



Language Development for Culturally Disadvantaged Children

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There is growing national awareness that environmental influences are both pervasive and potent in the shaping of the individual. It is true, of course, that the entire educational enterprise is based upon such a principle, and it is the success of the system that has confirmed the principle. But it is also paradoxically true that it is the failure of the educational system that has resulted in the recent resurgence of interest in the role of environmental influences in the determination of individual differences.

There was an optimism during the early fifties that equality of educational opportunity for children from the various economic sectors of our country would tend to reduce the extreme differences in ability and subsequent economic success that exists among our people, but early efforts in this direction were not distinguished by their success. As subsequent educational programs became

more specifically oriented towards the recipient group, toward those for which there was a reasonable expectation of failure, it was possible to show some advantage accruing from the educational program, but in follow-up studies the advantage proved transitory as the children, in subsequent years, would fall back to their earlier relative position.

While some have lost heart in the educational enterprise, concluding in effect that "you can't make a silk purse out of a sow's ear," others, hopefully a majority, have accepted failure as evidence of a need for an earlier and greater effort. These people entertain the hypothesis that if children from the lower economic sector fail in school, it is because their cultural milieu has failed to prepare them to succeed.

While the major emphasis of Project Head Start is an implementation of programs that will overcome problems that accrue from "cultural deprivation," it becomes immediate-

ly apparent that the first problem is that of deciding what sort of training is required. Among the various programs put forth, for this purpose, the most systematic has been that of Carl Bereiter and Seigfried Engelmann (1966). They begin their book with an analysis of the effects of cultural deprivation upon educational achievement and focus their attention upon the general deficit of language skills that is characteristic of children coming from lower socio-economic levels. Since the level of language skill demonstrably varies with socio-economic conditions and also plays an important role in the ability of the child to profit from formal educational experiences, Bereiter and Engelmann argue that the development of language skills should have a high priority in educational programs for disadvantaged children. Their ideas and program have not simply accrued from ivory tower theorizing, for they have been ac-

tively involved in a program of research in an experimental preschool at the University of Illinois.

Hawaii has been the location of a similar program of research under the auspices of the University of Hawaii Head Start Evaluation and Research Center.

Initially a direct prototype of the Bereiter program was instituted but it has since been tailored for local use. Also more basic research as to the nature of language deficit in culturally deprived children and theoretical foundations of the Bereiter approach have been carried on by the writers.

This paper takes up the topics of (a) Bereiter's program, (b) a critical analysis, and (c) implementation and study in Hawaii.

The Language Program

Bereiter argues that the traditional preschool of middle class children is inappropriate for the present generation of deprived youngsters who are receiving remedial preparation for elementary school in such programs as Head Start. The middle class school — with its dominant approach being the expanding and enriching of children's environments — is set up to provide the children with a barrage of novel stimuli from Dick and Jane's pony on Happy Acres Farm to firemen and astronauts. But the deprived child with his relatively ineffective language cannot gain as much from an environmental enrichment program as he can from systematic and intensified remediation of his more crucial problem, his language deficit. These children can broaden their perceptual experiences after first developing a language facility that will make these future experiences meaningful. The most imminent of those future experiences is elementary school where their failure is readily predictable if no intervening development occurs.

Having built a case for the position that an outstanding characteristic of deprived youngsters is a language deficit which is a predominantly necessary skill for success in school, Bereiter quite logically leads us to the conclusion that this area of emphasis in an intensified remedial preschool will yield the greatest payoff for effort and resources invested.

Looking at the specific nature of this language deficit, Bereiter's analysis draws attention to the lack of "language logic" on the part of deprived children. A lack of meaning for such basic words as *and*, *or*, *not*, *if . . . then*, etc., detracts from the deprived child's ability to communicate. For example, Bereiter observes that, whereas middle class children seem to construct meaningful sentences by putting together individual words in a logical order, the deprived children tend to speak in single giant words like "Iwan-nagotothebathroom." These giant words are learned and used as single meaning units and at no point are broken down to or constructed from smaller verbal units.

Bereiter sets forth several criteria that dictate an alternative to the traditional preschool. First time is an important factor. Since these children generally have a 2-3 year language deficit to make up in the one year prior to their impending enrollment in the elementary school, it is necessary that this learning be carried on at an accelerated rate. This means that relatively small proportions of the day be taken up by non-language-learning activities. In order to extend the "normal" attention span of these four-year-olds, a system of sustaining their participation must be used. Finally a system for the individualization of instruction and frequent evaluation of each child's learnings must exist.

Bereiter allows for his three cri-

teria of systematic use of time, sustaining responses, and individualization of instruction by strict scheduling, use of operant conditioning techniques, and small patterned-response groups, respectively.

The two hours in school for the children are broken up into six, approximately 20 minute periods which are alternated between study groups and other semistructured activities. A businesslike atmosphere is maintained throughout the school day in order that appropriate school behaviors may be established. While some critics have reservations about the program because of their concern that the emotional needs of disadvantaged children will not be met in such a structured situation, it is only through such a structured program that it is possible to remedy the language deficiency. Further, a structured environment in which the conditions of reinforcement are clarified should be *more* conducive to emotional adjustment.

In other words, operant conditioning procedures using edibles and small toys as reinforcers should prove quite successful in maintaining responses over a long period of time with these deprived subjects. We shall look at the effectiveness of this and other techniques toward the end of the paper.

The third criteria of individualization of instruction is accomplished by small groups in which four or five children respond in unison to the teacher. The teacher monitors the children's responses and stops at appropriate points to aid particular children over their rough spots.

The content of the program is derived from a hierarchical analysis of language skills according to the aforementioned logic of language. The best way to present an explanation of what is meant here is to present the levels of the program and give an example at each level.

Level	Example
First order statements	
Identify statements — singular	This is a <i>ball</i> ¹
Identity statements — plural	These are <i>balls</i> .
Negation	This is not a ball.
Second order statements	
Polar discriminations	This <i>ball</i> is <i>big</i> (<i>little</i>).
Multiple polar discriminations	This ball is <i>big</i> (<i>little</i>) and this ball is <i>hard</i> (<i>soft</i>).
Polar discriminations — plural	This ball is <i>big and hard and heavy</i> (<i>small, soft, and light</i>).
Example: color	This ball is <i>red</i> (<i>blue, green, etc.</i>)
Prepositions	The ball is <i>on</i> (<i>over, under, beside, etc.</i>) the chair.
Second order identify statements	This <i>ball</i> is a <i>toy</i> .
If . . . then deductions	If the ball is <i>big</i> , then it is black. ²

¹Bereiter, Carl and Engelman.

²Given the stimulus:

Child provides underlined portion as response to remainder of sentence as spoken by teacher while exhibiting appropriate stimuli.

Results in Hawaii

There is naturally tremendous interest in programs of preschool intervention, and this is coupled with a strong interest in an evaluation of these programs. Are the expenditures in these programs justified by the results achieved? While this is a seemingly reasonable question, the answer is somewhat elusive. The first problem encountered in attempting to answer it stems from the fact that cultural deprivation is a sociological rather than a psychological variable. That is, in selecting a child for the program, one looks at the social context in which the child was reared rather than assessing some characteristic of the child per se. Further, the general objective of the programs are also social, e.g. educational and vocational success. At this time it is impossible to tell whether or not the degree of success

for these children will exceed that which would be expected had the programs not been implemented. This information, however, when it becomes available, will provide the critical test of the program.

But in the meantime, it is possible to look specifically at some of the psychological variables that are correlated with cultural deprivation. In Hawaii, for instance, as in other areas of the country, the children that have been afforded the opportunity to participate in these programs have shown consistent and substantial gains on measures of intelligence and language abilities (Crowell and Fargo, 1966). These gains have also generally exceeded those that have accrued from participation in less formal intervention programs. Such gains are not only interesting in and of themselves, but they are correlates of school success,

a primary prediction of our long term goals of social and vocational achievement.

These results are certainly a basis for optimism, but it is also recognized that in dealing with correlates of school and vocational success, there is something less than complete certainty that the children will fulfill our expectations. Higher intelligence scores will not cause school success.

This dilemma has resulted in research into alternate approaches to the problem of curriculum validation. Bereiter and Engelmann (1967) have started investigations on the development of specific components of intelligence that enable them to state more positively what it is that is accomplished by their educational programs. The present writers have been engaged in preliminary studies that should make it possible to eventually show that participation in a language program of the sort described here does in fact result in increased learning ability. This type of research is of particular benefit, for it tends to focus attention upon specific components of the curriculum and makes a start on the problem of providing criteria for the selective retention, revision or elimination of various aspects of the curriculum. This is extremely important, for a failure or even limited success in terms of the social goals would not point the way toward changes in the curriculum that would better ensure the success of the pupils.

On an observation level, the program appears to have the outstanding feature, due to the condition of reinforcement, of sustaining hour after hour of active responding on the part of the students. This involvement in the instructional content also takes away from the time children might be exhibiting other problem behaviors.