Preventing School Failure: The Relationship Between Preschool and Primary Education
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Preventing School Failure: The Relationship Between Preschool and Primary Education

Proceedings of a workshop on preschool research held in Bogota, Colombia, 26–29 May 1981
Résumé

Cette publication contient les exposés présentés au cours d'un séminaire sur la relation entre l'éducation préscolaire et primaire qui a été tenu à Bogota, Colombie, en mai 1981, sous les auspices du CRDI et de la Fondation Ford. Le séminaire a réuni des chercheurs en éducation préscolaire venus de diverses régions du monde et spécialisés dans différentes disciplines. L'éveil précoce des enfants fut examiné à la lumière des études de cas et des programmes nationaux présentés, et analysé en fonction des effets à court et à long terme qu'il peut avoir sur le développement de l'enfant et son succès lors de son entrée dans le système scolaire. Les travaux sont groupés sous trois grands thèmes : recherche et action en éducation préscolaire et primaire; considérations sur le problème de l'éducation préscolaire et primaire; et discussions et recommandations générales.

Resumen

Esta publicación contiene las ponencias presentadas en un seminario sobre la relación entre educación preescolar y primaria, celebrado en Bogotá, Colombia, en mayo de 1981 bajo los auspicios del CIID y la Fundación Ford. El seminario reunió a investigadores de la educación preescolar procedentes de diversas regiones del mundo y con diferentes formaciones disciplinarias. La estimulación infantil temprana fue vista a la luz de los estudios de caso y los programas nacionales presentados, y analizada en función de los efectos que a corto o largo plazo puede tener sobre el desarrollo del niño y su éxito al ingresar al sistema educativo formal. Tres amplias secciones agrupan los trabajos de acuerdo con los temas tratados: investigación y acción en educación preescolar y primaria; consideraciones sobre la problemática preescolar y primaria; y discusiones y recomendaciones generales.
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Summary of Some Years of Preschool Research

Hernando Gómez Duque

Introduction

Some of the papers that I have presented at seminars whose central theme is similar to the topic discussed here have been characterized by a thorough quantitative content, reflecting long periods of dedication to what Thomas Kuhn has called "normal scientific activity." These periods offer science, and those of us dedicated to it, some very clearly defined limits of study. Thus, the methodological and normative variations within case studies are minimal and cause no disagreement among the scientists who work according to similar orientations.

My topic here has a longitudinal and empirical basis formed from my close and uneasy observation of various childhood intervention experiences. Many of you may reject this empirical basis as too anecdotal, lacking the reiteration and context of a methodology that arrives at the solid conclusions of normal research projects. To others, my thesis may appear incoherent.

As Kuhn has said, there are periods in the history of science in which "factual" data appear to be out of step with what one would expect from the postulates of a theory. According to Kuhn, "The discovery of truth begins with the recognition of an anomaly; that is, with the recognition that in certain ways nature has violated our expectations, induced by the limits which govern normal science" (Kuhn 1975).

Many years of work in this field have led me to sense the presence of numerous anomalies. I say "sense" because I am far from being able to document them adequately for the scientific public. Nevertheless, like Popper, I feel I am qualified to conjecture, and you to refute, about the data being presented at this meeting.

The information presented here should be examined on two levels. First, it is necessary to formulate a theoretical model that will redefine the goals of education. Without this, the operational model will never be articulated. The second level in the hierarchical structure is occupied specifically by the central topic of this meeting: the child from birth to age 12. For practical reasons, however, we must first analyze what has been done up to the present on this second level.

A Model for Discussion

In regard to the form of analysis, I will adopt a quite conventional model: the anticipated response to the system may be broken down into variance attributable to the preschool period (here I include the popular definition of the term "preschool"), variance attributable to the environment (included here are the family, play companions, and the community through the media it utilizes), and variance attributable to the school period. The model should clearly include double interactions and the source of the variance, which is, I feel, the most important in structuring a coherent process, that is, the triple interaction of the three systems.

Obviously, my proposal is nothing innovative, as the organizers of this seminar have already stated the same model in their introduction to the objectives and guidelines, and I will use their positions as a basis for my discussion.

The Component of the School

"Several attempts have been made to change the school system at its various levels and in different areas: Teacher training programs are developed, new textbooks introduced, new educational materials tried out, school facilities improved" (Objectives and guidelines).

We should note here that if the objective is to
improve student performance within the school, the school as a whole has been taken as a source of variance contributing to the performance variable. The components cited (i.e., teacher training, new textbooks, etc.) can be tested to verify positive impact.

In educational terminology, such areas of study are known as "school factors that affect performance." In spite of the catastrophe generated by James Coleman's report on equal educational opportunities, there are certain empirical proofs that support intervention at the primary school level. However, these studies have not received the support they deserve, and to date we have not had a well structured theory as to what the school can contribute.

In Colombia, and perhaps in other developing countries, research at the primary school level is certainly poor. Even if the conclusions of the Coleman report could be taken as conclusive, there are a variety of factors in these countries that do not exist in more-developed nations, and that surely, on their modification, would make a notable contribution to student performance.

At this point, I wish to pose a fundamental question: if there is no structured theory in regard to how factors inherent in the school affect desertion rates and low performance, why concern ourselves with earlier periods?

Even at the risk of being labeled a conservative, I believe there are sufficient elements in tradition to think that the family is responsible for this first stage. If, because of certain historical conditions, there are marginal groups in which the family can not fulfill this function adequately, we must ask ourselves what the obstacles are for these families in contributing to the education of their children, because groups from different socioeconomic levels appear to be able to do it well.

The conclusion is that the family is potentially capable of carrying out this task. At least this is one of its principal social duties. Some families can not for reasons that have not yet been studied systematically. However, some of these circumstances are in the heads of many, although in the hearts of few.

If we are not completely convinced that our system of primary school education is not susceptible to change, then why have we embarked on research to design a new structure of formal education to replace the old? The answer is clear in the following message from Coleman: "For those children whose families and neighboring communities are educationally deprived, it is important to substitute the home environment with an educational atmosphere, beginning school attendance at an earlier age and making the school day longer." (Coleman 1966)

I believe it is valuable to reflect on this statement. In the first place, the proposal concerns children of deprived families, from which we may conclude that families that are not educationally deprived can fulfill their function as child educators. In the second place, the proposal of substituting the family environment with an educational environment has two implications: the first is that taken by Coleman when he suggested that the substitution be that of a new schooling system. The second is the formulation of interventions that replace by means of reinforcement. But the reinforcement of this educational environment of the family causes the scientist to cross boundaries that have been forbidden by the establishment. In more modern terms, the scientist is almost forced to move within those limits set by the governing body.

To conclude this rather incomplete section, I refer to Elkind in the following conjecture: "In closing the discussion, I would like to emphasize another side to this issue of preschool instruction. This is the consideration that the emphasis on preschool education has obscured the fact that it is the elementary school years which are crucial to later academic achievement" (Elkind 1978).

The Preschool Component

"A different approach has been adopted by administrators and educators who look for the causes and the solutions of school failure in the experiences which take place in the period prior to school entrance" (Objectives and guidelines).

In 1979, the SER research institute, whose head offices are in Bogota, contracted me to report on what had been done in Colombia in the area of childhood instruction during the 1970s. I must admit that the list of projects in my summary was subjectively selective and, for this reason, my inferences may not be entirely representative.

When I received this assignment, a marvelous anecdote came to my mind of something that had happened to me when I was a student at the University of Chicago. After having spent quite some time analyzing the data for a longitudinal study, about which I will comment briefly further on, I was pleased to note that a group of deprived children who had received a psychoeducational stimulus treatment were ahead of their control group companions by a 1.5 standard deviation in intelligence quotient (IQ). I went to the office of the program's director to report on this discovery. After telling my story and expecting an effusive reaction from the educator, I observed Mr
Foster's passive response and heard his only remark: "IQ for what?" I am still searching for an answer to Mr Foster's question.

I believe that my experience in this instance is not too different from what can be seen reflected in the majority of the projects included in my summary.

I can affirm with little doubt that none of these projects were oriented by a research paradigm that could have much importance above and beyond the limits of an eminently psychological argumentation. All of the projects mentioned the deprived segments of the population and their problems, but little questioning was done as to the contributions of remedial programs for this social problem.

My conjecture in this respect is that the methods of research are propagated through financial backing, but their message arrives incomplete to the source executing those projects. I am inclined to think that the decision to embark on a research venture has a high content of self-financing from the institutes that concentrate on these activities. Scientists, thus, are channeled into a normal scientific activity, whose limitations are completely ignored, as they are pushed onward from an outside source.

Returning to the model of components of variance, I can affirm that the intention of all the projects carried out in Colombia in the first half of the decade focused on the degree of variance that could be effected by different combinations of treatments, using different methods of psychological evaluation as measures. But allow me to describe in detail my own personal experience at the Human Ecology Research Foundation.

A Longitudinal Study

Around 1970, the "boom" of genetics versus the environment reached its peak with the article published by Arthur Jensen in the "Harvard Educational Review." The empirical evidence, to my mind, was in favor of Jensen, but not because of the theories he defended and still attempts to maintain.

Nevertheless, the method of research imposed the design of studies that permitted the mobilization of deprived children according to a distribution by intelligence. As a result, the supporting theory should be based on a psychological concept that permits the manipulation of "cognitive structures" according to the convenience of the investigator.

An excellent article by Eleanor Duckworth quotes a statement by Bruner to the Geneva group at the Woods Hole Conference: "You have done nothing but document the child's unaided development; you don't intervene. Surely each of the notions you have studied is composed of other simpler notions. Surely it is sufficient to decompose each of the complex notions into its simpler parts, to teach the simpler parts, and to aid the construction of the whole notion in this way" (Duckworth 1979).

As noted by Duckworth, the position taken by Bruner is an effort to impose uncritically on the social sciences methodological structures developed in the context of the natural sciences.

Even though the study I am describing incorporated "a posteriori" elements from a progressive theory of education, adapted from the David Weikart group, the basic supporting scheme was consistent with the main thought in the Bruner quotation.

The intent of the program, in my view, was to mobilize the variance in such a way that the factors inherent in primary school and the environment surrounding the child would become only marginally important.

From the point of view of methodology, the Foundation's program was surrounded by elements of a tradition that is increasingly questioned. The best definition I know of this tradition is that given by Habermas: "Only the controlled observation of a determined physical behavior organized in an isolated field under circumstances which can be reproduced by perfectly interchangeable subjects seems to permit valid perceptual judgements in an intersubjective manner" (Habermas 1978). I must point out that Habermas does not follow this research tradition.

The results of this experience have been amply published in magazines of world renown, including "Science." I, therefore, think it unnecessary to repeat them here. I would, however, like to mention those data that secured my participation in this symposium.

Table 1 shows the experimental design of the project with the different contrasting groups. In this table Groups 1 to 4 are made up of experimental subjects that received the same treatment but for durations varying from 1 to 4 years.

Group "HS" belongs to a different population in terms of its social and economic background; the results of the psychological tests make it possible to place their parents clearly on a scale of income distribution.

Group "NE" is made up of children who fell outside the limits, at the beginning of the program, for inclusion or exclusion in regard to the rest of the population considered for the experi-
Table 1. Design for the longitudinal study of the Human Ecology Foundation at the preschool level.

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<td>HS</td>
<td>High socioeconomic level</td>
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<tr>
<td>NE</td>
<td>Low socioeconomic level - no intervention</td>
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<tr>
<td>CE</td>
<td>Low socioeconomic level - no intervention; ex post facto selection</td>
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Table 2. Ratings in the WIS-R tests at 10 years of age.

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<th>Labyrinths</th>
<th>Vocabulary</th>
<th>Ordering</th>
<th>Similarities</th>
<th>Digits</th>
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<td>(8.72)</td>
<td>(3.83)</td>
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<td>(43)</td>
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<tr>
<td>G2</td>
<td>Prom</td>
<td>17.35</td>
<td>9.38</td>
<td>20.65</td>
<td>17.85</td>
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<td>10.09</td>
<td>8.69</td>
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<td>G3</td>
<td>Prom</td>
<td>14.64</td>
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<td>Prom</td>
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<td>10.67</td>
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<td>18.60</td>
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<td>14.43</td>
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<td>SD</td>
<td>(6.73)</td>
<td>(2.18)</td>
<td>(6.12)</td>
<td>(4.77)</td>
<td>(8.32)</td>
<td>(3.22)</td>
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<td>CE</td>
<td>Prom</td>
<td>14.38</td>
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differential positions. Given that the activities in Colombian public schools are centred on these two basic skills for the first years, we must be careful in expecting a very positive impact from preschool experiences, at least as long as we sustain the philosophy of the transmission of values that currently orients our system.

With respect to the data on school performance in terms of the different levels of competence reached by the children, I have analyzed them and not found significant differences. One thing does stand out: the children who participated in the treatment are 2 years behind in the system in relation to their schoolmates of a high social class.

Let us turn now to the significant differences I found in the tests of block designs, information, labyrinths, ordering of drawings, similarities and analogies, digits, and incomplete drawings.

When we compare eight points in favour and two against, the quantitative result favours the preschool child within certain limits.

Omitting in the analysis Group G4, which only received 1 year of treatment, and Group NE, which received no treatment, these differences completely disappear.

Some important facts must be noted: (a) 2, 3, or 4 years of treatment appear to justify an intervention (1 year, beginning at age 6, is too late) and (b) note the equality between the groups G1 (4 years of treatment) and CE, classmates who have not attended preschool. Even when for this latter group children with ages similar to those of the children who participated in the intervention were selected, there is still doubt as to whether this would be an equivalent control group. This lack of equivalence could infer a greater degree of socioeconomic well being for the parents of these children.

In a longitudinal study I undertook with Dr Miguel Urrutia of FEDESARROLLO on the evaluation of earnings during the 1970s of families whose children were attending the program, we found the following: (a) the actual earnings of the head of the family showed no significant change, (b) the total earnings of the family changed positively in real terms, (c) the variation in this family earning level was owing to a greater participation by the wife in the work force, and (d) the housing conditions changed notably.

These characteristics place the neighbourhood on a different socioeconomic level from that observed when the children began the program. For this reason, it is not rash to state that the CE group belonged to a higher level, and here we would begin to define the first parameters for a new system of confronting these situations.

Moving Into the Third World

“Different types of early education programs, both formal and informal, are developed, plans are made to increase the number of preschools, the family and the community are involved in early stimulation activities” (Objectives and guidelines).

The list included here by the organizers is more or less representative of the hecatomb that resulted from the interventional modes of the period beginning in 1975. This variation is not subject to criticism as it is a fundamental principle in the epistemology of biosocial evolution maintained by Campbell and Popper and to which, temporarily, I adhere. On the contrary, I am pleased about it as it is a symptom that the paradigm of this type of normal science I have been criticizing is beginning to lose ground.

The problems can be seen more as interactions among the factors that affect the child in his or her development, and we recognize the need to see the problem as a totality and not through isolated components. On this point it is valuable to cite Theodore Adorno when, in a controversy with Popper on the logic of the social sciences, he stated: “The social whole has no life of its own beyond the components which it brings together or makes known. It is produced and reproduced by virtue of its separate moments . . . . So rarely, however, are we able to separate said totality from life itself, the cooperation and the antagonism of its elements, are we able to understand only one of these elements — even its simple functioning — independently of the understanding of the whole, which has its own essence in the movements of the individual entity” (Adorno 1978).

Another fundamental symptom that the problem is not one of articulating a paradigm is the change noted in the methodology and norms.

Table 3. Frequency of responses to the question: of all the things in school that you do, what do you like most?

<table>
<thead>
<tr>
<th>Activity</th>
<th>%</th>
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<tbody>
<tr>
<td>Writing and reading</td>
<td>26</td>
</tr>
<tr>
<td>Drawing</td>
<td>21</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>14</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
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<td>Assignments</td>
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<td>Play</td>
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<td>Others</td>
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used in research. Almost all the programs started in Colombia in the 1970s had a strong experimental component with treatment groups, control groups, and subjects assigned randomly.

This type of inferential mechanism lost ground around the year 1975, when the first quasiexperimen
tal studies appeared. Later we hear of action research, participatory research, the promotion of base groups, and the norms for evaluating experiences present a good number of uncertain elements. The number of quantitative factors or elements hypothesized as a result of the interventions multiply, until the possibility of identifying some feature common to the groups taking part in the research is lost. A value system relative to each of the subgroups in the culture with which the researcher has worked is defended. Science thus begins to be diffuse, as does the problem that one hopes to remedy through experimentation or experimental action.

My experiences with the projects that I have named those of the Third World have been true learning experiences in my research career. I wish to give special emphasis to the project developed by the Human Ecology Foundation with the financial assistance of the Van Leer Foundation. It is not necessary to go into detail here as to all that has been done in 3 years. I will mention only those aspects that, in my view, are most relevant for this discussion.

Part of our work was to achieve the active participation of the family in preschool programs carried out by the Foundation. With this proposal, we decided to invite the mothers to collaborate with the teachers in designing educational materials. These workshops were to fulfill two goals: (a) to create interaction between the mother and the teacher and (b) to assure that the new materials would be used in the children’s homes and, thus, give a certain continuity of educational environments.

The first meetings were successful, but soon afterward desertion from the weekly workshops was noted. We made a decision to design workshops based on higher priority elements in the eyes of the participating mothers. Attendance improved and the interaction grew between the teachers and the family. We attempted to motivate dialogue so that these workshops would be a vehicle for true expressions of social problems that were beginning to emerge.

The problem began to get too big for us, I must admit. There was no chance of remaining neutral in our attempt to overcome these obstacles that oppressed the deprived sectors of the population.

To penetrate more deeply into the daily problems of the community, we decided to modify our initial strategy. This had been based on a few demonstration training units that, as their name indicates, were aimed primarily at designing a curriculum consistent with certain “modern educational theories” and explaining it to the teachers.

The second strategy was to have taken shape in what we called Centres for Integrated Community Development. The philosophy was similar to that of Father Jerry Pantin in Trinidad-Tobago. However, we were unable to achieve our goals because we did not obtain the necessary financial backing to continue.

In Search of a New Paradigm

Ten years as a researcher into the problems affecting children and the resulting historical reflection have been basic to arriving at a stopping point. My initial steps were as a quantitative methodologist and, paraphrasing Donald Campbell, as a servant of an experimental society. I wish now to relive these experiences to formulate strategies that, in my judgment, are more related to the social realities of the Latin American. I believe it is time to deepfreeze all those elements that have been useful in analyzing empirical relationships by transforming numerical data. I do not deny their utility at certain points in history in which there is a clear model to be articulated. However, I feel that the horizon at the moment is rather gloomy.

This is not pessimism, as I am sure that there is a long road to travel yet, but this road must be taken in a different manner. Plato says, in Phaedro, “To come to a prudent resolution in anything, my son, one must begin by getting to the bottom of the question; otherwise we will unavoidably fail.”

In closing, I wish to leave an element for thought familiar to many of you. This quote from Paulo Freire sums up all I have wished to convey: “Those who use cultural action as a strategy for maintaining their domination over the people have no choice but to indoctrinate the people in a mythified version of reality. In doing so, the Right subordinates science and technology to its own ideology, using them to disseminate information and prescriptions in its effort to adjust the people to the reality which the “communications” media define as proper. By contrast, for those who undertake cultural action for freedom, science is the indispensable instrument for denouncing the myths created by the Right, and philosophy is the matrix of the proclamation of a new reality. Science and philosophy together...
provide the principles of action for conscientization” (Freire 1970).


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