



# Problems and Fixes to PR's Education System

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THE OBSERVATORY OF PUBLIC  
EDUCATION IN PUERTO RICO

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# Researchers

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# Acknowledgments

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# What is the Observatory?

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Think-tank that focus on public education in Puerto Rico aimed to:

Promotes the scientific and objective study of the education system to provoke possible solutions.

Guide informed public debates.

Serve as a source of information to design public policy based on data that transforms and improves the education system.

At almost a year since its formation, the Observatory presents the preliminary results of 5 research works that complement each other to identify important aspects of the Island's educational system.

# EDUCATIONAL REFORM: THE PARADIGM OF SCHOOLS ALLIANCES (CHARTER) IN THE FACE OF POVERTY AND VIOLENCE IN THE COUNTRY.

César Rey Hernández

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This work tries to make an analysis of the two laws (Law # 149, Law # 85) that have guided the educational reform of the last twenty years of our school system. Changes in public policy are examined within the social and economic context of education in Puerto Rico, emphasizing the charter school model, the cornerstone of Law # 85 and the axis of public debate in the country. From a critical and comparative perspective, their history and the ideology that originates them are discussed. From there, the potential and limitations of this model to bring changes to the country's educational system are analyzed.

From the empirical work and the comparative method carried out, we were able to verify that the two pilot projects of Alianza schools (charters) have been relevant and successful because they immediately benefit the community they represent.

# Main Findings:

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- ❖ The charter school model represents the paradigm of public education for youth from impoverished and violent sectors of the country.
- ❖ Charter schools in Puerto Rico do not represent a budgetary expense for the Department of Education, rather it represents an advantage.
- ❖ However, the particularity of success depends on the particularly community and historical leadership in both cases, as well as great external financing from philanthropic organizations and foundations that bet on this reality.
- ❖ That the projects of alliance schools in other latitudes, particularly in the United States, have in some cases involved the exclusion and marginalization of the most impoverished sectors of that society. In our case, contrary to the examples studied in the United States, these alliance schools have meant the empowerment of their communities.
- ❖ It is important to point out that in our evaluation we evidenced the intention of some of the proponents to privatize schools through alliances and not necessarily have an intention to empower these communities.
- ❖ The educational vouchers did not turn out to be of interest to the educational process at this stage of the educational reform experimentation.

# SOCIOECONOMIC AND DEMOGRAPHIC PROFILE OF YOUTH THAT HAVE NOT COMPLETED HIGH SCHOOL

Héctor Cordero Guzmán

The study focuses on the educational attainment of youth ages 10 to 28 in Puerto Rico and has five main objectives:

- ✓ To identify the dimensions of the dropout problem in Puerto Rico in recent years (after 2010). (“Dropouts” are defined as youth not in school that have not completed High School.)
- ✓ To document changes in levels of school completion by age and gender in Puerto Rico over the past decade.
- ✓ To look at when in the youth life cycle and at what age the problem of school dropout is beginning to manifest itself.
- ✓ To examine the main demographic and socioeconomic characteristics of youth not in school that have not completed High School in Puerto Rico and compared them with young people who completed high school and did not go to college; Youth enrolled in high school or college; youth with some college studies (but not completed); and young people who have a college degree or more.
- ✓ To analyze the impacts and possible consequences of not completing high school on employment status and how they relate to poverty levels among young people in Puerto Rico.

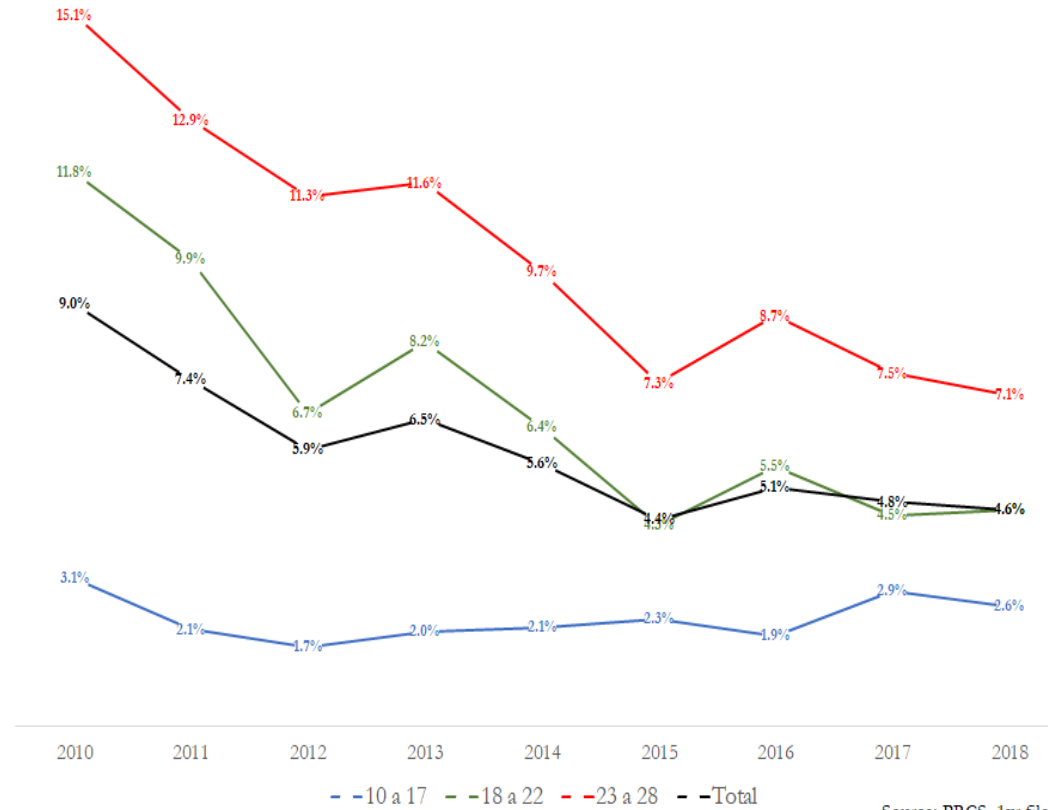
# Main Findings

- ❖ Puerto Rico's population between the ages of 10 and 28 was 27% of the total in 2010 and that decreased to 24.5% by 2018
- ❖ The school dropout rate decreased from 9% in 2010 to 4.6% in 2018.
- ❖ The dropout rate for men between the ages of 10-28 decreased from 10.4% in 2010 to 5.6% in 2018. For women, the rate was consistently lower and declined from 7.6% in 2010 to 3.7% in 2018.
- ❖ The proportion of young people between the ages of 21 and 28 who did not complete high school and who were not enrolled in school declined from 14.6% in 2010 to 6.8% in 2018.
- ❖ There is a significant increase in the proportion of young people between the ages of 21 and 28 with at least a Bachelors degree from 17.2% in 2010 to 24.8% in 2018.
- ❖ For youth below poverty, the dropout rate was 12.9% in 2010 and decreased to 6.7% by 2018 while for those not in poverty the dropout rate was 4.4% in 2010 and decreased to 2.1% by 2018.
  - For youth ages 21-28 below poverty, the dropout rate was 22.2% in 2010 and decreased to 10.6% by 2018 while for those 21-28 not in poverty the dropout rate was 6.6% in 2010 and decreased to 3.2% by 2018
- ❖ The proportion of youth between the ages of 21 and 28 that were employed fluctuated between 45.9% in 2010 and 47.4% in 2018 and there was no significant reduction in the proportion of young people out of the labor force at 37.9% in 2010 and 37.1% in 2018.



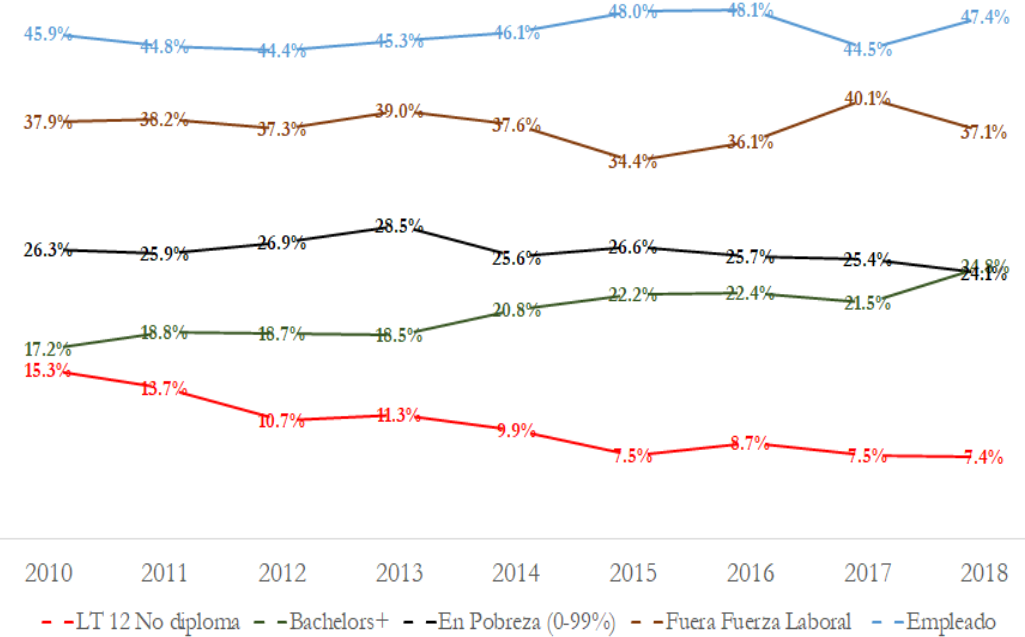
# Changes in School Dropout, Poverty and Youth Employment in Puerto Rico

TASAS DE DESERCIÓN ESCOLAR POR EDAD ENTRE EL 2010-2018



Hector Cordero-Guzman. hcordero@aol.com

EMPLEO, PARTICIPACIÓN LABORAL, POBREZA Y EDUCACIÓN DE JOVENES ENTRE EDADES 21-28 EN PUERTO RICO



## THE EFFECT OF THE LARGEST SCHOOL CLOSING ON STUDENT ACHIEVEMENT

José Caraballo Cueto

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In the related literature there is some mixed evidence on the consequences that school closing has on student achievement, but many articles pointed to detrimental effects. We selected Puerto Rico as the case study, a U.S. jurisdiction that closed almost 30% of their public schools in three years, which would probably make it the most intense school closing in the U.S. and perhaps in the world. Taken advantage of student level data, we use causal inference methods and found that this large school consolidation had statistically significant effects on the student performance in standardized tests. We discuss factors that may play a key role and recommend potential alternatives.

# Main Findings:

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- ❖ Fiscal savings of closing schools? From FY 2017 to FY 2020 there was a \$34 million reduction in operations costs, but maintenance increased by \$311 million.
- ❖ A larger percentage of schools closed in low-income municipalities such as San Sebastián and Patillas and poverty rate was higher among displaced students than among non-displaced students (81% vs. 77%).
- ❖ Academic achievement declined in general between FY2017 and FY 2020 but decreased more among displaced students.
- ❖ On average, displaced students had a higher achievement than non-displaced students in FY 2017, but they had lower achievement in FY 2020.
- ❖ After matching similar students with different techniques, results are conclusive: closing reduced the educational achievement of displaced students.

# REGIONAL SOCIOECONOMIC PROFILE AND ITS RELATIONSHIP WITH EDUCATIONAL SEGREGATION IN PUERTO RICO'S PUBLIC SCHOOLS

Indira Luciano Montalvo

- When analyzing the academic performance of students at the regional level, it is desirable to find heterogeneity within schools and homogeneity among schools in the region. Heterogeneity within the school causes a possibility of improvement for the most vulnerable by interacting with those with better socioeconomic characteristics and academic performance. When homogeneity occurs in schools, there is a self-reinforcing effect of the peers, affecting the teaching-learning process. If most of students are poor, the obstructing resources are multiplied, and the facilitating resources are divided. This will lead to poorer academic performance, fewer resources for school and poorer quality of teaching.
- This research aims to answer the following question: **Is there a relationship between socioeconomic and academic performance segregation at the regional level in Puerto Rico's public schools?**
- The purpose of this research is to demonstrate whether the regional socioeconomic homogeneity of Puerto Rico's public schools has led to homogeneity in academic performance through the self-reinforcement effect. If it's not the case, probably, contextual and institutional variables have a greater impact on academic segregation in the region. School segregation by income and academic performance was calculated with the Duncan Index of Dissimilarity by municipality for the variables most recent years (2017, 2018-19).

# Main Findings:

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- ❖ Income segregation results, using Census data, coincide with the findings in Nieves-Ayala's (2012) about residential segregation. The spatial distribution of people in each municipality of Puerto Rico by income level is homogeneous, showing low segregation.
- ❖ Homogeneity was found among public schools of each municipality, using school poverty data.
- ❖ Considering academic achievement, greater diversity is seen between public schools in each municipality.
- ❖ There is no significant relationship between socioeconomic segregation and academic achievement. It can be said that the self-reinforcing effect of socioeconomic homogeneity is not significant in academic performance. This implies that the greater diversity of academic performance shown in the municipalities should respond to other contextual and institutional variables.
- ❖ There is greater diversity within municipalities when it comes to school quality and school administration.
- ❖ No significant differences were found for the segregation measures and their relationship when distinguishing urban from rural areas.
- ❖ Correlation and determination coefficients between segregation measures showed weak linear relationships with academic performance segregation. However,
  - ❖ in rural areas, segregation by school quality showed a greater explanation for academic performance segregation;
  - ❖ and in urban areas, segregation by school administration showed a greater explanation for the same variable.

# WHAT LIES BEHIND SCHOOLS' ACADEMIC ACHIEVEMENTS FACTORS INFLUENCING ACADEMIC PERFORMANCE AT THE SCHOOL LEVEL

Eileen V. Segarra Alméstica

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Differences in academic achievement may result from disparities in school quality, socio-economic characteristics or community resources. To develop adequate policies to provide each child the tools needed for success, it is important to assess the relative influence of these factors.

This work aims to measure the effect of socioeconomic and school factors on academic performance at the school level in the public system. It uses school-level data provided by the Department of Education of Puerto Rico and PRCS data by Census Track.

## Objectives:

- ❖ To measure the effects of socio-demographic and community variables on academic achievement, using school level data.
- ❖ To estimate the added value of each school after controlling for socio-demographic and community variables.
- ❖ To identify the factors that can contribute to the added value provided by the school.

# Main Findings:

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- ❖ Socioeconomic factors explain over 60% of the variation in the academic performance between high schools and around a third of the variation among middle schools
- ❖ Rural schools present higher indicators at the elementary level and the middle school level.
- ❖ The percentage of students below the poverty level is the strongest predictor of school academic achievement.
- ❖ The percentage of students register in the special education program is associated with lower academic achievement in high school and middle school and with increases in school attrition during middle school.
- ❖ School size is negatively associated with value-added in elementary and middle schools
- ❖ The quality of teachers has a positive and significant effect on the value-added of schools.



# Recommendations

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# General Recommendations:

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- ❖ Create a significantly important endowment fund by the Department of Education to expand the experience of alliances in the most disadvantaged communities.
- ❖ A commitment to a continuous oversight process of education policies by independent entities with a rigorous element in the evaluation of academic performance, relevance of the curriculum and insertion in the labor market.
- ❖ Assure schools the resources to enforce and strengthens attrition prevention mechanisms as outlined in CARTA CIRCULAR NÚM.: 16-2013-2014
- ❖ Provide alternatives career pathways for non-college bound youth.

# General Recommendations:

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- ❖ Strategies that increase job quantity and quality, and the returns to schooling for youth
- ❖ Develop and support strategies that connect youth to the labor market and support the transition from school to work
- ❖ Strengthen support programs and community outreach at high schools and middle schools
- ❖ Promote teacher quality through training and education opportunities.
- ❖ Merit should be criteria to promote and retain personnel, not seniority.

# General Recommendations:

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- ❖ Public policy to improve public school's student's academic performance should be differentiated in regional terms by factors that affect academic performance unequally, such as variables related to school quality and school administration.
- ❖ Reduce school size for elementary and middle schools
- ❖ Reopen some schools to allow smaller size groups.
- ❖ Create a committee that evaluates petition to reopen schools based on several characteristics, including strength of facilities.

# Key aspect looking forward:

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- ❖ Support research on youth characteristics, conditions and outcomes to better understand why advances in education among young people in Puerto Rico have not translated significant reductions in poverty or increases in labor participation.
- ❖ Further the analysis of special education focusing on middle schools.
- ❖ Recognized the need for a more a resilient education system in the presence natural disasters and emergencies.
- ❖ Start working on a protocol to re-open some schools.
- ❖ The need to develop periodical and consistent long run plans, that promote continuity of effective policies.