Commentary

Human Development

Optimizing the Developmental Consequences of Education: Reflections on Issues Raised by Michael Cole

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The Progressivist Agenda of Universalizing Enrolment in Basic Schooling

Can humanity make the world a better place? Is social progress possible? The twentieth century saw the formulation of several international conventions on human rights, building on the abolition of slavery, calling for the elimination of racial discrimination, oppression of women, and exploitation of children. Within this broad, progressivist program, one of the most practical proposals has been to increase the level of enrolment of girls and boys in school by taking affirmative action on behalf of those against whom there exist identifiable social barriers.

A crucial premise of this agenda is that the experience of schooling reliably affords students beneficial developmental opportunities, like the growth of intellectual competencies, orientation towards society's expectations, and preparation to focus their energies in ways that will be beneficial to the whole society. How can psychological research help to guide the design of formal education so as to optimize its achievement of those developmental consequences? Michael Cole has been a leading exponent over the past 40 years of how to situate the Western science of developmental psychology in its cultural and historical context [Cole, 1996]. As he observes in this paper, despite the methodological sophistication of the extensive, cross-cultural research of the 1960s and 1970s, which consistently showed superior performance on cognitive tasks by schooled over unschooled children, 'there are serious reasons to doubt that differences obtained with standard psychological testing methods provide any logical evidence at all for generalized changes in classical categories of cognitive functioning.'

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Nevertheless, a remarkable convergence in the introduction of institutionalized public basic schooling (IPBS) has occurred across a wide range of societies during the twentieth century [Serpell & Hatano, 1997]. This form of schooling originates historically from Western Europe and derives from its origin a number of cultural assumptions:

A primary goal of the curriculum is to impart a commitment to objectivity and rationality; the children enrolled are in a formative stage of intellectual and moral development; and focused, explicit instruction holds the key to enabling children to acquire essential academic competencies. In addition to these premises, the paradigm is characterized by hierarchical organization of the curriculum, an emphasis on advance preparation of children for future cognitive challenges, standardized instructional targets, group instruction, regular scheduling of activities, and age-grading of classes. Some of these characteristics have arisen over the course of history, not so much from philosophical or pedagogical ideals, but more from considerations of organizational efficiency and administrative convenience (e.g., the need to manage a large number of children brought together in one place for instruction). These factors, extrinsic to the explicit agenda of education, nevertheless have become so profoundly institutionalized that they now define to a large extent what most public elementary schools are like as contexts for learning. [Serpell, Baker, & Sonnenschein, 2004, pp. 17f]

These assumptions apply both to the industrialized countries and to the third world.

Cross-cultural research on human development has devoted a great deal of attention over the past four decades to unpacking the component elements of IPBS or of literacy and assessing their influence on various dimensions of cognition [Akinasso, 1981; Rogoff & Chavajay, 1995]. Cardinal studies in this tradition were those of Cole and his associates [Cole, Gay, Glick, & Sharp, 1971; Scribner & Cole, 1981], which focused on disentangling direct causal impact from loose patterns of correlation. Time and again such research found that the cognitive benefits of formal instruction were relatively narrow and context-specific. In this paper, however, Cole acknowledges that in the larger scheme of human affairs, correlations, albeit loose, may be more significant than his earlier analyses conceded. In particular, the mass schooling of women may be responsible for effectively mobilizing progressive social change in many third world countries.

The IPBS Package as Catalyst for a Virtuous Cycle

The argument advanced by Levine and his colleagues, grounded in empirical evidence from Africa, Latin America, and elsewhere, is elegantly summarized in Cole's figure 3. Although the layout of the figure represents the causal chain as a linear one, it should be understood as essentially circular, since the children in levels 4 and 5 will go on to become another generation of mothers with yet more schooling than their mothers in level 1. According to this argument, context-specific skills acquired by young women at school articulate later in their lives with health messages propounded in clinics, schools and the mass media to enhance their children's opportunities for survival, health, and educational participation. An independent study in Turkey by Kagitcibasi [1996] arrived at similar conclusions and invoked, by way of interpretation, the concept of a 'virtuous cycle.' This term was used by the authors of a study that found long-term beneficial outcomes for

children of low-income US families enrolled in the High/Scope Perry Preschool intervention program [Schweinhart, Barnes, Weikart, Barnett, & Epstein, 1994]. Likewise, the initially devastating critiques of the US Head Start program have given way to more optimistic analyses, suggesting that although no significant, sustained increases in cognitive functioning were achieved, the mothers of children enrolled in Head Start became more successful advocates for their inclusion and retention in mainstream classes. Much as a vicious cycle of poverty has been postulated – in which the children of the poor become even poorer than their parents because of a cascade of mutually confirmatory disadvantages – so we can postulate a virtuous cycle of empowerment in which children of poor families enrolled in school encourage their parents to take pride in their achievements and benefit from that pride expressed in parental advocacy on their behalf.

Recognition of this 'virtuous cycle' effect provides a helpful bridge between the weak analytic validation of early intervention programs and philanthropic advocacy of universalizing access to basic education and literacy. The world is indeed like this: formal education on the IPBS model does empirically confer advantages. But, on the other hand, the world did not necessarily need to be this way: other forms of schooling do exist, and may be just as effective. Moreover, certain features of IPBS are quite arbitrary. For instance, the English language is today a passport to international mobility, such that where the choice is available, many parents who seldom speak any English at home will rationally opt to enroll their children in English-medium schooling. But if history had taken a different turn, the language performing that role at the turn of the century might have been French or Chinese. One valuable contribution of systematic research to the responsible crafting of public policy is to raise awareness that such particular confluences of variables are historically contingent rather than driven by theoretical variables. The explicit demonstration that children can be equally effectively introduced to literacy in any of the world's natural languages should act as a safeguard against such anomalies as the policy of immersion of all Zambian children in English from the first grade. The fact that such a policy could be implemented for more than 30 years (1967–2001) shows that research evidence is often overlooked by political decision-makers; the fact that the policy was reversed illustrates the potential use of research evidence to bolster common sense and guide risky policy development [Tambulukani, Sampa, Musuku, & Linehan, 2001].

Peripheral Origins of Systemic Change

At the end of his paper, Cole presents us with a provocative, two-part question. Will any of the emerging alternatives to centralized, standardized models of education gain ascendancy? And, if so, where will such changes originate: in the center (as affluent, technologically sophisticated, and internationally dominant societies address the challenges of diversity and decentralization), or in the periphery (in third world societies, 'as a mode of resistance or survival in the face of centralized globalizing forces')? I find the second part of this question especially poignant, as I resume my career in the so-called periphery, after a sojourn of thirteen years at the center of the world's new Roman Empire, the USA. Many key advances in the articulation of Western democracy have been pioneered by members of oppressed

groups. The arguments formulated by Frederick Douglas, Elizabeth Garrett Anderson, Mahatma Gandhi, and Nelson Mandela convinced decision-makers among their oppressors of the need for social change, in large part because these 'peripheral' voices had appropriated the concept of democracy and were able to show with confidence that its internal principles were inconsistent with the exclusionary practices of contemporary society. We may hope to see similar revolutionary insights emerge from the confrontation of Western cultural hegemony in the field of education, as third world intellectuals grapple with inconsistencies in the practices they have been handed down from the center.

Embedded Planning

The two dimensions on which Cole highlights constructive alternatives to IPBS seem to me logically connected: de-centralized adaptation and embeddedness. The bird's eye perspective that informs centralized planning achieves its commanding view at the cost of detachment. If educational planners and managers are to remain accountable to those whom they aspire to serve, they must find a way to recruit the imagination and participation of students, teachers, and parents in the implementation of planned social change. Thus in order to make an impact on practice, theories of developmental psychology and education need to connect with the perspectives of those audiences, who are engaged with everyday life, deeply embedded in their local contexts [Serpell, 1994].

Two types of innovation in educational methods are especially well attuned to this challenge: group work among students and inquiry-based projects in the community. Group work generates manageable units for instructional attention by a teacher charged with a large class of students. The physical rearrangement of students into pods instead of linear rows of desks affords different patterns of social interaction around literacy tasks, conducive to co-constructive appropriation of knowledge [Forman & McPhail, 1993]. Group work also has the capacity to sustain motivation beyond the short-term influence of a class teacher. For instance, Adamson-Holley [1999] followed up a cohort of girls who had qualified for selection to a boarding school in the small Zambian town of Mpika, after three years enrolment in a co-educational upper primary school program that emphasized 'child-to-child' partnerships. Despite a much more individualistic regime at the secondary school, the students were still practicing mutual peer support, and even took the initiative to meet up at weekends with their former class-mates who were now studying at less well-resourced basic schools elsewhere in the town in order to share with them knowledge and skills they were acquiring in their more privileged school setting.

Inquiry-based projects demand a focus on tangible, local concerns, and open up a multitude of opportunities for students to connect their theoretical studies with everyday life in their home community. For instance, in the child-to-child primary school classes in Mpika, children were introduced to mathematical graphs through the community health activity of growth monitoring [Gibbs & Mutunga, 1991; Mwape & Serpell, 1996]. In a follow-up interview two years after leaving school, a young mother recalled this topic as the most valuable thing she had learned at school and cited as an example of its application that she had advised a contempo-

rary on how to nurture her underweight infant with oral re-hydration after an episode of diarrhea.

Note that both of these alternatives to the tradition of 'chalk and talk' or 'drill and practice' in the time-honored configuration of Cole's figure 1 appear strategically better suited to promote one of the cardinal objectives of education: to promote in students a life-long commitment to learning. Note also that such approaches to education call into question the simplistic agenda of maximizing the time that children spend in school, since for any given community the way forward may well be to promote education beyond, if not actually without, schools. The school in this model becomes a base, or a resource center rather than a container, a shelter or a forum. In rural areas of Zambia and other African countries, the local primary school doubles as a community library or a meeting place for evening adult classes [Serpell, 1999].

Paradoxically, however, societies in the political periphery of the 'globalized' world of the early twenty-first century may be less likely to experiment with such alternatives to IPBS because of their preoccupation with material scarcity. Sadly, one of the consequences of this preoccupation in Zambia has been a growing readiness to import packaged technology, through which the cultural practices of other societies are liable to be incorporated into the process of planned social change without being subjected to critical appraisal [Serpell & Haynes, 2004]. Tempting though it is to import standards and practices from abroad, those in the periphery who aspire to play a leading part in the progressive reform of education would do well, in my view, to embed their planning in the specific cultural context of their own local communities. Designing a new instructional module or assessment instrument from scratch for a particular context may be arduous, but the rewards are likely in the long run to be greater than from seeking to apply an imported package.

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