

Pre-school education in developing countries

Certain expressions, however ambiguous they may be, die hard. The expression 'pre-school education' belongs to this category. In many contexts, it seems to imply that before infant-teaching institutions are organized, young children are virtually deprived of any education. Nothing could be further from the truth.

The facts show that in traditional societies, especially in the developing countries, educational activity is pursued. This is particularly the case where the culture is stable and there is complete harmony with the background and natural environment. It is, moreover, the indelibility of this first educational experience that creates difficulties when the process of acculturation begins.

In cultures where the sector of primary, i.e. rural, activities dominates—often engaging 90 per cent of the working population—and which have, for this very reason, a markedly static character, there is no need for any form of pre-primary education other than that provided by the family or clan: at least for the

great majority of children who, in accordance with the rules of tradition, are not called upon to exercise technical or political leadership demanding functional relations with more dynamic cultures. For the minority, the future leaders, special educational measures are generally adopted: tutorship, attendance at private nursery schools and, later, studies in industrialized countries.

We thus rediscover, in a new form, the solution adopted for example in sixteenth- and seventeenth-century Europe, where the future leaders of social structures which, being essentially static, were characterized by educational forms oriented towards reproduction of the established order, received technical and functional instruction, either by attending exclusive institutions such as the aristocratic academies in France and the Elizabethan academies in England, or by going abroad, especially where a particular science or art flourished.

In general, it may be said that systematic, realistic, predominantly scientific instruction only spreads and develops widely in cultures where the secondary—industrial—sector plays an important part, with all the ensuing economic, political, administrative and military complexity.

Such cultures, whose dynamism grows in proportion to their development, exploit with increasing intensity the available intellectual potential, a fact which led certain people to

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believe that the members of these societies were more 'intelligent', more 'gifted', than others, or even that they belonged to a 'superior race'. In the industrialized world, the exact sciences play a growing part. By their very nature, they are based on a logic which, originally philosophical, becomes mathematical; upon a particular type of rationality characterized by a predominantly objective system of reference.

The complexity of their theories and methods of organization and functioning also requires highly abstract thought and language.

It is largely for these reasons that in the industrialized countries formalized, systematic education begins increasingly early and lasts longer and longer in a child's life.

A decisive period

This brings us to a crucial question. By and large, it has been accepted for some time, thanks to the progress of dynamic psychology, that a man's character and affectivity are broadly outlined, even definitively drawn, in the first five or six years of his life. This observation seems to be universally valid. Furthermore, we are now in a position, at least in the highly industrialized countries, to formulate a similar hypothesis for cognitive development.

It is known that in his now-classic work, Bloom¹ concludes from a considerable number of previous studies that the intellectual development of the individual, in its varying phases, evolves as follows: in relation to the general level of intelligence reached at the age of 17, about 50 per cent of aptitudes are already fixed at the age of 4, the following 30 per cent are achieved between 4 and 8 and the remaining 20 per cent between the age of 8 and 17.

Parallel to this, the school career also seems to be determined, in essence, early in life. Bloom observes that when a child starts the first year of primary school, 33 per cent of his

scholastic attainment profile is already decided.

Kraus, who followed 148 children in the United States—white, black, Hispano-American and oriental—from kindergarten to adulthood, confirms Bloom's observations in the school environment. Kraus writes:²

The first assessment found to be in high and stable correlation with the results obtained in the intelligence tests and the reading and mathematical comprehension tests, given subsequently, is a reading test taken in the third year of primary school.

And, Kraus continues, the results in the reading test in the third year of primary school "could have been used, for the majority of the children, as predictors of success or failure, certainly for the following six academic years, thus covering lower secondary education, and even for later".³

Finally, Kraus observes that only a few of the pupils who failed in reading in the third year were able to overcome this difficulty: these were the children who had the good fortune to be individually assisted by reading remediation specialists. And the author concludes sadly: 'There were no late bloomers.'⁴

All this is confirmed by Husén⁵ and by several of my own observations.⁶ At the end of a longitudinal study carried out in Sweden, Husén finds that the opinion of third-year primary-school teachers and the results in intelligence tests taken at the same time are good predictors for the school career.

In a Belgian mining region, Minon⁷ has

1. B. Bloom, *Stability and Change in Human Characteristics*, New York, N.Y., Wiley, 1964.
2. Philip E. Kraus, *Yesterday's Children: A Longitudinal Study of Children from Kindergarten into the Adult Years*, p. 41, New York, N.Y., Wiley Interscience, 1973.
3. *ibid.*, p. 42.
4. T. Husén, *Talent, Opportunity and Career*, Stockholm, Almqvist & Wiksell, 1969.
5. G. de Landsheere (ed.), *Recherches sur les Handicaps Socio-culturels de 0 à 7-8 Ans*, Bruxelles, Ministère de l'Éducation Nationale, Direction Générale de l'Organisation des Études, 1973, 450 p.
6. P. Minon, *Facteurs Sociaux de la Première Orientation Scolaire*. Liège, Institut de Sociologie, 1966.

shown that the occupational future of a great majority of socio-culturally deprived children is determined by the age of 10.

Thus Ausubel¹ is probably right in asserting that 'in the field of culturally handicapped childhood, the main theoretical and experimental problem, both for pure and applied research, is that of the reversibility of the effects of cultural deficiency on the development of verbal and theoretical intelligence'.

One cannot but be struck by the convergence of these various observations. However, they are still of purely statistical validity and we lack, in particular, carefully collected studies of cases where this premature determinism seems to be refuted by the facts.

How is this relevant to the developing countries? As might be guessed, the question is, for many of them, crucial. We are reminded of the despairing reaction of a teacher when she heard of the aforementioned researches. For she was devoting all her energy to educating Latin American adolescents who, up to then, had received no school education. Were her efforts practically useless?

Certainly not. But could one hope to recover all the educational time lost? We cannot be sure. Whereas it is still possible, up to a relatively late age, to make reasonable progress in the field of figurative and social learning, it seems to be quite a different matter in the abstract, symbolic field. It would appear that if a certain basic symbolic learning has not been acquired at the right time (during the 'sensitive periods', as Montessori used to say), the aptitude for acquiring it diminishes. How many semi-skilled workers, in the West, whose regular schooling has often come to a halt at the age of 10, have been able to change course and start a new, more intellectual career?

Nevertheless, the ambiguity of many of the above reflections is obvious. Even if they are derived from rigorous research, surely their validity is limited to a very special type of culture? Should we not ask, for example, whether de-

veloping countries do not need men of action trained on the spot rather than thinkers with a long academic preparation? Do certain cultural conditions in certain countries facilitate more belated development than in the West?

One cannot but be staggered by the fact that large-scale transcultural studies were not undertaken years ago to clarify these problems. Were men reluctant to raise them? Did they wish to avoid them? This would be a serious mistake on the part of the developing countries. For even if it were proved that man's intellectual destiny is universally determined from childhood, this would not mean that the situation of these countries is hopeless. The West has faced the same difficulty in its time.

In short, a series of problems with direct, fundamental educational repercussions arise during the transition—especially if it is accelerated—from an economy essentially dominated by the primary sector to modern industrialization and the development of services. This process exerts a dynamic influence on the whole culture which, from being static, suddenly finds itself obliged to create new forms of adaptation and to produce flexible, creative behaviour-patterns to which it is not used.

This transformation, often of a mutational character, requires, in particular: (a) an intensification of communication and information input, particularly in writing; (b) the use of a widely diffused language, which often has to be learnt from scratch; (c) the formalization of education.

In order to achieve the acculturation we are concerned with, children will have to learn to perceive the world by means which have up to then been partly or wholly alien to them; and, as if such a task were not difficult enough in itself, the building of concepts, of this new logic, will often have to take place at school, in

1. D. P. Ausubel, 'How Reversible are the Cognitive and Motivational Effects of Cultural Deprivation?', *Urban Education*, Vol. I, 1964.

a language which is also alien, of which the child originally knows nothing.

If, as is only too likely, the pupils do not embark on this process until the age of 6 or 7, or even later, when, according to Bloom, only 20 per cent of their general intelligence has still to be developed, the vicious circle of difficulties is complete.

In writing these lines, one thinks particularly of those regions of the world where contacts with the culture which dominates the contemporary industrial, even post-industrial era have remained tenuous. Many less clear-cut situations exist, of course, but there is every reason to suppose that they are marked, in varying degrees, by the basic difficulties we are trying to indicate. Hence the usefulness of extreme cases to make the point more clearly.

The role of pre-primary education

As might have been guessed, all the preceding considerations establish, in my view, the necessity of making contact, as early as possible, with the modes of thought and cultural forms of the world into which the future adult will have to integrate.

This must be done in such a way as to overcome the formidable difficulties in achieving balance and continuity between the original culture in which the child has been soaked during the very first years of its life—apparently the most decisive—and a culture which has almost nothing in common with the former, both from the point of view of attitudes and values and as regards behaviour towards the physical world.

It is here that pre-primary education has a decisive part to play, particularly in forming an experimental background without which teaching can have no meaning for the pupil. In the absence of meaning, we are reduced, at best, to a solution of despair: the pupil learns by rote, without understanding, all that is necessary for

academic progress, for which, by a strange coincidence, the criteria for success are precisely the capacity to reproduce, parrot-fashion, the set forms he has learnt, and not to transfer or apply them to reality.

In what language should pre-primary education be given? Bearing in mind the many tests conducted, with various objectives, in the past, the only possible solution seems to be to use exclusively at the outset the language heard by the child since birth and spoken in the family circle. Except where the very nature of the conceptual substratum of the mother tongue makes this impossible, it is in it that the quantitative study of the environment, the pre-scientific construction of reality and also, of course, certain essential qualitative aspects would be approached.

From the beginning of primary schooling, the child would be initiated in the language of major communication in which secondary and, eventually, higher studies will be pursued. But up to the age of 8 or 9, recourse would be had to the mother tongue to ensure deep understanding.

As has been said, the child's living experience must be enriched. He will discover, in particular, in the school environment the cultural elements missing in the family setting, yet necessary in order to follow the educational curriculum which awaits him. In these activities the conceptualization of space, time and causality will take pride of place. Exercises involving serialization, classification and grouping, always in conjunction with the discovery of relevant relations, will be done at every opportunity, with hypothetico-deductive thought as the final goal. The development of affectivity and moral awareness will, of course, not be overlooked.

These few suggestions do not purport to be a draft curriculum, but simply guidelines for thought, as regards both the elaboration of educational programmes and teacher training. They also point the only way to breaking the vicious circle created by the system of parrot-learning whose genesis we have described above.

The institutions: practical considerations

Is the immediate generalization of pre-primary teaching in developing countries possible? The answer, however sad, is evidently no. Not only because the resources are lacking but also, and perhaps most important, because there are not enough qualified educators. For, in order to be properly carried out, pre-primary action requires solid psychological and pedagogical knowledge, to be applied by teachers who have themselves been through the whole process of intellectual and affective training that their pupils in turn will have to accomplish under their direction.

We thus face a crucial question. Is it worth while to invest heavily in primary teaching if, in the absence of pre-primary education, only superficial results can be expected for the majority of pupils?

We are thus brought back to a previous question of prime importance: in non-industrialized societies, is it true that both affectively and intellectually, the essential development of man is virtually decided by the age of 7 or 8? If not, what should be done to overcome the difficulty?

In view of the capital importance of this problem for the future of the world there is a clear and urgent need for wide-ranging research in the most diverse cultural contexts. Let us hope that international organizations and private foundations will find here, as soon as possible, a priority area for action.

In the meantime, what can the developing countries do? In the short term, however undemocratic such an option may be, they will no doubt have to continue to give priority to a culturally privileged minority, capable of supplying the necessary senior personnel and intelligentsia. Not for the first time!

But, parallel to this, they should prepare, with the aid of a solid theoretical framework, the maximum number of young teachers for pre-primary education. These teachers cannot

be trained on the cheap. In Japan, for example, future nursery-school teachers pursue complete university studies, and we have suggested in another publication that this should also be made obligatory in all European countries.

After twenty-five years of field study and observation in the developing countries and a close examination of the university students they produce, I have become profoundly convinced that each time a centre for pre-primary education, staffed by sufficiently qualified personnel, begins to operate in a developing country, a veritable nursery for talent is created.

In this context, community development centres can play a decisive part, for, to the extent that the community, especially its leaders, adopts the idea of pre-primary education, not only are the resources necessary for providing such education more readily available but it can also count on an adult world which appreciates its value and consequently engenders in the child the positive attitudes which are, in the final analysis, the key to success.

An anecdote by way of conclusion

Just after the launching of *Sputnik I*, I had the opportunity of carrying out a large-scale survey of education in the United States. At the time, the country was living in a state of shock and seeking desperately to stimulate its scientific creativity. The means used were sometimes unexpected. We actually saw, in a first-year primary-school class in New England, Mendeleev's table used to teach letters and figures! Future atomic scientists can never be conditioned for their career too early!

At the end of long months of observation, I was often questioned about the scholastic reforms which might be contemplated. To the great surprise of the people I spoke to, I did not contemplate an increase in the number of hours devoted to science in secondary teaching, or the

adoption of sophisticated programmes or technical novelties. I simply suggested that nursery schools should be developed and democratized in that country where they were still the prerogative of a rich minority. Even then, I believed in the influence of the first years of

life on the development of men and nations.

This feeling has been strengthened over the years, and if I were the Minister of Education in a developing country, I should not rest until I had beside me a small team truly aware of the significance of pre-primary education.