Preventing School Failure:
The Relationship Between Preschool and Primary Education
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Preventing School Failure:  
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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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Early Childhood Education in Brazil: Trends and Issues

María Carmen Capelo Feijó

The Brazilian Educational System: Its Structure and Organization

To analyze the trends and issues related to early childhood education in Brazil, some background information on the Brazilian educational system seems essential. The formulation of Brazil's educational legislation corresponds to the three administrative government levels: federal, state, and municipal. The Brazilian Constitution gives the federal government the responsibility of defining the educational policy of the country — the rules and general direction of Brazilian education. Thus, a unified policy determines the educational goals of the whole nation and each state must organize its own educational system.

The structure of the Brazilian formal education system comprises: (a) primary education (basic education is the Brazilian term), consisting of 8 years (grades 1 – 8); (b) secondary education, consisting of 3 or 4 years, which aims at preparing students for entry into middle level occupations and/or higher education; (c) higher education, of varying duration; and (d) postgraduate education, offering the equivalent of Masters and Doctorate degree studies.

It should be noted that this structure does not include preschool education. This does not mean that attempts to provide preschool education for Brazilian children have not been made. It has only not been considered as a priority area because the Brazilian educational system is still struggling to provide basic education for its school-age children.

Primary Education and its Effectiveness

The 1971 Education Reform Act included as one of its principal objectives the provision of free and compulsory education for all children between the ages of 7 and 14. According to information reported by the Ministry of Education, between 1971 and 1975 gross enrollment in primary education throughout Brazil increased by 14.6%, from 17 066 093 to 19 549 249, equivalent to 87.7% of the corresponding age group. However, despite an annual enrollment growth rate of 3.4%, a considerable gap remains between the government's enrollment target and the actual situation. An analysis of the basic education system shows a high rate of students repeating grade levels, most frequently between the first grade and the second grade. In September 1977, Veja, a Brazilian magazine, reported, on the basis of statistics given by the Ministry of Education, that half of the 6.4 million Brazilian children who were attending the first grade of primary education were not going to be able to pass the school examinations to be promoted to the second grade. Most of the repeaters drop out of school after 2 or 3 years of frustrating experiences.

Although policymakers continue to rely most heavily upon the expansion of primary education, it is now time to question the cost of having such a high rate of repeaters and dropouts in the Brazilian school system. The Preliminary Diagnosis of Preschool Brazilian Education in 1973 reported that enrollment in the first grade of primary education was 2.4 times higher than the number of children 7 years old (the age of school entrance). The enrollment was 6.7 million, whereas the Brazilian 7-year-old population was only 2.8 million. The high rate of repeaters was pointed out as one of the reasons for such a concentration. Thus, to focus only on the expansion of primary education may not necessarily be the best policy in terms of the most effective deployment of resources.

Even though in Brazil the characteristics of the school system, such as low professional qualification of the teachers, poor physical conditions of the schools, irrelevant curricula, and often an almost total lack of teaching-learning materials...
have been considered as the major obstacles to success in school, it has recently been suggested that the problem is evidence of the negative effects of environmental factors during the first years of life — nutritional deprivation and the lack of educational stimulation. An analysis of the situation in primary education is compelling the authorities to focus on factors that exist before school — the child before and at the time of school entrance and the conditions affecting his or her development.

In Brazil, nutritional deprivation and the lack of educational stimulation represent environmental factors that obviously do not ensure optimal conditions for the development of the child. According to the "Infant—Mother Protection Coordination" (CPMI) of the Ministry of Health (Brazil), poor nutrition, characteristic of children of the lower socioeconomic class, is the cause of many organic deficits, such as rickets, anemia, and visual and auditory deficiencies, so common among Brazilian children. In a study carried out by Ana Maria Poppovic et al. (1975), the performance (mental capacity) of middle-class preschool children was compared with that of lower-class preschool children. The results indicated that lower-class preschool children were 2 years behind in their performance when compared with middle-class preschool children.

**Preschool Education and its Current Trends**

Although there has been some concern through Brazilian educational legislation to provide early childhood education, governmental planning has so far been modest. Consequently, educational programs for children who have not yet attained the age of compulsory school attendance (7 years old) are available only to a small proportion of the Brazilian preschool population. As reported by Ana Bernardes (1976), of a population of 9,746,712 children between 4 and 6 years old, only 686,390 children (7.04%) were enrolled in preschool programs. Of these, the majority (41.1%) were attending private schools. One can reasonably conclude that most children from low-income families did not have the opportunity to attend the available preschool programs. If one considers the present Brazilian population under the age of 7,20 million approximately, the implementation of early childhood education in the Brazilian context represents a challenge. No doubt there have been attempts to face this challenge. Many programs for young children have been implemented by public and private institutions; some state public school systems are now providing some type of educational program for 4-, 5-, and 6-year-old children. There are also some private, industry-related, church, and social service child-care programs in existence. Such programs have been implemented in the form of direct assistance and/or education. For instance, the nutritional and health programs have much more assistance than education. On the other hand, the programs that emphasize the educational component have been primarily traditional preschool programs that fail to take into consideration the real needs of Brazilian children, possibly because there is little information regarding the characteristics and setting of the Brazilian child's life.

There has been some concern on the part of the Brazilian government regarding provisions to integrate actions toward the implementation of early childhood programs. No doubt such a task gives rise to many difficult problems, many of which are common to most countries. Some of the problems are of a quantitative nature; others are matters of policy, organization, and administration. However, some activity in the field can be seen. Recently the federal government listed early childhood education among its top priorities for the 1980s. Thus, the issue of early childhood education is now recognized as being of major significance in the Brazilian educational context, after having been considered for a long time as a “luxury” for middle- and upper-class children. This shift is leading Brazilian authorities to avoid isolating the issue of early education and to try to integrate it into a comprehensive approach to educational and other policies.

This move is most clearly evidenced in specific programs proposed recently by the Ministry of Education. These programs aim to integrate education in the schools with community development. Thus, a much broader approach is now part of government planning. For instance, the Federal University of Ceará, together with the Office of Education, is implementing a program within a poor community of the city of Fortaleza. The program aims at integrated actions in the areas of health, education, cultural activities, and family planning, to find alternative ways in which the well-being of the community could be reached. The family is the target — and special attention is being given to children from birth to 6 years of age.

The implementation of programs such as those already mentioned will not only make the desired integrated action a reality but will provide valuable information about the characteristics and settings of Brazilian children's lives. So far, in Brazil, there is little research on the relationship
between early experience and the behavioural, social, and educational outcomes of early intervention. Obviously, this information will be valuable in current government planning of early education. There is a need in Brazil to bring together action and research to examine the context within which, and the process by which, early childhood education should be implemented. In this regard, a promising strategy seems to be the analysis of programs now in progress. Evaluation of current early childhood programs may be an important source of knowledge and direction.

**Issues in Evaluating the Effectiveness of a Kindergarten Program**

In this section some preliminary results of an evaluative study conducted in the Ceará state educational system are discussed.

The structure of the educational system of the state of Ceará, as is the case for the whole country, does not include preschool education. However, the system implements educational programs for children under the age of 7, by organizing kindergartens in some of its primary schools. In 1979, 328 kindergarten classrooms were operating in 132 primary schools of the public state educational system. The majority, 250, were located in Fortaleza, the state capital. Enrolled in these classrooms were 8691 children; 6859 of these in Fortaleza.

After 1 or 2 years of kindergarten these children were to attend the first grade of primary education along with a number of children who had not had the opportunity to attend kindergarten because, in the state of Ceará, the availability of educational facilities for children who have not yet attained the age of compulsory school attendance is still quite limited. It has been argued that the system cannot afford to extend education to young children because it does not even meet the existing demand for the first grade of primary education. For instance, in 1974, 733 000 students were enrolled in that level. This figure corresponded to 71% of the school population between 7 and 14 years old. This means that 29% of the children who were of school age (from 7 to 14 years old) did not have an opportunity to be enrolled in the state educational system. A brief look at the educational system of Ceará would show that the inability of the system to meet the existing demand for entrance into first grade of primary education is not the only problem faced by the system. In Ceará the problem of school failure, represented by the high dropout rate and by the number of students who fail to be promoted to second grade, is significant.

According to the First Five Year Development Plan of the State of Ceará (1975–79), from 1967 to 1972, of every 1000 students who entered first grade, only 70 reached eighth grade to obtain primary school diplomas. The bottleneck of the system is found at the passage from first grade to second grade, where the rate of promotion is only 22%. The student dropout rate is 50%, whereas the percentage of students who repeat the first grade is around 23%.

As it is being argued for the whole country, the problem of school failure in the state of Ceará is thought to be primarily owing to nutritional deprivation, a lack of educational stimulation, and the characteristics of the school system itself. However, until now no studies have indicated the real causes of such a high rate of school failure. If a lack of educational stimulation is considered to be one of the obstacles to success in school, would a year of kindergarten before first grade enable the children to perform better in the first year of school?

By addressing this question, the study reported here has two major objectives: (a) to provide an empirical description of the kindergarten program that is being developed in the state public schools of Ceará and (b) to analyze the effects of kindergarten experiences on the subsequent learning of young children.

**Method: Experimental Design and Subjects**

This study was carried out in Fortaleza, a city of more than a million people with many problems characteristic of rapidly expanding cities in developing countries, including a large number of families living in very low socioeconomic conditions. The children who were selected for this study were the offspring of such families. All of them were living in poorer sectors of the city. The average income of their families was US$50 per month and the level of schooling of their parents did not go beyond primary school.

The sample consisted of 57 children who, in 1979, attended part-time kindergarten for a year in public primary schools and 70 children who did not have this opportunity. Because the comparison groups could not be regarded as a random sample, various control procedures had to be used to ensure equivalence. One was to identify the two groups of children on the kindergarten registration day set by the Office of Education. Children enrolled in kindergarten in eight
different schools were selected to represent the experimental group. The control group was selected from among children whose parents had made an attempt to enroll them in kindergarten but had been unsuccessful because there were no more places in the schools. Thus, both comparison groups consisted of children for whom the parents had applied for admission. Apart from that, the two groups were matched for the following variables: sex, age, number of children in the family, and birth order (position of the child in the family). Because in the educational system of the state of Ceará to be enrolled in the first grade of primary education the child must be between the ages of 7 and 8, the children selected for this study were, at the time of kindergarten enrollment, between 6 and 7 years old. Later on in the study, because the control group had more children than the experimental group, a subgroup of 14 children formed a third group in the research design. This decision was made mostly because I wanted to observe how these children would react to a short-term program in which some reading-readiness activities were to be developed.

These three groups of children were followed up in their school performance into the first grade of elementary school. At the time of first grade attendance (1980) the children from the control and training groups were enrolled in one of the eight public schools, together with the children from the experimental group — the ones who had attended kindergarten the previous year (1979). The group was spread out in 26 classrooms. Each classroom had children from at least two groups: experimental and control. The training group children were all together in one school but were distributed among four different classrooms that also had children from the other two groups: experimental and control.

The eight schools were located in different sectors of the city. The children were enrolled in the schools the parents had applied to for admission to kindergarten. Generally, the parents applied for admission to the schools located in the sector of the city in which they lived.

Instruments and Procedures

Because the purpose of this study was not only to analyze the extent to which kindergarten experiences would have an effect on the subsequent learning of young children, but also to provide an empirical description of the kindergarten program being developed in the public schools of the state of Ceará, data collection fell into two areas: data on the kindergarten program and data on the assessment of the children's academic performance at school. Also, because the children were followed up into the first grade of elementary school, information about the educational opportunities (nature and implementation of the program) available to the children at that grade level was also gathered.

Data on the kindergarten and first-grade programs were obtained by means of questionnaires and interviews with administrators, supervisors, and teachers, and classroom observation and an analysis of curriculum material and planning. Because the first grade of elementary school emphasizes language development, more specifically reading and writing as major curriculum goals, the children's school performance at that grade level was assessed through academic achievement tests in areas such as reading skills and mathematical concepts. Rating scales were also used by the teachers to gather information on the children's interest in engaging in school-type activities. Data concerning the students' academic performance were also collected from school records. Figure 1 represents the testing sessions and the instruments used.

Testing was done by undergraduate students from the School of Education of the Federal University of Ceará. Before each testing session a training session that included a practice phase was given to familiarize the examiners with the format of the test and possible difficulties in application. Also, because the tests had been translated from English into Portuguese, a series of pilot studies was conducted to permit their adaptation to the Brazilian educational setting.

All the testing sessions were given at the schools. To ensure suitable conditions for the administration of the tests, the children were asked to come to the schools on Saturdays, just for the testing sessions. It should be pointed out that the school administrators and the parents of the children were extremely cooperative. As reported by the parents, the children loved to go to school for the “play session,” as testing sessions were named. During the first year, when the control group children were not attending kindergarten, they were notified about the testing sessions through their siblings or friends at the school in which the sessions were taking place. To guard against examiner biases, the children were assigned to examiners randomly, and no information was provided regarding the treatment group.

Kindergarten and First-Grade Programs

The kindergarten program had the following main characteristics: broad objectives, with
emphasis on general personality development rather than training in specific skills. The program focused on a teacher-child centred approach, embracing activities in the areas of language, arithmetic, motor coordination, science, art, and social events. There was also a lot of time for free play. A booklet for teachers set forth the objectives, recommended sequences, gave examples of activities, and indicated materials that could be used in the development of the program. At the same time the teachers were encouraged to act on their own initiative and to make a point of adapting activities and tasks to the children's interests and abilities. Observations showed that curriculum implementation was fairly uniform among kindergarten classrooms.

All the schools in this project were under a program in which the same physical facilities (classrooms and materials) were used by two groups of children. Each group was composed of an average of 30 children under the responsibility of one teacher. However, the teachers were directed to arrange their schedules to rotate use of the classroom facilities. For instance, while one group was using the classroom, the other group was using the open space available at the school for activities such as recreation, storytelling, and so on.

The first-grade program emphasized mainly reading and writing. Teacher instructions, most often directed to the whole class, predominated. Children had to spend a lot of time copying exercises from the blackboard, and other kinds of activities were almost nonexistent. Observations indicated that there were striking dissimilarities between the kindergarten and first-grade programs. This implied a serious discontinuity in the educational process that may be harmful to the children.

### Preliminary Results

Because the data collected for this study are still being analyzed, only preliminary results can be reported at this time. The results reported here refer only to: (a) the school record data regarding the children's academic performance at the end of first grade (Table 1 summarizes the children's promotion to second grade by research group) and (b) the results of the data related to the children's language abilities.

The school records of the children's academic performance indicate that those children who attended 1 year of kindergarten were apt to be more successful in school than those children who did not have kindergarten experience. These data can be taken as a plausible indicator of the effectiveness of early education programs. They can be considered as concrete indicators of whether or not a child has performed acceptably within his or her educational institution.

The children's language abilities were assessed by the two following tests: the Stanford Foundation Skills and the Interactive Reading Assessment. The Stanford Foundation Skills test was
Table 1. Children’s promotion and failure at the end of first grade according to school record data.

<table>
<thead>
<tr>
<th>Group</th>
<th>Promotion</th>
<th></th>
<th>Failure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Row total</td>
<td>Male</td>
</tr>
<tr>
<td>Kindergarten experience</td>
<td>14</td>
<td>22</td>
<td>36</td>
<td>14</td>
</tr>
<tr>
<td>No kindergarten experience</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Training</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>34</td>
<td>61</td>
<td>34</td>
</tr>
</tbody>
</table>

During the first grade, four children dropped out from the schools: one female from group one (kindergarten experience); two females and one male from group two (no kindergarten experience).

A comparison of the mean scores on the Stanford Foundation Skills subtests, BK A-Alphabet Recognition, BK A-Figure Matching, and BK C-Phoneme Identification, indicates that differences between the kindergarten, training, and no-kindergarten groups were not statistically significant. Only in the subtest BK B-Rhyme Identification, was the difference in the mean scores of the kindergarten group statistically significant. However, when the mean scores for the four Stanford Foundation Skills subtests were compared, no difference between the groups was statistically significant.

The Interactive Reading Assessment given as a post-test is comprised of six subtests: decoding words, decoding nonsense words, alphabet recognition, story reading, reading comprehension, and listening comprehension. A comparison of the mean scores of the total point ratings of the Interactive Reading Assessment indicates that the children who attended 1 year of kindergarten, as well as the ones who attended the short training program, were able to perform better on the test than the children who did not attend kindergarten.

In conclusion, I would like to raise a final issue for future consideration. If we look at the results on the separate subtests of the Interactive Reading Assessment, we are perhaps inclined to conclude that scholastic experience before entering first grade does make a difference in the subsequent learning of young children. In connection with this finding, however, it may be useful to consider what specific types of reading activities schools are in fact offering to the children.

The results of the subtests that involve decoding and oral production show the impact of prior experience, whereas the results of the comprehension subtests do not indicate any such impact. These findings may be attributable to the fact that schools are less concerned with developing thought processes than with developing more mechanical processes. If this is true, perhaps future studies of the effect of previous experience on scholastic performance should include a consideration of the emphasis Brazilian schools are placing on these different types of skills.