THE
PUERTO RICAN
STUDY
1953–1957

A Report on the Education and Adjustment of Puerto Rican Pupils in the Public Schools of the City of New York

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Oriole Editions: New York
1972
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1972

PUERTO RICANS ON THE MAINLAND:
The Educational Experience

The Migration and Mainland Experience: An Overview

In February 1971, the U.S. Census Bureau published its November 1969, sample-survey estimate that the fifty states and the District of Columbia had 1,454,000 Puerto Rican residents—811,000 born on the island, 636,000 born in the states and district, 1,000 in Cuba, and 6,000 elsewhere. In March 1972, the Census Bureau released preliminary and a few final state population totals from the 1970 census for three categories—persons of Spanish language, persons of Spanish family name, and Puerto Ricans. Puerto Rican counts were for three states only—New York (872,471; 5% of the state population); New Jersey (135,676; 2% of the state population); and Pennsylvania (44,535).

Puerto Ricans have been on the mainland for many years; in the 19th century, a small colony of Puerto Ricans, gathered largely in New York City, worked for the independence of the island. After the annexation of the island in 1898 by the United States, a continuing migration to the mainland began. In 1910 some 1,600 Puerto Ricans were living in the United States; by 1930, they numbered close to 63,000. The migration was reversed during the depression of the 1930s; and again was substantially impeded by World War II in the early 1940s. After the end of World War II (and concurrent with the advent of cheap air transport) it increased steadily until it reached its peak in the early 1950s (in 1953, 304,910 persons left the island and 202,307 returned, leaving a net balance of 72,603). The state of the economy on the mainland has always been an indicator of the migration. The decline in Puerto Rican migration to the mainland in 1970 and continuing into 1971 was precisely due to economic hardship in the states.¹

In a prescient book on Puerto Rican Americans, the Jesuit sociologist, Rev. Joseph P. Fitzpatrick, observes that Puerto Ricans have found it difficult to achieve “community solidarity” and suggests that they may work out adjustment “in very new ways” differing from those of past immigrants (technically, as American citizens, Puerto Ricans are migrants to the mainland United States); and Father Fitzpatrick cogently observes:

Finally, in 1953, the New York City Board of Education presented in booklet form the results of a study initiated by its Division of Curriculum Development. This brief report indicated a new awareness of the importance of using Spanish in instructing Puerto Rican children, of the need for knowledge of Puerto Rican cultural backgrounds, and of the need for bilingual teachers. But it equally made clear the critical need for a fully developed educational program for Puerto Rican children; and it served as a prologue to the Puerto Rican Study which was initiated in 1958.

THE PUERTO RICAN STUDY

The Puerto Rican Study, which is here re-published in a new edition, was, for its time, one of the most generously funded educational studies. The Fund for the Advancement of Education provided a grant-in-aid of a half million dollars and "contributions equivalent in amounts authorized by the Board of Education made the study a vital operation in the school system." (Foreword) It was not completed until 1957, and it was finally published in April 1959. It is, unquestionably, the fullest study ever made of the Puerto Rican educational experience on the mainland; and, in a broader sense, it remains one of the most comprehensive statements yet made, not only of the Puerto Rican school experience, but of the educational experience of the non-English speaking minority child in the American school. As such it is an invaluable document in American educational historiography, with all of the contemporary relevancies which the 1960s have defined (and continuing into the 1970s) with reference to ethnicity, the minority child, the contexts of poverty, and the educational needs of the "disadvantaged" child. It is strange that, in the proliferating literature on the minority child and the schools, The Puerto Rican Study should have been neglected; and its neglect may be due to its appearance before the advent of the Johnsonian anti-poverty programs of the 1960s with their educational components, and to the inevitable fate of sponsored reports whose implementation and evaluation are seldom realized or avoided for a variety of reasons.

The Puerto Rican Study's objectives are clearly stated:

In a narrow sense, The Puerto Rican Study was a four-year inquiry into the education and adjustment of Puerto Rican pupils in the public schools of the City of New York. In a broader sense, it was a major effort of the school authorities to establish on a sound basis a city-wide program for the continuing improvement of the educational opportunities of all non-English-speaking pupils in the public schools.

While the Study was focused on the public schools in New York City, it was planned and conducted in the belief that the findings might be useful to all schools, public and private, that are trying to serve children from a Spanish-language culture. As the Study developed, it seemed apparent that it might have values, direct or indirect, wherever children are being taught English as a second language. (p. 1)

It sought answers to the following specific problems: (1) What are the most effective methods and materials for teaching English as a second language to newly arrived Puerto Rican pupils? (2) What are the most effective techniques whereby the school can promote a more rapid and more effective adjustment of Puerto Rican parents and children to the community and of the community to them?

As the Study progressed, its staff developed two series of related curriculum bulletins—Resource Units organized around themes and designed for all pupils, and a Language Guide Series which provided the content and methods for adapting the instruction to the needs of the pupils learning English (the Study lists the Units and Series). The Study also furnished a detailed description of the Puerto Rican children; devised a scale to rate English-speaking ability; and constructed a detailed program for the in-service education of teachers (Chapter 17).24

23 The Resource Units and the Language Guide Series are invaluable aids for the teacher who is looking for materials for the instructional program for Puerto Rican children; equally valuable (and developed as part of The Puerto Rican Study) is Samuel M. Goodman, Tests and Testing: Developing a Program for Testing Puerto Rican Pupils in Mainland Schools (New York: Board of Education, 1958). Admittedly, The Resource Units and the Language Guide Series were intended (in their emphases) to facilitate a more rapid adjustment to the American way of life (in keeping with the ethos of The Puerto Rican Study and its period), but this does not detract from their value as cognitive aids. The Puerto Rican Study and its ancillary materials are a complete compendium for the education of Puerto Rican children measured against the principles discussed in Theodore Anderson and Mildred Boyer, Bilingual Schooling in the United States, 2 vols. (Austin, Texas: Southwest Educational Development Laboratory, 1978); and Vera P. John and Vivian M. Horner, Early Childhood Bilingual Education (New York: Language Association of America, 1971). Notice should also be made of the materials describing the programs at the Bilingual School (Public School #311, Bronx, N.Y.) which incorporate many of the recommendations of The Puerto Rican Study. The most completely developed Bilingual School in the United States is Public School #35 (Bronx, N.Y.) whose programs are essentially based on the recommendations of The Puerto Rican Study.

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FOREWORD

This report is in three parts, prefaced by an introduction or overview and followed by a concluding chapter with emphasis on the future.

The introduction tells what the Puerto Rican Study is—its background, sponsorship, objectives, relationships to the total school program, the nature and scope of its operations, some of its outcomes, and the first steps taken to translate its findings into practice.

Part I, Chapters 1-6, presents the Study's contribution to the development of methods and materials for teaching English to non-English-speaking children, describes the materials developed, and charts a program for their continuing improvement.

Part II, Chapters 7-12, digests more than a dozen studies of Puerto Rican pupils in New York City schools, their problems in achieving a satisfactory educational-social-cultural adjustment in New York City and how the schools can help them more effectively. Here we begin to see the inter-relationships of language and cultural adjustment.

Part III, Chapters 13-18, brings together data and conclusions of the Puerto Rican Study with respect to major issues that are basic to the formulation of policies and long-range programs.

The concluding chapter synthesizes the many suggestions and proposals presented in Parts I, II, and III for improving the educational opportunities of Puerto Rican and of other non-English-speaking children in New York City schools. It is more than a summary. It is a guide to action that will make children of non-English language background an asset to mainland schools.

Both for its inception and its achievements, those in charge of the Puerto Rican Study are indebted to many sources. Some of these are acknowledged in the text of this report or in its appendices. To acknowledge by name, title, and contribution all of the individuals and organizations to which we are in some measure indebted would require a volume in itself which would still be subject to omissions. Yet, there are acknowledgements to be made.

The Study was fortunate in its sponsorship and its support. Officials of the public schools were seeking a sound basis for the development of a city-wide program to improve the educational opportunities of Puerto Rican and of other non-English-speaking children. Officers of the Fund for the Advancement of Education early saw the need for such a study and its potential value to other communities with similar problems. Under the leadership of William Jansen, Superintendent of Schools, and of Alvin C. Eurich, Vice-President of the Fund for the Advancement of Education, plans for a study were formulated. Grants-in-aid totaling half a million dollars made the study possible. Contributions equivalent in amount authorized by the Board of Education made the study a vital operation in the school system.

The Commonwealth of Puerto Rico made a significant contribution. Officials of the New York City Office of the Migration Division, Department
of Labor of the Commonwealth of Puerto Rico, prepared and presented to the proper officials a memorandum on the need for such a study. Throughout, the Study enjoyed the generous cooperation of the Secretary of Education, the Chancellor of the University, and colleagues and many officials of the Commonwealth government. Much of the success of the Puerto Rican Study stems from the contribution of staff members who were on loan or leave of absence from the Department of Education or from the University of Puerto Rico.

To the institutions of higher learning in the City of New York the Study is indebted for access to libraries and other resources, for assistance in obtaining personnel, for valuable comment of specialists in many different fields, for forums in which to present our findings, for cooperation in specific studies and most of all for friendly, critical, moral support.

While the objectives of the Study were limited to the work of the schools, our inquiries brought us into contact with many departments and agencies of the government of the City of New York. In every case we found interest and readiness to cooperate.

The Regents of the University of the State of New York evidenced a genuine interest in the Study and officials of the State Education Department responded generously to every request. The concern of the State found expression in an amendment to the Education Law increasing state aid to help provide additional staff for the education of non-English-speaking children.

In every contact with the schools, with officials and agencies of the Board of Education, we found interest in the Study, a desire for its success and a willingness to help. In retrospect it would be difficult to conceive a more genuine cooperation than was given to the Study by all concerned.

A tribute to the members of the staff of the Puerto Rican Study is in order. They came from different backgrounds of experience. They brought to the Study different talents. In large measure they worked anonymously. Developing team work, they maintained throughout a constructively critical assessment of the enterprise. The quality of their work is reflected in the publications and the supporting documents bearing the imprint of the Puerto Rican Study. For editorial assistance in the preparation of this volume I am especially indebted to Edith Mayer, Frances Low and A. Barnett Langdale.

In writing this report I have tried to tell what the Study attempted to do and what it accomplished; to state the problems and to report the findings; to chart the direction and to describe the tasks still to be done. If at times my interpretations appear not to be completely supported by the evidence, I would remind the reader that this Study is the first stage of a continuing long-range search for ways and means of improving the educational opportunities of Puerto Rican and of other non-English-speaking children in our mainland schools. It is hoped that such a search will eventually produce new and better solutions to the problems which remain.

Loudonville, New York  J. Cayce Morrison, Director

June 25, 1958

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Observations looking to the future

Other sample lessons were attempted. The fourteen in the published bulletins are those which stood the test of wide use among participating teachers. These are the ones that actually worked. The "suggested procedures" were those that the majority tried and found good. The "optional experiences" or "other things to do" were successful experiences in some schools. If one pupil did it successfully or if one teacher found it a profitable venture, others might benefit.

As the project developed, some teachers experimented with developing resource units in science areas other than safety and health.

The principles and procedures guiding the development of the materials herein reported might profitably be employed at different grade levels, and in other subject areas to open wider the doorway to science for non-English-speaking pupils. The emphasis on teaching through experimentation and demonstration, through specific vocabulary building and minimal reading assignment, might very well open wider the doors of science to many mainland pupils less gifted in verbal intelligence.

Development of the science materials was restricted to the junior high school level; but the chairmen of science in at least two participating high schools became interested in the project and encouraged use of the material in the orientation classes of their respective schools. On their advice, the subtitle of the teacher's guide is—"For Use with Puerto Rican Pupils in the Secondary School" rather than for use in the junior high school.

Chapter 5
The Puerto Rican Study in the High Schools

In the spring of 1954, the Puerto Rican Study extended the experimental program to the high schools. Six high schools were designated as participants—one on an experimental, the others on a cooperating basis. In the experimental school, one teacher was relieved from teaching assignments to give full time to the work of the Puerto Rican Study. In the cooperating schools, one teacher was relieved one period daily for work with the Study.

THE TENTH-GRADE POPULATION IN THE EXPERIMENTAL HIGH SCHOOL

In January, 1955, through the use of a modified questionnaire technique, a survey was conducted of the national origins, educational and familial backgrounds of 853 pupils in the tenth grade of the experimental high school (High School of Commerce). In February, 1955, data were obtained on the educational potential and achievement of 738 pupils of the same tenth-grade group.

Socio-educational data were analyzed in terms of the ethnic background of pupils.

Ethnic background of tenth-grade pupils

Of the 853 pupils, 24 per cent had been born in Puerto Rico and another 7 per cent had been born in the United States of Puerto Rican parents. Thus 31 per cent of the respondents were of Puerto Rican extraction.22 Nine per cent had been born in a foreign country, that is, outside of Puerto Rico and the United States.

Age at first entry of non-mainland-born pupils to United States

Table 11 gives the age of entry of Puerto Rican and foreign-born pupils at first entry to the United States. Of the two groups who had started their schooling before coming to New York City, approximately 68 per cent of the Puerto Ricans and 73 per cent of the foreign-born had entered New York City schools at the age of 12 or older.
TABLE 10
Ethnic background of pupils in grade 10, High School of Commerce
(January, 1955)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born in Puerto Rico</td>
<td>201</td>
<td>24</td>
</tr>
<tr>
<td>Born in United States of Puerto Rican Parentagea</td>
<td>59</td>
<td>7</td>
</tr>
<tr>
<td>Born in United States of United States-born Parentageb</td>
<td>345</td>
<td>40</td>
</tr>
<tr>
<td>Born in United States of non-Puerto Rican and non-United States Parentagec</td>
<td>112</td>
<td>13</td>
</tr>
<tr>
<td>Born in United States, Birthplace of Parents Unknown</td>
<td>63</td>
<td>7</td>
</tr>
<tr>
<td>Born outside United States and Puerto Rico</td>
<td>73</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>853</td>
<td>100</td>
</tr>
</tbody>
</table>

* Either one parent or both parents had been born in Puerto Rico.
* Both parents had been born in the United States.
* Either one parent or both parents had been born in a foreign country other than Puerto Rico.

TABLE 11
Age at first entry to United States of Puerto Rico-born and non-Puerto Rican foreign-born pupils

<table>
<thead>
<tr>
<th>PER CENT ENTERING AT AGE INDICATED</th>
<th>Puerto Rico-Born</th>
<th>Non-Puerto Rican Foreign-Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at First Entry to United States (N = 178)</td>
<td>Island-Schooled (N = 23)</td>
<td>Exclusively Mainland-Schooled (N = 56)</td>
</tr>
<tr>
<td>5 or under</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6—8</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>9—11</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>12—14</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>15 or under</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>48</td>
</tr>
</tbody>
</table>

Another tabulation showed that 30 of the 178 island-born Puerto Rican pupils and 55 of the foreign-born pupils entered New York City schools at the 9th or 10th grade level. Two per cent of the Puerto Ricans and 4 per cent of the foreign-born had attended mainland schools elsewhere prior to entering New York City schools.

Of the 178 Puerto Rican-born pupils, 15 per cent had been upgraded from one and one-half to three and one-half or more grades in transferring from Puerto Rico to New York City schools.

Principal language spoken in home

Analysis of the principal language spoken in the home disclosed the persistence of the language barrier among the Puerto Rican pupils whose entire schooling had been on the mainland and the considerable percentage of the foreign-born pupils in this group who had come from a Spanish language background. Spanish was the chief language spoken in the home of 30 per cent of the non-Puerto Rican foreign-born and schooled, and in 18 per cent of the non-Puerto Rican foreign-born whose entire schooling had been in the United States. This indicates the preparation of foreign-born pupils who are of Hispanic background.

Of the Puerto Rican pupils, Spanish was the sole language used in 38 per cent of the homes of those partly schooled in Puerto Rico, in 35 per cent of those born in Puerto Rico but schooled on the mainland, and in 5 per cent of those born on the mainland of Puerto Rican-born parents.

The testing program

In February, 1955, a test battery consisting of a non-verbal intelligence test, a reading test, and an arithmetic test was administered to all tenth-grade classes in the High School of Commerce during a specially scheduled two-hour period. In all, 738 pupils were tested.

Puerto Rican pupils who had entered the New York City public schools in grades 8, 9, or 10 were given test directions in Spanish to make sure that they understood the tasks involved in taking the tests. At a later date, these recent arrivals were given two additional tests, namely, a test of ability to understand spoken English and a test of ability to read Spanish.

The tests used were: the Lorge-Thorndike non-verbal intelligence test; the PLS Oral Directions (OD) test, later revised as the Test of Ability to Understand Spoken English (USE test); the Gates Reading Test Series; and a Spanish-language reading test developed by the Superior Education Council of the University of Puerto Rico.

For analysis of data, pupils were divided into four groups:

A-Group—the island-born, partly island-schooled pupils
B-Group—the island-born, mainland-schooled pupils
C-Group—the mainland-born pupils of Puerto Rican parentage (one or both parents born in Puerto Rico)

D-Group—the mainland-born pupils of non-Puerto Rican parentage

**Intellectual ability of Puerto Rican pupils**

Two significant observations may be drawn from the data. The first is that the average IQ of the A-Group (island-born, island-schooled) tends to increase with each added year of mainland school experience. The data are summarized below, in three columns:

<table>
<thead>
<tr>
<th>No. years in mainland schools</th>
<th>No. pupils tested</th>
<th>Average IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>29</td>
<td>72</td>
</tr>
<tr>
<td>3-4</td>
<td>33</td>
<td>73</td>
</tr>
<tr>
<td>5-6</td>
<td>28</td>
<td>82</td>
</tr>
<tr>
<td>7-8</td>
<td>16</td>
<td>87</td>
</tr>
<tr>
<td>9-10</td>
<td>10</td>
<td>93</td>
</tr>
</tbody>
</table>

A similar correspondence between average IQ of the island-born, island-schooled group and the number of years spent in mainland schools was found in the testing of Puerto Rican pupils in elementary and junior high schools. This is a factor to be considered in the placement, guidance, and instruction of all newly arrived pupils from Puerto Rico.

In the testing of the three Puerto Rican groups during 1953-1954 and 1954-1955 it was found that at the fourth-grade level the C-Group, or second-generation pupils, scored an average IQ about 10 points below the average for non-Puerto Rican mainland-born pupils of the same grade and school, but that they tended to reduce the difference until at the junior high school the average difference was approximately 2 IQ points. In the 10th grade, the average IQ of the Group C, or second-generation Puerto Ricans, was about 2 points higher that the average of the mainland-born non-Puerto Rican group of the same grade and school.

**Ability to understand spoken English**

In the form used, the Oral Direction (OD) test (later revised as the USE test), was designed to measure understanding of simple spoken English in the familiar surroundings of classroom, home, and neighborhood. Because of the low ceiling it was used only with Group A Puerto Rican pupils who had been in mainland schools three years or less.

The tenth-grade pupils in their first year of attendance in mainland schools performed better by approximately 12 points on the OD test than did the pupils in grades 4 through 9 in their first year of attendance in mainland schools. For pupils in their second or third year of attendance in mainland schools, however, the OD performance of pupils in grade 10 was about the same as that of pupils in grades 4 through 9.

**Reading ability of Puerto Rican pupils**

The group differences found in the study of Puerto Rican pupils in grades 4-8 were paralleled by the grade 10 results: the average reading-grade equivalents of the tenth-grade pupils increased from Group A to B, to C, to D—that is, from the island-born, island-schooled pupils to the island-born, non-island-schooled pupils, to the mainland-born pupils of Puerto Rican parentage, to the mainland-born pupils of non-Puerto Rican parentage.

With the exception of the A-Group pupils, all groups showed an increase in level of reading ability from grade 9 to grade 10.

In terms of national norms, the reading-grade expectancy of tenth-grade pupils tested in February is 10.6. The average scores of the four groups and the lag of each group from the norm is indicated in the following:

<table>
<thead>
<tr>
<th>Group</th>
<th>Average Grade Score</th>
<th>Average Lag</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Island-born, island-schooled</td>
<td>4.9</td>
</tr>
<tr>
<td>B</td>
<td>Island-born, mainland-schooled</td>
<td>7.1</td>
</tr>
<tr>
<td>C</td>
<td>Mainland-born of P. R. parentage</td>
<td>8.0</td>
</tr>
<tr>
<td>D</td>
<td>Mainland-born of non-P. R. parentage</td>
<td>8.6</td>
</tr>
</tbody>
</table>

So far as reading is concerned, the problem confronting the teachers and pupils of the high school under consideration is indicated by the measures of lag in ability to read English.

While the island-born, island-schooled Puerto Ricans, on the average, scarcely reached the fifth-grade national norm, there was a wide range in reading among individuals in this group. The range in reading-grade equivalents was from 1.5 to 10.5. In terms of the number of years attendance in mainland schools, the average reading-grade equivalent increased steadily from 3.0 for those here 1-2 years to 8.0 for those here 9-10 years.

**Ability to read Spanish**

Puerto Rican pupils, island-born and island-schooled, who had entered New York City schools in grade 8, 9, or 10 were tested for reading ability in both Spanish and English. The product-moment correlation coefficient between scores was .35 in grade 10. For grades 4 to 9 inclusive, the coefficient ranged from .37 to .59. These coefficients indicate that for a child transferring from the upper elementary or secondary school grades of Puerto Rican schools to New York City, his ability to read Spanish should be one index of his probable ability to read English.
A STUDY OF INDIVIDUAL PUERTO RICAN FIRST-GRADE CHILDREN

In the spring of 1955, the teachers of 12 experimental first-grade classes were asked to cooperate in a special study of selected children. Five children were to be selected in each class as of May 1, 1955—three who had made little progress and two who had made great progress in learning English as a second language.

The study was designed to find answers to two questions: “Who were the children who had made little or no progress in learning to speak English in the first grade?” “What could be learned from them and their linguistically successful contemporaries that would further understanding of some of the problems attending bilingualism?”

A subsidiary question was whether obvious manifestations of failure or success might be related to personal characteristics of the child, or to conditions in his environment which might inhibit growth in language learning.

Since the children selected for study were in experimental classes, they had been under special observation throughout the school year. In September, each child’s ability to speak English had been rated by his teacher as Good, Fair, Poor, No English or Don’t Know. During the year the teacher had kept a log of class progress and anecdotal records of individual children. In January, 1955, the children were given individual tests of ability to speak English and were rated on a three-point scale for each of the following: understanding of English, fluency and accuracy, and response rapport. They were further classified as language learners or non-language learners. By May 1, 1955, teachers, coordinators and Puerto Rican Study observers had a fair estimate of the relative progress of each child in the several classes. In May, 1955, the Columbia Mental Maturity Scale was administered to each of the 60 pupils.

Background factors

Following is a comparison of the two groups of children: Group A—36 pupils who had made little progress, Group B—24 pupils who had made great progress in learning English as a second language. Each child had been under observation for eight months. The two rapid-progress and the three slow-progress pupils in each class had been under the same teacher, in contact with the same classmates, subjected to the same instruction. They were compared as to age, place of birth, kindergarten attendance, mobility, intelligence.

The following background factors were comparable for the two groups:

Age There was a four-month difference in the chronological age range of the two groups, but the mean age for the two groups was the same—6 years 10 months. Chronological age did not account for the differences in learning English.

Place of birth The two groups were approximately equivalent in ethnic background. In each group, three-fourths were born in Puerto Rico and the remainder in the United States.

Language used in home According to the school’s records Spanish was the only language spoken in the homes of all Group A children and in the homes of 22 Group B children. Two of the Group B children came from homes using both English and Spanish.

September rating in English In September, two children in Group A and two in Group B had been rated “Fair” in use of English. All others in both groups had been rated “Poor”, “No English”, or “Don’t Know”.

Kindergarten attendance Three pupils of each group had attended kindergarten for a year; two of the little-progress and one of the great-progress for a part of a year.

Class changes Four pupils of each group had changed classes once. Two in the little-progress group and one in the great-progress group had changed schools more than once.

IQ ratings On a non-verbal test, the Columbia Mental Maturity Scale, the range for the little-progress group was 57-123, the mean 87; the range for the great-progress group was 64-129 and the mean 90.

Slight differences between the two groups were noted in the following:

Size of family There was a tendency for children who learned English more slowly to come from larger families. Eighty-six per cent of the little-progress group had older brothers and sisters and averaged 3.5 siblings. Seventy-nine per cent of the great-progress group had older brothers and sisters and averaged 2.2 siblings. Tentative possibilities noted here were that larger families tend to fall in lower socio-economic brackets, or possibly that children of large families, like twins, find less need for outside communication.

Attendance There was a tendency for children who made least gain to be absent more frequently. The little-progress group ranged in attendance from 69-186 days, averaged present at 146 or 79 per cent of the school days. The great-progress group attended 83 to 197 days, averaged present at 161 or 85 per cent of the school days. It is uncertain, of course, as to whether the loss of days at school was the cause of slow progress in English, or whether the factors causing non-attendance such as health and parents’ attitudes might have been factors slowing progress.

Individual progress in learning English

As noted, neither age, place of birth, kindergarten attendance, transfers, nor intelligence quotient seemed to account for children’s rate of
Chapter 14

Problems of Learning

This chapter is concerned with those problems of learning that are basic to the formulation of city-wide policy and progress. It presents a brief review of the status of learning as found by the Puerto Rican Study; analyzes the probable long-range outcomes to be anticipated through programs generally in operation; and endeavors to assess the outcomes that might be achieved.

STATUS OF LEARNING OF PUERTO RICAN PUPILS IN NEW YORK CITY SCHOOLS, 1954-1956

When the Puerto Rican Study was being launched, the questions most frequently asked were—"Can the Puerto Rican pupils learn English?" "What is their learning potential?" Teachers were concerned about what appeared to be slow progress of those already here and about the constant influx of new arrivals who had to start from the beginning. The situation is reflected in the performance of Puerto Rican pupils on certain tests administered by the Puerto Rican Study. It is illustrated by the mean performance by grade of island-born, island-schooled Puerto Rican pupils in two areas of learning, namely, reading and arithmetical computation—two skills generally assumed as essential to further learning. See Table 24.

The foregoing data are based upon the testing of approximately 2,200 pupils for both subjects, distributed through grades 4-9, and of over 700 pupils in grade 10. Some of the pupils tested had been in New York City schools only a few months, others more than six years.

The hard facts are that in reading English, the island-born pupils, as a group were from 2.5 to 5.7 school years behind the national norms in reading and from 2.0 to 4.7 school years behind in arithmetical computation. From the viewpoint of educational policy, these facts standing alone would be discouraging, to say the least. In conjunction with other facts obtained in the studies of large numbers of pupils of Puerto Rican background in New York City schools, the above data may be looked upon as the hard base on which to build a city-wide program.

TIME AND THE SECOND GENERATION

The record indicates that the Puerto Ricans can be expected to repeat the experience of other migrant non-English language groups in New York City, that is, to become reasonably well assimilated by the third generation.

TABLE 24
The mean performance by grade of island-born, island-schooled Puerto Rican pupils in reading and arithmetical computation

<table>
<thead>
<tr>
<th>Grade in which tested</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>National reading norm at time tested</td>
<td>4.9</td>
<td>5.9</td>
<td>6.9</td>
<td>7.9</td>
<td>8.9</td>
<td>9.9</td>
<td>10.6</td>
</tr>
<tr>
<td>Mean reading grade equivalent</td>
<td>2.4</td>
<td>2.8</td>
<td>2.9</td>
<td>3.6</td>
<td>4.2</td>
<td>5.6</td>
<td>4.9</td>
</tr>
<tr>
<td>Difference</td>
<td>2.5</td>
<td>3.1</td>
<td>4.0</td>
<td>4.3</td>
<td>4.7</td>
<td>4.3</td>
<td>5.7</td>
</tr>
<tr>
<td>National arithmetic norm at time of testing</td>
<td>4.6</td>
<td>5.6</td>
<td>6.5</td>
<td>7.6</td>
<td>8.6</td>
<td>9.6</td>
<td>10.6</td>
</tr>
<tr>
<td>Mean arithmetical grade equivalent</td>
<td>2.6</td>
<td>3.1</td>
<td>3.6</td>
<td>4.5</td>
<td>5.2</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Difference</td>
<td>2.0</td>
<td>2.5</td>
<td>3.0</td>
<td>3.1</td>
<td>3.4</td>
<td>3.7</td>
<td>4.7</td>
</tr>
</tbody>
</table>

TABLE 25
Average or mean performance of eighth-grade island-born, island-schooled pupils by number of years in New York City schools

<table>
<thead>
<tr>
<th>Test</th>
<th>Less than two grades</th>
<th>2.0—3.9 grades</th>
<th>4 grades or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to understand Spoken English</td>
<td>58.1</td>
<td>69.3 (11.2)*</td>
<td>73.2 (3.9)*</td>
</tr>
<tr>
<td>(mean point score)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading, grade equivalent</td>
<td>3.6</td>
<td>4.6 (1.0)*</td>
<td>4.9 (0.3)*</td>
</tr>
<tr>
<td>Arithmetic computation, grade equivalent</td>
<td>5.1</td>
<td>5.3 (0.2)*</td>
<td>5.4 (0.1)*</td>
</tr>
<tr>
<td>Non-verbal intelligence</td>
<td>73.6</td>
<td>79.9 (6.3)*</td>
<td>83.2 (3.3)*</td>
</tr>
</tbody>
</table>

*Average increase of score over two-year period.
The question is—"Can either New York City or the Puerto Ricans afford to wait until the third generation?"

The performance of Puerto Rican pupils on the several tests used by the Puerto Rican Study tended to improve with each succeeding year spent in New York City schools. This was true of measures obtained on a non-verbal intelligence test, a test of ability to understand spoken English, a test of ability to read English, and a test of arithmetical computation. This is illustrated in Table 25 which summarizes the mean scores of the island-born, island-school eighth-grade group on each of the several tests.

The foregoing summary indicates that the performance of island-school pupils tends to improve with time spent in New York City schools, but that the rate of improvement decreases after the fourth year.

The influence of the gradual adjustment from the social-cultural background of Puerto Rico to the social-cultural milieu of New York City is reflected in nearly every measure applied to the three ethno-educational groups of Puerto Rican pupils.

The change is illustrated in the average IQ obtained in the fourth grade by each of the three groups of Puerto Rican background, compared with the non-Puerto Rican group. The average IQ for each group, and the IQ point gains from one group to the next, are presented in the following:

<table>
<thead>
<tr>
<th>Group</th>
<th>Av. IQ</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Island-born, partly island-schooled</td>
<td>76.3</td>
<td></td>
</tr>
<tr>
<td>B - Island-born, exclusively mainland-schooled</td>
<td>79.6</td>
<td>3.3</td>
</tr>
<tr>
<td>C - Mainland-born, mainland-schooled</td>
<td>88.4</td>
<td>8.8</td>
</tr>
<tr>
<td>D - Non-Puerto Rican, mainland-born</td>
<td>96.4</td>
<td>8.0</td>
</tr>
</tbody>
</table>

To some degree, the foregoing data may be interpreted as measures of the gradual adaptation of pupils to the changing social-cultural environment of New York City.

Applying the same analysis to the junior high school data, the averages for each group in grades 8 and in grades 7-9 combined were as follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Average IQ</th>
<th>Gain in IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gr. 8</td>
<td>Gr. 7-9</td>
</tr>
<tr>
<td>Group A</td>
<td>77.9</td>
<td>78.1</td>
</tr>
<tr>
<td>Group B</td>
<td>86.8</td>
<td>86.6</td>
</tr>
<tr>
<td>Group C</td>
<td>94.2</td>
<td>92.4</td>
</tr>
<tr>
<td>Group D</td>
<td>93.7</td>
<td>93.4</td>
</tr>
</tbody>
</table>

The corresponding averages obtained by each of the four groups in grade 8, and in grades 7, 8, and 9 combined, show a progression similar to that in grade 4 from Group A to Group B to Group C. The Group C pupils compare favorably with the non-Puerto Rican or D-group.

In the other areas tested, in the eighth grade, the D-group or non-Puerto Rican pupils exceeded the C-group or second-generation pupils by 1.5 points on the scale of ability to understand spoken English, and by the equivalent of a half grade in ability to read English. Stated differently, in the junior high school, the mean performance of the non-Puerto Rican or D-Group was exceeded by percentages of the C-Group or second-generation Puerto Ricans as follows:

| Ability to understand spoken English | 42 per cent |
| Ability to read English              | 36 per cent |
| Ability in arithmetic computation    | 36 per cent |

Throughout the Puerto Rican Study the record of the second generation of Puerto Rican pupils in junior high schools has compared favorably with that of their peers of non-Puerto Rican heritage. Of the second generation of Puerto Rican pupils 36 per cent exceeded the average IQ of the D-Group and approximately 25 per cent scored an IQ of 100 or above.

Judging from the gains made by the second generation of Puerto Rican pupils in New York City schools, it would appear that the third generation should be able to compete on equal terms with their peers of like socio-economic background.

POSSIBILITIES OF ACCELERATING SOCIAL-EDUCATIONAL ASSIMILATION OF PUERTO RICAN PUPILS

Can the progress of Puerto Rican pupils be accelerated in learning English? If so, their learning as a whole and their social assimilation in school and community may be proportionately accelerated.

During the school year 1956-1957, 20 elementary schools cooperated with the Puerto Rican Study in an endeavor to assess pupil progress in learning English over a six-month period from October 31 to April 30. The data used were the October ratings reported on the school census of that date, and ratings in April prepared on the same forms, under the same instructions.

As of October, the total registration in the 20 schools was 26,814. Of these, 9,078 or 34.5 per cent were rated C-G, that is, as language learners. Nineteen of the 20 schools submitted data on the April rating. Usable data from both rating records were obtained for 5,561 pupils. Table 26 gives the number of pupils by grade for whom ratings were reported in both October and April, and the percentage distribution of pupils at each rating period by steps on the Scale for Rating Pupil's Ability to Speak English. For convenience, only kindergarten, third-grade and sixth-grade data are presented. In general, from kindergarten to grade 8 there was a consistent decrease in the per cent of pupils rated E-G and a consistent increase in