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# *Quality in Question: a new agenda for curriculum reform in developing countries*

**KEITH LEWIN**

The last two decades have witnessed unprecedented investment in educational provision throughout the countries of the developing world<sup>1</sup>. Many countries have been allocating 15% or more of public expenditure to education and enrolment ratios have grown significantly even in the poorest countries. There is increasing concern that quantitative expansion has not been accompanied by sufficient emphasis on improving educational quality. This paper develops this theme and makes suggestions for future action.

Five features of educational development stand out as shaping the recent growth of systems. There are relationships between education and national development; the impact of growth on quality; the importance of historical experience; the influence of selection and allocation systems; the experience with educational innovation.

## EDUCATION AND NATIONAL DEVELOPMENT

Throughout the 1960s many argued, as if it were self-evident, that a more educated labour force was necessarily more productive and would make more efficient use of national resources and available capital. We have extensively reviewed the main aspects of these debates in recent papers (Lewin, Little & Colclough, 1982, 1983). Theoretical credence was lent to these beliefs by well known studies demonstrating that correlations existed between GNP/capita and educational provision across countries; that within countries educational level, occupation and earnings were highly intercorrelated; and that economic growth could not be explained by increases in conventional factor inputs alone but only through the inclusion of a 'residual' factor related closely to increases in educational provision (Schultz, 1961; Denison, 1962; Harbison & Myers, 1964; Bowman, 1980). Rates of return to investment in education were commonly high and were argued to be indicative of the potential contribution to economic development that increased educational provision could make (Psacharopoulos, 1973, 1980).

Through the 1970s faith in education as an 'engine of growth' began to wane as some countries began to experience 'educated unemployment' suggesting to some that there was an over-investment in provision at particular levels (Blaug *et al.*, 1970, Turnham & Jaeger, 1971; Psacharopoulos, 1973). The growth of the 'brain drain' of high level qualified manpower from some developing countries, qualification escalation for job access, increased rural-urban migration and impressions of deteriorating quality also contributed to growing misgivings about the likely impact of expansionary policies of educational provision (Caldwell, 1969; Godfrey, 1976; Dore, 1976; Deraniyagala *et al.*, 1978; Hawes, 1979). Such apparent disillusion, it must be emphasised, was to be found more in evidence in the academic community and

amongst representatives of donor agencies than amongst the politicians and people of the majority of developing countries where slackening in demand for education was aberrant (see Oxenham (1984b) for some examples), and few politicians would argue openly for more restrictive access.

Few seriously contend now that investment in educational provision is, as motherhood might have been thought to be, an absolute good which is morally unassailable and economically wise. The development experience of the last two decades has laid bare some of the more obvious fallacies—that, for example, massive educational investment would precipitate sustained economic growth and that the goal of equality would necessarily be well served by expanding the educational franchise. At the same time there is evidence that, under specific circumstances, there is a strong probability that education can contribute to productivity, to health and nutritional status, to reducing fertility, to the realization of cognitive growth potential, to non-cognitive attributes of individuals, to increased participation of marginalised groups (see the extensive review in Lewin, Little & Colclough, 1982). Such probabilities depend both on the articulation of national development goals about which there is some consensus and on the quality of curricular experience provided by educational institutions. Moreover, along with these insights a shift has taken place in many national plans (Lewin, 1985) which considerably broadens the scope of the goals towards which educational development is directed. Typically, national plans over the last 10 years have placed increasing emphasis on the non-economic benefits for equity, national unity and social development associated with greater access to education.

For these reasons it is now possible to argue that our understanding of relationships between educational provision and national development is now considerably greater than it was in the 1960s. This provides a more secure if not ideal basis for policy formulation and opens new perspectives on the achievement of greater quality in delivery systems.

## GROWTH AND QUALITY

The second characteristic of change is concerned with the effects of the considerable quantitative growth in provision which has taken place in enrolments at all levels over the last two decades (Thompson, 1981a; Watson, 1981; Brock, 1981). Correspondingly little attention has been focused on school quality until recently. Typical growth rates have been between 3% and 7% per annum at the first cycle level, 6%–11% at the second level and 10%–17% at the third level, though these have slowed down in the 1970s. The non-schooling gap—the differences between the school age population and actual enrolment—diminished in higher-income developing countries and increased in those with lower per capita income (World Bank, 1980a). The experience has been very different between countries. However, a number of points present themselves which are sufficiently common to warrant inclusion in this discussion.

As global figures above suggest, growth rates have favoured the higher levels of education systems. Often tertiary education enrolments have grown three or four times faster than those of primary systems though it must be remembered that the base lines for growth are very different. Any assessment of the significance of such growth patterns needs to take into account the costs of provision at different levels, overall balances of resources allocated and patterns of participation.

Some startling examples serve to make the point. In sub-Saharan Africa unit costs for tertiary education may be as much as 100 times greater than for primary provision (World Bank, 1980b) though it would be difficult to perform any cost/benefit analysis that would show such differences were warranted by contributions to development by the beneficiaries of such investment. Unit costs of tertiary education in Papua New Guinea apparently exceed those in the U.K. (Anderson, 1981). The proportion of total educational spending allocated to tertiary provision varies between 1.5% and 32% in the poorest countries and reaches as much

as 57% in some middle income developing countries. Median figures exceed 25% for two groups of developing countries (Annex 14, World Bank, 1980a).

It is difficult to see how the higher figures can be justified if the implication is that such provision is at the expense of facilities and support for first cycle education where the possibilities for having most impact on cognitive growth at least cost seem greatest (Lewin, Little & Colclough, 1982). Participation rates for higher education vary from less than 1% in some African countries to more than 15% in parts of Asia. In all cases it is the initially socially advantaged who enjoy the highest participation rates and often enjoy considerable subsidy (in Malaysia the poorest 20% of households receive 4% of post-secondary public expenditure, the richest 20% receive 63% (World Bank, 1980b).

High rates of enrolment growth have also implied increase in class sizes, often to averages in excess of 50 at the primary level, and/or simultaneous reductions in the proportion of qualified teachers, as training systems are unable to adapt rapidly enough to growing demands. Thus increasing enrolments at secondary level, and particularly in mathematics and sciences, have often made it impossible to retain long-standing traditions of trained graduate teachers teaching upper-secondary classes. The implications for teacher supply stemming from Universal Primary Education (UPE) and Universal Secondary Education (USE) are another well known manifestation of this problem. Alongside these problems it is rare to find growth in administrative and professional support systems commensurate with growth in teachers or pupil numbers. The breakdown of these systems is all too familiar, with serious consequences for school quality.

Effective demand for schooling has tended to concentrate on the problems of access to modern-sector employment through formal educational qualifications, and this has contributed to retarding changes in curricula and organisational form. A consequence of this has been the emergence, or continuance, of dual systems of provision. These may be unified in principle, but in practice consist of small numbers of 'core' schools where, by and large, academic objectives are achieved and substantial numbers of pupils progress to post-secondary education, together with a much larger number of peripheral schools where standards of academic achievement are derisory and few if any pupils progress to higher levels. The distinction between 'action' and 'façade' schools has been documented by Somerset in Kenya (Somerset, 1982) and serves as an illustration of the problem.

The problems associated with growth and quality sketched out in these brief remarks are not inevitable. An important proposition from these observations is that the need to balance individual aspiration against collective benefit has not been given the attention it deserves. All too often growth has exacerbated problems of quality in provision. Consensus concerning purpose has been uncommon and, in the absence of pressures to the contrary, political expediency in reacting to demand for schooling has shaped expansion in ways unlikely to result in optimising social benefits. The most common motive force has been response to the *individual* rationality of increasing access. Parents are more likely to favour extending equality of opportunity through school expansion as the only practical means of maximizing their own children's opportunity, not as a result of commitment to a moral principle, as Dore has pointed out (Dore, 1980). It may be that market forces are the mechanism which provides most equitable means of distributing some goods and services; but there is clearly a problem with the provision of education which cannot be resolved simply through appeal to the logic of the market place.

## HISTORY IN PERSPECTIVE

The third feature of development relates to the significance given to the 'colonial heritage' that has shaped patterns of schooling and curricula in those countries where these were bequeathed by departing metropolitan powers. Emotion and self-interest often dictate that discussion

polarizes around who is responsible for (and therefore who should pay the cost of remedying?) problems of irrelevant curricula, inappropriate teaching and learning styles and inefficient school systems. More dispassionate analysis seeks to ascertain the extent to which historical experience has 'determined' or 'conditioned' particular patterns of development (Dos Santos, 1973) and to what extent it is incidental to them.

Most of the developing countries with a colonial experience have now enjoyed political independence for two decades and some for considerably longer. The institutions that were established and the structural features of school provision (such as types of school and the length of first, second and third cycles) do conform to patterns recognisable in metropolitan countries. Some curricular forms, e.g. early specialisation and streaming in ex-British colonies, persist and have recognisable genealogies. Even, and perhaps especially, in the area of examinations and assessment which exert powerful influences over the curriculum, there are few examples of radical changes in practice and quite a few attempts at reform which have not endured (Lewin & Little, 1984).

Observations of this kind are not sufficient to displace much of the responsibility for what may now be regarded as inappropriate forms of provision on to the colonial past. To do so is to contribute more to descriptions of the context within which development has occurred than to an explanation of *why* it has taken certain forms. What is most salient now is the analysis of those questions which are concerned with understanding the interplay of contemporary social forces which shape views of desirable and acceptable change and influence choices of content and pedagogy. Few of these now have overtly colonial or imperialistic dimensions except perhaps in the few remaining outposts of empire. Some do have neo-colonial aspects in so far as they derive from the interests of emergent transnational elites which adopt values and patterns of consumption to be found in the richer countries. Some donor agency activity may also be arguably considered neo-colonial.

But by far the most important influences on educational policy are to be found within countries and arise from pressures which would exist with or without conscious external intervention or manipulation. Education policy is likely to be under domestic control to a far greater degree than, say, the technology of production in export-orientated industries. It is a mistake to suppose that because the initiatives for innovation in some industrial sectors are to be found in highly developed economies this is also necessarily true of education in general and the curriculum in particular. Where external influences have precipitated particular kinds of curriculum reform it has rarely been in the absence of domestic pressures of a far stronger kind, which have been reinforced but not determined by exogenous inputs.

I would like to suggest here that the relevant questions concerned with constraints on curriculum development and quality improvement are those which take their cue from conscientious analysis of contemporary social and economic pressures, the bulk of which are endogenously determined and are no longer rooted in a deep understanding of colonial experience. Accepting this point should help to focus attention on pressures over which governments, at least in principle, have some direct control. It helps to put in perspective problems that arise from the expectations and interests of groups within countries and the importance of their values in shaping and sustaining particular kinds of curricula (for example those that are highly academic in character, which are found very difficult by the majority of children and are of low utility to the bulk of school-leavers).

## SELECTION, ALLOCATION AND THE IMPOVERISHMENT OF QUALITY

The fourth dimension of change arises from understanding key features of the 'Diploma Disease', which impinges so dramatically on school quality. Curriculum quality is pervasively and adversely influenced by selection and allocation systems which determine life chances. In many developing countries schooling is perceived to be concerned with acquiring and

legitimizing access to desirable jobs. It is not predominantly concerned with developing the full potential of individuals. Curriculum quality is likely to be most affected where:

- few modern-sector jobs are available each year for large quantities of school leavers;
- the rewards for access to these jobs (income, security, prestige) are very great;
- the modern-sector labour market is bureaucratized and depends heavily and incrementally on academic qualifications for selection and promotion;
- the preceding generation of school-leavers at a particular level mostly succeeded in getting modern-sector jobs;
- the professional infrastructure of education (teacher-training, in-service education, advisory staff, etc.) is poorly developed;
- systems of examination and assessment are heavily dependent on the recall of trivial information.

The arguments which support these observations have been well rehearsed and require no repetition here (Dore, 1976; Little, 1978, 1984; Lewin, 1981a, 1981b; Lewin & Little, 1984; Oxenham, 1984). The propositions which follow from this are that problems of curricular quality need to be tackled through strategies that include consideration of:

- the motives of pupils and parents in participating in the school system;
- the rationality of these in relation to recruitment practices in the labour market;
- the purposes of public examination systems and allocation mechanisms which exist in the absence of centralised examining;
- the construction, use, and perceptions of assessment instruments.

#### CHANGE WITHOUT CHANGE

The final observation is concerned with the apparent failure of many of the attempts at educational reform which have been tried. One of the most comprehensive reviews of educational innovation in developing countries (Havelock & Huberman, 1977) paints a rather gloomy picture of the results of more than a decade's efforts to effect substantial improvements in quality and provision.

In spite of large scale investment and expectation, few of these innovations appear to make a dent at a national level in the educational or training problems which they were designed to solve. They appear in many respects to be giant pilot projects.

Our conclusion was that innovation is not practised up to the level of existing knowledge. Our findings point to a rather dismal picture of international and national efforts to innovate, repetitions of obvious mistakes or omissions.

The World Bank (1980a) refers specifically to curriculum development activity and its effects on educational outputs as failing to meet expectations and being thwarted by resistance to change by ill-informed clients, inadequate resources, poorly articulated implementation strategies and insufficient monitoring and evaluation procedures. Adams & Chen (1981) refer to the history of educational innovation as 'doleful', with failure as its frequent companion. Various authors have developed catalogues of features of innovation that predispose them to failure or success (Havelock & Huberman, 1977; Lewin, 1980; Hurst, 1983a). Rather than reiterate them here I focus on two observations which seem to have particular relevance to discussion of curriculum reform.

The first is that failure is always relative to expectations. If these are unrealistic, failure is guaranteed. The danger of tautology is obvious. However, there does seem at least some force in the argument that it may be necessary to promise more than can be delivered in order to initiate curricular reform projects requiring substantial resources. There are some benign reasons for this (the zealous enthusiasm of a committed entrepreneur, the optimism generated

by the esprit de corps of development teams, genuine commitment to ambitious goals) and some less attractive ones (the need to impress naive politicians, the desire to attract funding from donors wanting high visibility for project, personal aggrandisement). It is also plausible that, the greater the competition is for resources, the more the bidding stakes are raised and superlatives cloud considered judgements.

Secondly, realistic project planning depends not only on feasible delineations of what *ought* to be but also on accurate perceptions of what *is*. Some curricular reforms, it seems, suppose that existing curricula are inadequate or unsuitable by virtue of their content and presentation, when problems in fact are much more importantly the result of the absence of even minimal resources for teaching and very low levels of teacher expertise. Failure in these circumstances seems inevitable.

We can conclude therefore that attempts to improve curricular quality depend on realistic initial appraisals of goals and need to start from understanding of what is, not what ought to be, the reality of classroom practice. Any such appraisals must recognise the power and predilections of interest groups both inside and outside the education system and the capabilities and motivations of clients in supporting durable changes. Moreover, due attention must continue to be given to the improvement of existing curricular quality despite the attractions of novelty and project styles of innovation which focus on small areas of need. The problem in many countries is that existing curricular intentions are not adequately implemented, and that change may exacerbate this by imposing additional demands on hard pressed teachers and distract attention from impoverished quality in the system as a whole.

## THE NEW CONTEXT

The five features discussed above are important in shaping the context in which educational quality may be enhanced over the next decade. Perceptions gained from an understanding of their significance in specific national environments constitute a major part of the belief system which informs policy-makers and creates new opportunities for quality improvement. Two other factors combine with these to create a new climate for curriculum reform. These are the completion of the first wave of indigenisation of curriculum materials and the impact on the resources available for educational reform as a result of global economic recession, and it is to these we now turn.

## CURRICULUM DEVELOPMENT CYCLES

The 1960s for most developing countries, and particularly those which were newly independent, was a time of rapid quantitative growth at all levels. Relatively little curriculum development was in evidence during this time, most expansion merely building on existing syllabuses or weakly modifying them to remove some of the more obvious distortions inherited from the past. Towards the end of that decade, stimulated by the explosion of curriculum development in metropolitan countries (particularly in science and mathematics), many countries took the first steps towards taking a view of curriculum broader than syllabus definition and began to establish curriculum units or centres to produce new curriculum materials (e.g. in Sri Lanka and Malaysia).

The 1970s therefore saw the proliferation of curriculum development activity, much of it derivative and orientated towards adaptation of what was thought to be good practice in metropolitan countries. Key perspectives during this period were to indigenise curricula to make them appropriate to national needs and, where it was thought necessary, to update antiquated material in the cause of accelerating modernisation. Most attention was focused on the design of written materials at school level, and curriculum development activity related to in-service and pre-service training generally came a poor second priority. Some adaptation and

indigenisation took indirect forms—when, for example, some programmes were adopted for use in one developing country and these adoptions were used as the basis for second-order adaptation in a third country e.g. integrated science in Lesotho, modern mathematics in Indonesia. Frequently adaptation concentrated on content modification without questioning very deeply aims, dominant views of the subject-based nature of academic knowledge, and the prevalent international conventional wisdom on pedagogy. Most activity centred on the strategically important secondary-level cycle, where allocation and selection of pupils was of most concern. Much of higher education seemed largely untouched by the flurry of activity (as some would argue it was in the United Kingdom); and primary curriculum development was all too obviously the poor relation, with resources generally forthcoming at a slower rate.

By the end of the 1970s most countries had ‘indigenised’ curriculum materials in schools and had them in widespread use; and some were contemplating the beginning of a second cycle of curriculum reform, building on the experience of first-generation adaptation and development and utilising the infrastructure of curriculum development centres which had been established. The environment for such curricular reform activity was very different from that of the 1970s, however.

First the external ‘pull’ exerted by curriculum development in science and mathematics characteristic of the late 1960s had lost its momentum as consolidation rather than development increasingly characterised curricula in metropolitan countries. There were no contemporary equivalents of the USA’s Public Schools Science Curriculum, or Britain’s Nuffield Science, Scottish Integrated Science, etc. to act as catalysts and provide well articulated models as a basis for a new wave of curriculum reform. The high spots of activity, most notably in micro-electronics and micro-computers, were in areas of relatively high cost where the expertise entry price was too high except for the richer developing countries.

Secondly, there was some evidence of disillusion with the impact of previous curriculum development activity. The well known abandonment of modern mathematics by some African countries and the ambivalent reception of some discovery-orientated science programmes in Asia provide examples of this. The costs, both in money and disruption, of substantial curriculum change were becoming more widely appreciated. Some of the unintended consequences appeared discouraging; there is, for example, evidence that in the short term substantial curriculum change disproportionately disadvantages children in rural schools; they generally experience the least qualified teachers, who are least able to cope with new content and pedagogy. In Sri Lanka large-scale curriculum reform in the 1970s coupled with school expansion seems to have reduced transition rates in some rural schools (Lewin, 1981a). Finally, indigenisation of curriculum materials was no longer the priority that it was; it had been widely attempted and, though the experience had been mixed, this reduced pressures for further change. Indigenisation also sharpened debate about the purposes of further curriculum reform, which could no longer be justified indiscriminately by appeals to nationalist sentiment and the need to replace ‘colonial’ books.

From a high point of growth in the mid-1970s curriculum development activity directed towards the production of text materials for schools stabilised. Concern grew for the misuse or lack of use of first-generation indigenous curriculum material, and more attention began to be given to other aspects of educational delivery systems that impinged on quality (e.g. examinations, advisory staff, school management, in-service/on-service training). The balance of emphasis had begun to change and bureaucratic organisations began to replace individual initiative.

## GLOBAL CRISIS AND RESPONSE

Education budgets in most developing countries are under severe pressure as a result of global recession which has struck energy-importing countries particularly hard. (Lewin, Little &



Colclough, 1982). In few has the proportion of the national budget allocated to education increased significantly in the 1980s; low rates of economic growth coupled with significant population increases have inevitably led to declining expenditures per pupil in real terms in poorer countries, e.g. Zambia. Even in some of the richer South East Asian countries substantial budgetary cuts have been announced to cope with slower rates of growth than anticipated (e.g. Malaysia). The general implications of this have been explored elsewhere (Lewin, 1983). Those of most concern for the improvement of curricular quality are highlighted below.

Stable or contracting budgetary provision, which seems the most likely scenario for many developing countries, may precipitate significant structural changes in the allocation of different types of expenditure. Most obviously the balance between capital, recurrent non-salary and recurrent salary costs is likely to shift strongly in favour of the latter. Salary costs must be met in the short term, whereas capital projects may be postponed or delayed and non-salary recurrent expenditure can be reduced without immediately obvious effects. Thus building maintenance can be postponed, capitation allowances frozen, travel budgets for advisory staff cut back. Because non-salary recurrent expenditure is relatively 'soft' it is vulnerable to cuts, though the long-term damage may be considerable and savings may be counterproductive. Advisers with minimal travel allowances and schools with negligible recurrent finance for consumable materials are unlikely to function efficiently.

The second point is that, in periods of contraction, third-cycle education will possibly suffer less than second, which in turn will suffer less than first. In its simplest form the argument here is that most primary provision is rural and away from centres of power, secondary is urban and its children are more likely to have articulate and influential parents, while tertiary institutions often enjoy special relationships with decision-makers and considerable prestige and public visibility. Cuts from a relatively high unit-cost base (third cycle) are likely to be less damaging than those where unit costs are low (first cycle). International standards of provision, and therefore resourcing levels, are also more often argued as essential at tertiary level than at primary, and thus unit-cost differentials may even continue to increase.

Thirdly, since continued budgetary pressure must ultimately focus on reducing recurrent costs and since over 90% of costs are likely to be salary-based, (Heyneman, 1983), this implies (a) a decline in real terms in salaries; (b) an increase in the proportion of young/unqualified/temporary teachers who are cheaper; (c) a worsening of teacher/pupil ratios. All of these effects can be observed, and all have ramifications for school quality and the kind of curriculum reform possible.

Fourthly, budgetary restraint is likely to decrease resources available for new initiatives, since these are likely to be regarded as second-order priorities. Maintaining the existing system is less risky and more politically attractive than embarking on new initiatives to improve quality. A possible implication of this is increased dependence on external assistance for innovation and curricular improvement, with the attendant dangers of ad hoc reforms depending on the special interests of different donor agencies.

## A NEW AGENDA

Curriculum development activity in the second half of the 1980s is therefore likely to have different emphases from those of the recent past. Severe constraints on resources seem likely to be a fact of life for the foreseeable future and the climate for funding innovations seems to have become less favourable. Substantial locally- and regionally-based networks now exist to support curriculum development in a way which was not possible even a decade ago, and the first generation of their products is now being used in school systems. The focus of attention is shifting away from the production of text-based materials (though these projects are still predominant in many areas) towards much greater concern for the quality of the delivery

system which translates curriculum intentions into curriculum reality. For these reasons some new perspectives need to be developed to respond to this new environment; the discussion below attempts to clarify what some of these might be.

### AN INVENTORY OF POSSIBILITIES

The first and probably most urgent tasks are: the development of a sense of awareness of probable consequences of pursuing current policies; and the delineation of the 'room for manoeuvre' that realistically exists. The first of these requires the kind of sensitivity analysis of the determinants of curricular quality that can lead to well-founded strategies to minimise adverse effects likely to result from steady-state or diminishing levels of resourcing. The second is essential if an operationally useful view is to be refined of: (a) what is *possible* by thinking outside the narrow perspectives of those steeped in rigid expectations of curricular form; and (b) what is *feasible* given the constraints on change imposed by system characteristics which vary considerably from country to country.

Curriculum planning at a national level is inevitably a political, administrative and bureaucratic process as well as a professional exercise in optimising teaching and learning methods. It represents a negotiation through which pressures arising from both the ability and willingness to resource improvements in quality are balanced. If curriculum development staff are to play a constructive role in this process beyond merely attempting to translate rhetoric into classroom practice they must be aware of, and seek to influence, beliefs and assumptions concerning education policy in general and its roles in contributing to national development.

The kind of sensitivity analysis envisaged can be illustrated with reference to an earlier observation. Budgetary drift, as a result of administrative and political convenience and the asymmetrical qualities of different types of expenditure, seems a real possibility with unintended, but not necessary unpredictable, outcomes (Lewin, 1983). Restricting growth in education budgets to levels below those required to maintain spending per pupil and to keep pace with growth in salary budgets (which may take place even if salaries are held constant, as teachers advance up incremental scales) is likely to force reductions in non-salary recurrent expenditure. It may be convenient and administratively expedient to reduce travel allowances for advisory and support staff, restrict the availability of textbooks and minimise school maintenance; but are these moves likely to minimise the effects on school outcomes? Freezing innovation and staff development activity may be attractive; but it may also have disastrous effects on the morale of the most able and motivated teachers. If there are threshold effects on school quality (see below) whereby physical resource provision is subject to diminishing returns above a certain level, professional support networks for teachers must be a high priority. It may be preferable, for example, to allow pupil-teacher ratios to drift upwards rather than to cut school advisory support to a minimum and abandon in-service/on-service work.

Rarely do groups of curriculum planners examine in detail the kind of options indicated above, since responsibilities for action are generally distributed across divisions of Ministries of Education with conflicting interests and perspectives. The development of sensitivity analysis in curriculum planning, therefore, does imply the establishment of task groups or policy review clusters that can take a broad view of curriculum quality. It also implies the articulation of criteria against which to measure impacts. The responsibility for this task falls squarely on professional educators, who will extract these criteria from agreed policy statements. In most countries they would include equity considerations, quantitative and qualitative assessments of outputs, internal and external efficiency measures.

Consideration of the likely sensitivity of outputs to changes in provision needs to be accompanied by a developed sense of the existing 'room to manoeuvre' (to borrow from Dudley Seers (Seers, 1983)). This expression refers to developing policy options that are not

blinkered by the rule-bound and role-orientated behaviour of bureaucratic systems, which tend to find reasons to resist significant change and dilute innovations over time to conform with existing orthodoxies. This situation is characteristic of much educational change, as Havelock & Huberman (1977) have noted. It seeks also to avoid falling into the trap of assuming that virtually any conceivable action is capable of implementation if it is deemed desirable in the abstract, as much academic debate seems to assume.

Judgements of the room to manoeuvre in development policy in general must take account of the limitations imposed by size, ethnic and linguistic diversity, accidents of geography which locate countries within spheres of influence of major powers, endowments of exploitable natural resources which generate foreign exchange, and the existence of established political and cultural traditions. Similarly, the room to manoeuvre in educational policy is circumscribed by a number of parameters, which are likely to include: the existing level of quantitative development of the system (small systems are more susceptible to rapid curricular change); the quality of available manpower (largely untrained teachers are less likely to be capable of assimilating pedagogically sophisticated innovations); the characteristics of the demand for school participation and its relationship to labour market practices (schooling is likely to be differentially valued in labour-short and labour-surplus economies; the more employers use existing educational qualifications for selection, the more substantial curricular change may be thought unwelcome). This list is by no means complete. It does provide a basis for more comprehensive inventories of possibility, that should form part of an assessment of options to improve curricular quality related to agreed goals which are neither unrealistically idealistic nor pessimistically fatalistic.

## REDEFINING GOALS

This paper has argued that more research evidence is now available on the likely impact of educational provision on development goals. It is not comprehensive, and a great deal remains to be done at the level of national and sub-national follow-up and consolidation. What exists does provide a basis for reconsidering development goals which it is appropriate to stress for inclusion in educational plans. Well founded goals are self-evidently important in any planned curriculum improvement programme, not so much because they freeze Olympian aspirations but because they provide a framework of intentions within which it is possible to plan curricula and provision.

A central problem in the definition of educational goals, and their refinement into useful aims and objectives, is that their very expression usually assumes that the process producing them is broadly representative. Their translation to meaningful classroom statements of intent is commonly regarded as a technical process. But this is rarely the case. The political process which produces national development goals may or may not be one characterised by widespread participation and free debate. Translation of goals into curricular objectives is rarely the province of that negotiation between clients, providers and planners which the essentially voluntary nature of learning suggests is necessary for their successful achievement. This suggestion does not mean we should fall into the trap of supposing that pupils are always the best judges of what is relevant for them to learn. Neither does it imply that teachers invariably can determine for themselves how best to organize curricula. It does imply that unless their perspectives are adequately taken into account, changes in practice are unlikely to be effectively implemented or have a substantial impact on outcomes.

Governments and curriculum planners do not have a monopoly of determining goals and educational objectives; unless these are widely shared they are likely to be confined to the contents of empty speeches and dust-gathering reports. Ministries of Education commonly have nothing like the power to implement curricular change that official documentation and curricular guidelines often suppose. Frequently they do not possess the capability or will to

monitor their successes and failures adequately. Without a recognition of the reciprocal nature of negotiating educational aims and generating some consensus on these, development and change are inevitably painful and often contradictory experiences.

The centrality of negotiation and consensus to the generation and refinement of aims and objectives makes it inappropriate to discuss in the abstract what these might be. Productive discussion can only take place in specific national contexts. Two further points are of interest, however. One important set of problems is concerned with changes in emphasis which take place as goals are progressively translated into classroom objectives. Typically this process involves the selective elimination of curricular intentions which are non-cognitive or concerned with higher-order cognitive skills, in favour of acquiring information specific to identified content. The case here can be overstated, and my observations derive particularly from the analysis of secondary science curricula (Lewin, 1981a, 1984). In these curricula it is often assumed that general exhortations in the prefaces of infrequently read teachers' guides (to promote broadly-based non-cognitive attributes and process skills) will be held in the forefront of teachers' minds, despite materials which encourage the recipe-style acquisition of 'key facts' and are consistently interpreted by teachers as such. The importance of explicitly maintaining a balance of purposes to reflect general intentions seems self-evident, particularly where poorly trained teachers need the support of detailed advice.

The second observation is that educational and development goals are not often considered cross-sectorally despite substantial evidence of positively interactive effects. Thus, for example, health-care planning often occurs largely independently from planning for first-cycle education even in integrated rural development projects (Little, 1982). This is a complex problem but one of great significance if educators are to look beyond the immediate environment of the school in attempts to improve curricular quality.

## CONTENT AND PEDAGOGY

Much of the curriculum development that took place in Africa and Asia in the 1970s was closely bound up with the revision of curricular material in ways which reflected priorities to 'indigenise' content and adopt modern pedagogical practice reflecting contemporary trends in metropolitan countries. 'Heuristic' and 'guided discovery' methods were widely promoted in science education, and content was modified (particularly in the life sciences) to use locally relevant examples on which to base practical work. Modern mathematics was widely adopted and stimulated the introduction of number-base work, sets and matrices and what were felt to be more valid approaches to the teaching of mathematics. In other subjects there were many changes in content to incorporate indigenous literature and strong emphases on national history, together with awareness of natural resources, economic activity and national ideology. Primary curriculum development, where it took place on a substantial scale, was influenced by widely diffused notions of the importance of child-centred curricula and activity-based teaching (Hawes, 1979; Lillis, 1980; Lewin, 1981a).

The great bulk of this activity did not obviously stem from substantial efforts to reappraise appropriate content and pedagogy on the basis of systematic research or sensitive analysis of curriculum reality. Any new agenda for curriculum reform needs to reconsider the importance of supporting the research base which is available to inform new initiatives and improve curricular quality. Lamentably little is still known of the developmental characteristics of children in different communities and cultures which could give real meaning to the planning of curricula sympathetic to likely qualities and levels of cognitive development of children of different ages. Where this kind of research has been done in metropolitan countries some of the findings have shed new light on existing orthodoxies in content selection and pedagogical approaches (e.g. Shayer & Adey, 1981). Results elsewhere might be equally informative.

Few high-quality studies have been conducted to penetrate problems of curricular relevance

by examining the intellectual, attitudinal and psychomotor skills required by major forms of employment. Nor have the opinions of school-leavers concerning the relative value of different aspects of their school experience been actively canvassed, perhaps because the results might prove embarrassing to those who purport to know accurately their needs and capabilities. Nationally-based studies of this kind might well be a start to defining curricular relevance into more operationally useful forms and in generating more of a consensus about educational goals. School-based studies of curricular form and impact are extremely rare, and are usually undertaken to evaluate the outcomes of specific innovations by those with some vested interests in particular conclusions. Few are undertaken in order to reassess curricular priorities or understand more deeply the relationships between intentions and practice. Yet this is precisely what is necessary to inform efforts to improve quality.

Much of the professional debate about curriculum has taken place amongst professionals who are not members of active, locally-orientated, research communities. Their reference groups are substantially external and the information base which forms their opinions is dominated by the research literature of studies undertaken on school populations in metropolitan countries. Under these conditions it seems unlikely that new initiatives will make substantial allowances to the particular qualities of national context and culture. The undervaluing, and often arrogant dismissal, of traditional belief systems as having no place in the modern school curriculum will continue. Urban bias in curriculum development will have little recognition since it is not a concern of urbanised communities. Pedagogy which is antithetical to dominant cultural norms will continue to be promoted, and poorly understood methods will be advocated (even the World Bank advisers can reason that, "Because the discovery method is not a necessary condition of meaningful learning, other methods, such as teaching, can be meaningful as well" (World Bank, 1980a)—as if teaching is somehow divorced from any realistic interpretation of discovery learning).

The thrust of the argument here is that, now the effects of a first cycle of systematic attempts at curriculum reform are becoming apparent, the consequences of indigenisation and the impact of 'modern' practices need reassessment. No simple answers are likely to be forthcoming which would suggest, for example, that adaptation of curricula designed for use elsewhere is necessarily undesirable. There is a compelling need to replace at least some of the supposition and assertion which has informed much development activity by more considered judgements based on experience and analysis. This can only happen if more viable local research communities are encouraged to develop in ways which value understanding derived from enquiry which is itself closely related to, and seen as part of, curriculum development. The Canadian International Research and Development Centre has taken a lead through the activities of its Research Review Advisory Group, and it is to be hoped that the importance of extending work of this kind is more widely appreciated (IDRC, 1984).

Key issues for research initiatives are likely to include:

- Deepening understanding of cognitive development within different communities;
- exploring content selection in the context of views on the nature of knowledge and how these are represented and legitimated;
- reconsidering pedagogical styles in the light of cultural expectations and demonstrable effects on achievement;
- examining the non-cognitive consequences of different patterns of curricular organization;
- determining social and economic expectations of educational provision in ways which can contribute to clearer understanding of relevance;
- more explicit discussion of the cost and benefits of the maintenance and reinforcement of existing culture through the curriculum in partial contradiction to views of schooling which see the curriculum as a modernizing institution.

## UNDERSTANDING EFFECTIVE DEMAND

The nature of the effective demand for education is one of the most powerful influences on curriculum reality in schools. It could hardly be otherwise. The delusions of grandeur and omnipotence that political rhetoric evokes often encourage the misleading belief that changes can be brought about by edict and the issuing of directive circulars. In the absence of substantial levels of consensus this more often leads to cosmetic changes designed to impress the casual school visitor than to significant changes in classroom activity. It may not be that Ministries of Education are quite like Lord Dalby [2] (Dore, 1980), but at least some seem guilty of substantial changes in policy in short periods of time which owe more to the vagaries of political whim than to the ability of their systems to change. Lack of response to innovations may be explained by the fairly rational reactions of those who, far from the centres of decision-making, fail to perceive any benefits accruing to them from changing well established and comfortable practices. If new practices generate dissent and rebellion amongst the constituency to whom teachers are most directly accountable—the pupils, parents and communities in which they live and work—they are unlikely to welcome them. Effective demand is a key factor in determining reactions to change.

An appreciation of this is essential to any new agenda for curriculum change. Demand for schooling in many countries is dominated by instrumental concerns which are intimately related to the selection and allocation functions of education systems. These do not necessarily affect curricular quality adversely, but for historical and practical reasons they have often discouraged significant reform and maintained a cognitive bias in education towards the accumulation and recall of factual information. (Lewin, 1981b, 1984; Little, 1978, 1984; Oxenham, 1984; Dore, 1976.)

Curriculum planning must recognise both the power and qualitative nature of effective demand if it is to respond to what are generally regarded as legitimate expressions of need. The social, as opposed to individual, rationality of expressed demand is bound to remain a key issue in countries which distribute resources very unequally according, in part, to educational qualifications achieved. In the absence of political willingness to reconsider the nature of this distribution, and the labour-market practices which reinforce it, priorities for the improvement of curriculum quality must focus on:

- understanding the characteristics of educational demand at different levels;
- ascertaining at what points and in what forms selection within school systems is most appropriate and least damaging to curricular quality;
- concerted attempts to improve the validity, reliability, and quality of the instruments and assessment procedures which determine life chances and exert undesirable backwash on curricula.

## CHANGE AND PROFESSIONALISM

Curriculum quality has frequently been perceived to depend more directly on the availability and distribution of physical plant and material resources for schools than on the less tangible characteristics of the infrastructure that supports these. The proportion of budgets allocated to building programmes provides examples of this, particularly where design criteria specify inappropriately expensive materials. So also do heavy investments in some types of equipment which are subsequently left unused for fear of breakage, lack of understanding or absence of spare parts. The relative neglect of growth in advisory staff and investment in teacher training are also symptomatic. Teacher-training institutions are widely seen as backwaters of neglect with low status, poor quality staffing, limited involvement with schools and curriculum development and slow adaptation to changes in school curricula. In-service and on-service provision, outside that directly related to externally funded projects, has been slow to develop.

For many teachers classroom work takes place in professional isolation, with predictable consequences for morale (Thompson, 1981b; Colclough, Lewin & Oxenham, 1983).

Investment in improving physical provision (buildings, equipment, etc.) is unquestionably important; it clearly does contribute to the development of school environments where effective learning can occur. But it is not a sufficient condition; nor is it often clear that the relationships between this kind of investment (with the attractions of high political visibility and patronage in the awarding of contracts) and investment in professional infrastructure are in any sense balanced against each other (Little, 1982). This lack of balance sometimes has the additional disadvantage of distracting attention from inputs that could make a substantial difference to a region or district (by introducing, say, effective school supervision and monitoring) in favour of dramatic inputs to single communities (a new school) which need careful consideration.

Moreover, it is at least plausible to argue that 'threshold effects' do operate which are discontinuous in character. Additional inputs, over and above a particular level, to the quality of buildings, provision of furniture and availability of educational equipment and material are unlikely to have linear relationships to process and output measures of quality. It is clearly important to establish how such threshold effects operate when hard choices have to be made about allocating scarce resources. The first textbook for each child is very important, but what of the fifth? Large changes in the level of physical provision of school resources in most countries are precluded by the scale of the investment needed. The basic tools of the teacher's trade in the formal system will remain as they are now. The curricular problem is far more concerned with how to maximise the use of these than to displace responsibility for curricular under-achievement on to a lack of physical resources which cannot realistically be rectified.

The quality of school experience is heavily dependent on the quality of staff, their motivation and the leadership they experience. If it were not so it would be difficult to explain the widely recognised differences in performance between schools with similar levels of physical provision. Teacher morale and professional support, and awareness of educational possibilities through adequate pre- and in-service training are critical determinants of curricular quality over and above the level of physical support that can be sustained across an education system as a whole, not simply that found in the best-provided locations. School quality can only improve through changes in teacher behaviour. Initiatives in those areas which support teachers and boost morale through providing access to information and advice, assist the development of professional associations, and create peer group pressures and recognition of performance have the potential for widespread impact and the possibility of extensive multiplier effects. Mechanisms for much more attention to enhancing the professionalism that this implies, amongst greater proportions of existing teacher cadres and new entrants, provide an important key to sustained changes.

## DONORS AND RECIPIENTS

The relationships between donors and recipients will always be uneasy. The history of colonial experiences, the mixed motives of the participants, and the inevitable association of aid with pejorative views of charity make this unavoidable. To put the discussion into some perspective, it needs to be noted that recent estimates (Weiler, 1983) put about 6.4% of the total public expenditure for education in developing countries as deriving from external aid. This modest figure conceals the fact that some African countries derive almost half their budgets from these sources, whilst others receive comparatively little. The potential influence that donors have in contributing to educational development varies accordingly and also depends on other factors; these include the scarcity of foreign exchange, the characteristics of manpower shortages, historical connections, the nature of expertise available, and political expediency. So also does the level of dependence which such aid may engender. What evidence there is on the general effectiveness of educational aid is disturbing, and the cogent arguments can be made against

its value (Hurst, 1983b). It has also been recently argued that educational aid may become more an instrument of foreign policy used to assist vested interests in developing countries maintaining a status quo favourable to the interests of donor country governments (Weiler, 1983). Whatever the truth behind these positions, it seems likely that aid flows will continue, perhaps with some shrinkage, for the foreseeable future. Any agenda for the discussion of curriculum quality should include some discussion of their best use and recognise their limitations.

The central problem of aid to improve curricular quality in the formal school system is how best to assist systems which require *recurrent* support and which employ very large numbers of public sector employees without entering into unsustainable levels of commitment. Capital aid seems increasingly difficult to justify except where special conditions exist—e.g. programmes to correct extreme imbalances in provision; strategic assistance in support of broader-based initiatives to improve quality (where some provision of accommodation and equipment in remote inhospitable areas may be a priority (Colclough, Lewin & Oxenham, 1985)).

Donor agency aid is unlikely to have a sensible role to play in technical assistance at school level since the impact of individuals working in schools is likely to be very marginal to the system as a whole and compromised by cultural and linguistic barriers. Selective support for materials, particularly the design, printing and distribution of text materials where few if any are available, is likely to be a more attractive proposition if these genuinely do benefit from substantial inputs from competent, nationally-based curriculum writers.

Reforms in salary and reward structures, which might succeed in attracting and retaining higher-quality teachers in schools, are a more difficult area for possible assistance though under some circumstances such reforms should be considered. They might generally be justified where genuine desire exists to move towards more equitable reward structures which recognise performance as much as initial qualification, or which create career structures with incentives for special responsibilities and continuous service, offering inducements to work in inhospitable and deprived environments. Any such support should be designed to be explicitly phased out over time; it should be offered to cushion immediate budgetary impacts and increase the general attractiveness of policies designed to motivate and reward conscientious and effective teachers (Colclough, Lewin & Oxenham, 1985).

Relatively small inputs of external assistance might pay substantial dividends in the development of effective advisory and teacher-support systems. School inspectors, professional advisors in particular areas of the curriculum, and efficient administration all play key roles in maintaining and monitoring school quality. Inputs into the training of key personnel and support on a limited basis to help them to undertake their jobs more efficiently, in the context of agreed regional and district level development strategies, appears an attractive option with the possibility of multiplier effects. Any programme of this kind should seek to make use of assessment information to improve teaching practices, as has been undertaken with some success in Kenya (Somerset, 1982). The local professional networks that might develop from such initiatives could help considerably to reduce the professional isolation of teachers and improve morale and motivation as well as awareness of new methods and content. Donor support needs targeting at realistic and replicable levels to stimulate such initiatives and strengthen local demand for, and use of, support services.

## IN CONCLUSION

This paper sets out to consider some of the major arguments which will inform discussion of curriculum issues in the latter part of this decade. Its scope has been broad and it cannot, of course, capture the full flavour of the experiences of those who read it. In a modest way I hope that it succeeds in shifting the focus of discussion on curriculum back to where it has always really belonged—to the sensitive analysis of classroom experience and possibly as a precursor



of initiatives to improve quality. All of the arguments that have been presented only acquire meaning in specific cases when their ramifications are considered, and argued about, by practitioners moving towards shared meanings and intentions. Diversity is a virtue in education: the tyranny of national planning needs to be tempered by appreciation that the quality of learning is closely related to the enthusiasm, commitment and understanding of the average teacher working in much less than ideal circumstances. Curricular reality is a reflection of the appreciation of this fact by those of us who presume to plan.

## NOTES

- [1] 'Developing countries' is used broadly to refer generally to those countries in Africa, Asia and Latin America loosely characterised by relatively low levels of per capita income, limited industrialisation and restricted infrastructure. It has no precise definition, nor does it convey any connotation of cultural poverty.
- [2] Of whom it was apparently suggested that he resembled a feather cushion which bore the impression of the last person who sat on it.

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