the Rue Vaneau in the Paris salon tradition. There, I met French savants, historians of diplomacy, technology, literature, music and architecture. I was enjoying a taste of Paris that had enchanted Franklin and Jefferson. Through this milieu, I came to know Claude Lévi-Strauss, then less well known to the world than Mead, but already a pivotal figure. Education, I was discovering, takes many forms, including the practice of collegial referrals.

Mead came to Paris several times during my stay there, meeting me at the UNESCO bar, then on Avenue Kléber. During these visits, she showed me signs of her mental processes that had not been so apparent to me when we first met: a combination of deductive and inductive thinking. She contrasted, as did the French, Anglo-Saxon empiricism with French Cartesian thought, and urged me to take advantage of both. She queried me about Marcel Mauss, Durkheim's nephew and Lévi-Strauss's teacher, whose ideas I was being introduced to in a seminar. His 1927 *Essai sur le don* [translated into English as *The gift; forms and functions of exchange in archaic societies*] was to become the wellspring of my dissertation, later published through Heller's good offices as *Gifts and nations*. Mead was quick to connect my earlier interest in Japanese patterns of gift exchange and reciprocity (the concepts of *giri* and *on*) with what I was learning through Mauss's 'armchair anthropology' in Paris. Three universal obligations were identified by Mauss: the obligation to give, to receive and to repay. Such generalizations served as magnets for attracting all kinds of inductive data and insight from a variety of human societies (Mauss, 1954). Mead helped bring these abstract obligations into observable focus within family, religious, work and school environments.

These Paris conversations with Mead and her friends planted the seeds for my awareness that the United States prefers to be a donor and teacher nation than to be a recipient or a pupil nation, and that international comity would be helped by the United States learning to alternate those roles. I also owe to the New York and Paris encounters with Mead the start of my concocting the phrase 'the Gaullist effect' to refer to people who take revenge on their benefactors by becoming nationalistic leaders not unlike those leading 'nativistic revivals' in cultures resisting loss of autonomy. Mead's analysis of 'cargo cults' and the case of the leader, Paliau, in *New lives for old* (1956) prompted me to make such an outrageous leap of comparison to Charles de Gaulle.

Conversations with Mead and Gorer consistently included phrases like 'that's a nice little point'. They were always searching for small clues about human behav-

jour that might fit into a larger pattern, a mosaic. Heller complained whenever a day passed when he did not come upon a 'new idea'. Mead always gave credit to Gregory Bateson for being a better theoretician than she was, though both, especially in their Balinese research, dealt with micro-behaviour through analyzing photographs of parent/child interactions. I felt lucky to be absorbed into such webs of discovery and support at the start of our thirty-year association, the outcomes of which did not end with her death. The centennial of her birth provides me with more continuities than discontinuities, for I am still involved with her foundation, the Institute for Intercultural Studies of New York, having served as its president while she was secretary. I am now passing on the post of secretary to a member of the younger generation—just as she would have prescribed.

In a recent book, *Uncommon lives: my lifelong friendship with Margaret Mead* (1999), by another of her former students, the late Patricia Grinager, Mead is described as 'an employment agent [who] mixed and matched hundreds of jobs she heard about to people she considered could do them'. She believed anthropologists needed to learn to take jobs that seemed to have nothing directly to do with their formal education. So she helped with career counselling and job placement long after students had left her classroom. (Her godson, Daniel Alfred Métraux, who was raised in the household Mead shared with his mother, continues the Mead tradition of placing his students, writing recommendations, and visiting them around the world.)

In the years since I first met Mead, she figured in recommending or endorsing me for the editorship of an anthropology journal of the Society for Applied Anthropology; teaching appointments in three institutions; administering an educational foundation committed to 'education of Negroes in the United States and in Africa, as well as American Indians'; organizing science co-operation between the National Academy of Sciences and the new nations of Africa; and finally, entering the Smithsonian Institution, where she played a key role in various international, interdisciplinary symposia I organized to produce books. The jobs I was not offered or did not take were also a part of my education. When nominated for several college presidencies, I was not discouraged by her, but was reminded that I would be more useful in broad, lateral relationships connecting various institutions than to sit on top of a pyramid, troubled by faculty tenure, parking problems and the sex lives of students.

Her open-endedness and belief in the versatility of individuals influenced her support of the assumptions behind President John F. Kennedy's efforts to appoint persons to African ambassadorships who knew something about the cultural regions they were intended to serve. Though I did not become the United States ambassador to Sierra Leone, Mead was happy that this might have been the case had Kennedy not been assassinated. My 'qualifications' included my friendship with an African woman, Paramount Chief, Madam Ella Koblo Gulama of Moyamba, who would have given me entrée to several Sierra Leone chiefdoms and her network of relations with educators and politicians in Guinea and Liberia. Mead, who was intrigued by the importance of grandmothers, was interested to learn that Madam Ella's grandmother was the Paramount Chief who negotiated the British protectorate, and that

Ella's father had chosen her as his successor ahead of her older brother—all with due electoral process—because she showed greater signs of leadership.

Apart from these professional links with applied anthropology, Mead taught me a great deal about friendship. There seemed to be no limit to the number of new persons she would bring into her life and make a part of new 'clusters'. She believed that friendship is kinship by choice. So when I presented to her the woman who finally had agreed to marry me, a Virginian whom I had met in France and a dancer, she was delighted. My bride was immediately absorbed into her circle. She concluded that dancers made good anthropologists because they had experience with choreography—the way elements come together to form patterns and movement. It was a special pleasure for us to be invited to the ceremony at the American Academy of Arts and Letters when Mead was elected. In the presence of Marilyn Monroe and Arthur Miller, we admired the exhibition of Mead's field note texts with drawings of textile patterns from Bali. Mead was much at home with the poets, as well as the main speaker at the ceremony, Salvador de Madariaga, well known to Mead for his 'national character' book, *Englishmen, Frenchmen and Spaniards* (1928).

When my wife Virginia and I were to set sail for Ghana in 1961 to do some field work on the life histories of African intellectuals, Mead gave us a farewell dinner in a Balinese restaurant off Times Square. The following year, returning with our new son to live in an apartment near Columbia, Mead often visited our flat for supper before teaching her Columbia evening class. If the baby cried during supper, Mead advised Virginia, 'go to your baby'. The same baby, now older, was carried around Greenwich Village by Mead's and Rhoda Métraux's Haitian nurse and housekeeper, Tulia, our son riding on her hip or back as in Dahomey, the Haitian motherland. A Christmas gift to our son later came from Mexico City, where Mead was attending an anthropology conference, and returned with a creche on her lap. It was presented with a note, 'gentle things, fragile things'. The baby grew up to become the godfather to her godson's biological son, David Métraux. All in the family.

Despite the access Mead gave us to her life and, by extension, to the lives of her daughter and much celebrated actor granddaughter and son-in-law, Barkev Kassarian, I was acutely aware that Mead always championed the autonomy of her protégés. She did not wish them to be known as 'Maggie's boy or girl'. She cultivated our independence and individuality as she did those of her daughter. At the marriage of her daughter to Kassarian, Mead, in a wheelchair from a broken ankle, entered the church from a side door to take her place, unassumingly, beside her former husband. She did this in order to avoid stealing the spotlight from the bride. Such behaviour matched well her protocols for doing research in clusters of groups, not unlike a jazz band when different performers wait their turn to shine together and individually.

The post-Mead world of education

Professional educators in the United States are using the centennial of Margaret Mead's birth to evaluate critically the Mead legacy. She would welcome the

scrutiny. Two leaders of this benign 'revisionism' are Ray McDermott of Stanford University's School of Education and Hervé Varenne, McDermott's former colleague at Columbia University's Teachers College. A provocative essay by McDermott called 'A century of Margaret Mead' is soon to be published by the *Teachers College record*. Varenne, a French-born anthropologist, has written the preface to a new edition of Mead's *And keep your powder dry* (1999a [1942]), her pioneer analysis of American culture faced with mobilization for World War II.

'Mead focused on learning as habits developed in the context of social relations,' McDermott observes. 'She was early influenced by the Gestalt psychology of Kurt Lewin and later by the cross-cultural work on stages of identity development by Erik Erikson [. . .] and Gregory Bateson, natural historian, husband of a decade [. . .] [who saw] little reason to distinguish communication and learning.' He adds that the Bateson and Mead model of learning anticipates much of what is currently under debate in the ethnographic study of learning.

McDermott's critique comes later: 'Mead could be so taken with patterning she could easily forget about the ingenuity it took for participants to squeeze into or out of the patterns even a little change. She was so taken with patterning she would often write as if, once socialized, the person is nothing more than an internalized pattern.' Implicitly, he suggests that Mead was impaled by her own acceptance of 'the American frame' while trying to change it. Mead took ideas from the rest of the world and she took away core American beliefs about adolescence and learning. McDermott continues:

She confirmed science and democracy as their frame without an acknowledgement of the even wider frame of capitalism and colonialism [or] Western systems of signification that come with guns and money . . . [She] never developed a systematic critique of the capitalism and colonialism that supported her version of either anthropology or public service.

With that caveat, he concludes:

We still have her work to do and then some. Received ideas of adolescence get worse [. . .] school performance is increasingly the only measure of the young person [. . .] our sense of how to measure knowledge and intelligence has been narrowed to fit the heightened competition that allows children of plenty to continue to lord over the rest of us. Margaret Mead would be terribly disappointed. [...] She always came to help. No wonder we miss her (McDermott, 2001b).

In a book on which he is currently working, *America without Margaret Mead*, McDermott provides a longer focus on Mead (and Bateson's) work:

Mead's position on various issues—gender, race, adolescence and learning—were caught in the effort of defining cultural differences that could define what was intrinsically American. [...] Her positions need to be updated, resituated, reformulated, or discarded. [...] America has changed and so can our reading of her work (McDermott, 2001a).

'Bravo,' Mead would say, instead of her occasional 'fiddlesticks'. But she would have every right to object fiercely to McDermott's suggestion that she was caught up inside 'America's institutionalized racism'.

Mead did not publicly inveigh against racism or capitalism. She tried to set a good example as a citizen who worked to end racial segregation, promote human rights, and who shared her personal income with others. She proudly served as a trustee of Hampton University, which was once restricted to the education of African-Americans and American Indians. Her *Rap on race* conversations with the celebrated author James Baldwin revealed her resistance to 'apologizing' for slavery just because she was white. She disavowed 'guilt by association' (Baldwin & Mead, 1971).

Perhaps one of the major benefits of these new evaluations concerns the controversy surrounding Derek Freeman's attacks on Mead under the heading of biological-versus-cultural determinism (Freeman, 1983, 1999). McDermott is right in asserting that 'Nature and nurture should not stand as conceptually opposed and only in the real world sometimes interactive. The dichotomy has to be challenged. The very existence of a category called human nature has to be challenged' (McDermott, 2001b). But that challenge has not yet been made so that 'human nature' reappears along with 'the power of culture', as the theme of the Library of Congress exhibition for the Mead centennial.

Varenne notes Mead's prophetic role in his analysis of *And keep your powder dry* when he detects a shift from 'scientific detachment' to full engagement as a teacher-leader in wartime. According to Varenne, '[s]he is not describing, she is prophesizing' when she writes:

If we are to fight, if we are to win, if we are to hold before us as we fight a goal we will count fighting for, that goal must be in American terms, in the mixture of faith in the right and faith in the power of science: Trust God—and keep your powder dry (Mead, 1999a [1942]).

Varenne asserts that:

[Mead's] goal is not cultural critique, [but] cultural construction . . . This is the realm within which many intellectuals quiver, and some may say they snigger as they express their irony—Mead's challenge is all the more radical that, having decided that a war had to be fought because it was just on American, that is universal terms, she also volunteered to act within the institutions of the United States, both governmental and private. [. . .] She trusted America, and she honed her rhetorical skills as an anthropologist (Varenne, 1998).

Both McDermott and Varenne, by quoting other critics of Mead, provide useful insights into Mead's growth as a commanding public intellectual intent on helping to improve American education by shaping what is now known as 'civil society', the interplay of governments and voluntary associations. Peer-review mechanisms in United States academia often punish scholars who dare to step outside their disciplines and 'go beyond their data'. Mead more clearly fitted the expectations of Peter

Kapitza, the Russian physicist, who once told me at a Pugwash conference: 'It is the duty of the intelligentsia to tell right from wrong.'

Regardless of what role Mead was playing—the 'pure scholar' or the prophetic moralist—she left a prodigious literature on education. Categories on education, family, psychology and children are the longest entries in her complete bibliography compiled by Joan Gordan (1976). Those articles should keep (at least) historians of education busy for another generation.

Epilogue

In her prologue to *Blackberry winter*, Mead wrote of the need to see the past and future as aspects of the present—the present of any generation. Counting in biological time, I realize that I have been a part of the Mead universe for two generations—half a century—thirty years while she was alive and now twenty after her death. I have furthermore been much engaged in the commemoration of her centennial. Commemorations function as a way of teaching history in order to see the long-term past and speculate on the long-term future.

Regardless of today's necessary re-evaluation of the Mead legacy, shaped by her work with others, I invite our successors in yet another millennium to challenge my comparison in 1980 of Mead with Aristotle, a comparison one might describe as 'generous' (Dillon, 1980). I then wrote in a special issue of *American anthropologist*: 'Did Aristotle foreshadow Margaret Mead?' In examining Mead's experience with statecraft and governance as a public citizen, teacher and anthropologist, the Aristotelian model provides a metaphorical point of departure. She enjoyed the jokes about her oracular qualities when she spoke at Delphi but might have regarded as outrageous any hypothesis that she provided some continuity between twentieth-century American thought and classical Greece. Aristotle (384–322 BC), the Greek philosopher, educator and scientist, was much concerned with ethics and politics, which require knowledge enabling humans to act properly and live happily. He believed that the most striking aspect of nature was change; his philosophy of nature included psychology and biology. Mead, too, was much pre-occupied by the mind/body relationship and made her forays into public affairs with a keen awareness that human behaviour must be understood in the context of the size of our brain and the intricacy of our nervous system.

Aristotle's method of inquiry focused on human rationality and yet stressed the continuity of humanity and nature rather than a basic cleavage. He integrated the ethical and social, as contrasted with the dominant modern proposals of a value-free social science and an autonomous ethic. Mead indeed resonates with Aristotle on that point. He extrapolated from the older city-state, the *polis*. Mead extrapolated, in her analytical modes and personal style of leadership, from traditions far removed from ancient Greece or pre-revolutionary Philadelphia. She often drew from the Village of Peri in New Guinea, where there is now a Margaret Mead Community Center, opened as a memorial to her in 1980. Its inhabitants and Mead taught each other a great deal about citizen rights and responsibilities, the latter

including techniques of reconciling divergent viewpoints to reach goals beneficial to the community at large.

Mead was engaged incessantly in extrapolations from small, organized communities to the world as *polis*. Her shifts from micro to macro analysis were essential tools in her efforts to teach Americans how to understand themselves in the light of human experience in other cultures.

Disavowed by some fellow academics as 'too popular', Mead was undeterred from using the media to get across ideas. Aristotle, in the pre-Internet world, produced writings of exoteric (popular) quality aimed at a general audience outside Plato's Academy, as well as technical (*esoteric*) treatises for students inside the Lyceum.

Print media and later electronic media were essential in Mead's roles as teacher-scholar-citizen. She seemed quite aware of Thomas Babington Macaulay's observation that reporters in the gallery become a fourth estate of the realm. Her prophetic time perspective often made news: 'We may have twenty-five years left to . . .', but she knew that the press was no substitute for institutions, that it should not be burdened with accomplishing whatever representative government, industrial organization and diplomacy failed to accomplish.

Like Aristotle, Mead wanted people to act properly and live happily. When asked by her godson, Daniel Métraux, what she most hoped to have accomplished in her life, she replied, 'To make at least one person happy.' But she also had wider ambitions for helping to create the good society, and more like Plato, wanted mayors of a megalopolis like New York and aldermen of New England towns to be philosopher-kings. She hoped that the fourth estate would share in that *esoteric* and *exoteric* task of governance. Her duty as a citizen was to serve as a pilot to both realms.

From oral tradition rather than reading her vast output of writing, I am guided by her almost daily in remembering at least two admonitions: (1) never expect recognition, gratitude or appreciation for what you do—your only reward is whether you meet your own standards, and (2) if you do not have access to a child every day, then borrow one.

Discussing whether anthropology is an art, a science or both should not inhibit us from borrowing from Mead and earlier generations to encourage the use of poetry in communication/education about children. Witness Mead's last poem, written in 1947 and dedicated to the daughter who made her a grandmother:

*That I be not a restless ghost
Who haunts your footsteps as they pass
Beyond the point where you have left
Me standing in the newsprung grass,*

*You must be free to take a path
Whose end I feel no need to know,
No irking fever to be sure
You went where I would have you go.*

*Those who would fence the future in
Between two walls of well-laid stones
But lay a ghost walk for themselves
A dreary walk for dusty bones.*

*So you can go without regret
Away from this familiar land,
Leaving your kiss upon my hair
And all the future in your hands.*

Notes

1. Creating such clusters of collaborators is no simple task, Mead concludes in her most seminal theoretical work, *Continuities in cultural evolution*, based on her Terry Lectures at Yale University in 1963. 'We need, now, a view of the future that neither minimizes the immediate peril nor generates despair', she wrote in a context of prescribing clusters of individuals, members of a small village council or the cabinet of a great nation, led by at least one irreplaceable individual (Mead, 1999b).
2. The title of her autobiography refers to the time when the hoarfrost lies on blackberry blossoms, causing the berries to set, the harbinger of a rich harvest.

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