Teachers in Brazil: Social Mobility and Elements for Federalism Strategies

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Abstract
This work analyzed the social mobility of graduated teachers and their strategic importance for Brazilian federalism. Four topics oriented our analysis: 1) What is really the attractiveness of teacher profession? Why did secondary students decide to become teachers in Brazil?; 2) Does the academic capital (graduate degree) allow the social mobility?; 3) What is the importance of graduated teachers on social stratification? What is the importance of social mobility for teachers to national plan of education and federalism strategies?; and 4) Would teachers break with the social reproduction? Would teachers stimulate the changing of habitus? Survey and interview were the guide to quantitative, qualitative and literature analysis. In Brazil, from the method perspective of this work the main conclusions were: 1) most of the graduated teachers do not obtain a social mobility from undergraduate to exercise of profession; 2) the rise of cultural access by teachers could represent a cultural mobility; 3) the teachers are important for federalism strategies by their disposition of live in areas with low Human Development Index and low incomes than other Brazilian professionals; and, 4) the presence of teachers in number per inhabitants related with the low number of homicides per inhabitants.

Keywords
Egressos, Licenciatura, National Plan of Education, Inequality, Stratification Social

1. Introduction
The number of graduated teachers is approximately 2 million in Brazil, which represents nearly 1% of Brazilian population (INEP, 2015). Graduated teachers analyzed on this work are the licentiates to teaching of undergraduate courses (Licenciatura) that form teachers to secondary education, in diverse knowledge areas: pedagogy (also primary education), chemical, biology, mathematical, geography, history, physics, letters, arts, music, and
The social mobility analysis were on three data kinds: Quantitative, Qualitative and Literature Review (Figure 1). At the end, a synthesis was elaborated to emerge elements for federalism discussion on National Plan of Education (Brasil, 2014). The graduated teachers in Brazil were the object of study in this work.
The teachers graduated from 1996 to 2015 (June) were evaluated by variables Human Development Index (HDI), individual income, economic class, cultural participation and consumption, if they had health insurance plans and if they are homeowners. All these in five times on 20 years: five years before of graduation (−5); on graduation (0); and five (5), ten (10) and fifty years (15) after of graduation. The HDI of states and of neighborhood (where teachers lived and changed) were calculated from IBGE (2015) source data, in accordance to UNDP (2010). Mean individual income per month; economic class position (Dieese, 2015); insertion in Health insurance plan; and home owners status (if they have or have not own home) were survey in professional council, association and unions. The evaluated unity of income per month was the Brazilian minimum wage (on January 2015: RS 788 ≈ US 292 ≈ € 291). Inter-Union Department of Statistics and Socioeconomic Studies (DIEESE classification about economic class) classified in six classes: upper (above 30 minimum wage); upper-middle (from 20 to 29 minimum wage); lower-middle (from 7 to 19 minimum wage); middle (from 3 to 6 minimum wage); lower (from 1 to 2 minimum wage); and under class (below 1 minimum wage). The cultural participation and consumption was the access per year in cultural institution (e.g. museum, theater and cinema), events (e.g. traditional fair, exposition, and show), and Historic and Artistic Heritage places (e.g. archeological sites and historical landscape). This information were surveyed by individual survey mediated by professional council, association and unions.

Others variables were systematized: homicides per 100,000 inhabitants in Brazilian states (Source data: State Departments of Homicide and Protection, Civil Police) and number of graduated teachers per 100,000 inhabitants (Source data: survey in professional council, association and unions). Homicide rates is an important variable to measure violence and inequality in societies (Morenoff, Sampson, & Raudenbush, 2001). These variables with HDI and mean individual income per month were vectored on Brazil map with Inkscape vector graphics editor (2015). The family income per month (Source data: IBGE, 2015), mean individual income and number of professionals per 100,000 inhabitants (Source data: survey in professional council, association and unions) were sampled for more three professions: Lawyer, Physician and Engineer. These professions are with more demand by secondary students in Brazilian university admission (MEC, 2015).

The chi-square test was carried out between the class distribution of graduated teachers at 15 years of graduation and the class distribution of others professionals with graduation (all undergraduate courses) to the variables: HDI, mean individual income and economic class. Mann-Whitney test was performed between the cultural access data of teachers with 15 years of graduation and data of others graduated professionals. The exact test of Fisher was performed between the data of teachers at 15 years of graduation and data of others graduated professionals to variables: insertion in health insurance plan and homeowners status. Pearson Correlation (coefficient = ρ) was performed between the variables HDI, individual income, number of homicides per 100,000 inhabitants, and numbers of teachers per 100,000. Linear regression analysis was applied to relate number of teachers per 100,000 inhabitants (y) and HDI (x); and, Homicide per 100,000 inhabitants (y) and numbers of professionals (x), for fours studied professions (Teacher, Lawyer, Physician and Engineer). Coefficient of variation (CV%) was calculated to analyze the differences between the origin and destination of family income data in each studied profession. All tests were performed at 95% of confidence and on normal distribution (Shapiro-
The graduated teachers were interviewed with open questions (Table 1) of all states of Brazil. The main demarches that converged were highlighted of discourses to support the quantitative data analysis (Santana, Silva, Inácio, Oliveira, Silva, & Encinas, 2013; Santana, 2014). The teachers were contacted by professional council, association and unions of states. The interviews were registered by audio recorder submitted on cloud storage.

3. Results and Discussion

The teachers changed to neighborhood with high Human Development Index (HDI) from undergraduate to exercise of profession (Figure 2), but the teachers still lived in sites with low HDI (0.55) than others graduated

### Table 1. Open questions of interview.

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<th>Topics</th>
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<td>1 What is really the attractiveness of teacher profession? Why did secondary students decide become teachers in Brazil?</td>
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<td>Would the cause be social mobility?</td>
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<td>2 Does the academic capital (graduate degree) allow the social mobility?</td>
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<td>3 What is the importance of graduated teachers on social stratification (their class position)? What is the importance of social mobility for teachers to national plan of education and federalism strategies?</td>
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<td>4 Would teachers break with the social reproduction? Would teachers stimulate the changing of habitus?</td>
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![Figure 2. Human development Index (HDI) of neighborhood where teachers lived (n = 527,014), mean individual income per month (unit: minimum wage), economic class, cultural access, health insurance plan and homeowners status, of graduated teachers and of others graduated professionals (n = 1,113,639) in Brazil. *p < 0.001; a = Chi-square Test; b = Mann-Whitney Test; and c = Exact Test of Fisher.](image-url)
professionals ($0.76, p < 0.001$). The number of analyzed data were of 527,014 teachers and 1,113,639 others graduated professionals, all data in each analyzed variable were on normal distribution ($p < 0.001$). The same rise (from undergraduate to exercise of profession) occurred with the variable mean individual income per month (in minimum wage), but at 15 years of graduation, the value of this variable is lower than to others professionals, 4.3 and 7.9 minimum wages ($p < 0.001$), respectively. The teachers in the most are classified on Lower-Middle economic class (at 15 year of graduation), while the others professionals in the most are on Middle class. Others factor relevant to feature in Brazil about economic class is the insertion in health insurance plan and homeowners status (if they have or have not own home). This insertion and ownership increased over time for the teachers, but the number of teachers that owned homes were lower than others professionals ($p < 0.001$). These data showed the teacher depreciation in Brazil, although the rise of income from origin (undergraduate) to destination (exercise to profession) was observed (without intra and intergenerational mobility). When the students became teachers, this is not guarantee for economic-social mobility. Over time, the cultural access by teachers increased, and this access on mean is higher (113) than practiced by others professionals ($61, p < 0.001$). This cultural access could represent a cultural mobility, because the occupying of cultural spaces mean an attention of local and contexts needed (Xu & Hampden-Thompson, 2012).

The distribution of some variables on Brazilian states (Figure 3) highlighted significant correlations. The number of teachers per 100,000 inhabitants were higher in areas with lower HDI values ($\rho = -0.603$), in areas with lower values of incomes ($\rho = -0.712$) and in areas with lower numbers of homicides per 100,000 ($\rho = -0.901$). The most of center-north-northeast states supported the correlations that are regions with high economic inequalities. This highlighted the importance of teacher profession for areas with low HDI, and their indirect

![Map distribution per Brazilian state of human development index (per state), mean individual income per month, numbers of homicides per 100,000 inhabitants, and number of teachers per 100,000 inhabitant classes.](image)
influence in homicide rates. Where exists teachers, exists schools, and exists students occupying activities to construction of subject. These relations was clear when compared with others professions (Figure 4(a)). The most of lawyers, physician and engineers established on areas with high HDI ($R^2 > 0.87, p < 0.001$), otherwise with teachers ($R^2 = 0.75, p < 0.001$). Other data highlighted (Figure 4(b)), the high presence of teachers was correlated with reduction of homicides per inhabitants ($R^2 = 0.96, p < 0.001$), and this relation for others professions was indifferent (not significant, $R^2 < 0.01, p = 0.216$). In addition, the variation of family income per month was higher to teachers ($CV\% = 296$) than the others professions ($CV\% > 30$) (Figure 4(c)), but this variation did not reflect on economic mobility (see Figure 2).

The most of graduated teachers in Brazil came from lower economic class families and the most of the others studied professions (lawyers, physicians and engineers) came from upper-middle class families. The motivation for lower economic classes becomes teacher could be the easy admission in University (low mentions for student from low quality secondary schools), and for higher economic classes the demotivation to become teacher is the low wages, but could other cause exist to the students become teachers? The qualitative analysis could response this. Another highlight was that in Brazil on areas with low HDI was needed a governmental program of employment for physicians “More Physicians” (Mais Médicos, 2015), because the Brazilian physicians did not accept to go to areas with low HDI. The physicians denounced low incomes and low quality of labor infrastructure (Póvoa & Andrade, 2006).

Thus, what is really the attractiveness of the teacher profession? Why did students decide be teachers in Brazil? Would the cause be social mobility? The gotten responses of teachers ($n = 25,013$ interviews) were converged to two topics: 1) “vocational desire” (e.g. capacity of oratory, persuasion and synthesis for public); and 2) “the imaginary transmitted by parents and media discourses of that “the school” (local of fundamental for personal economic growth, of respect and thrust) have moral and knowledge authorities approved by society”. The choice vocational could be little pragmatic of high economic classes (Rojewski, 2002). The social immobility is more important for riches than for the poor (Luckmann, 1970). Thus, the people of high economic classes did not desire become teachers, with low wages and work dedication in local with low quality infrastructure. For people

![Figure 4](image-url)
from low economic classes become teacher could mean the acceptance in the institutions or the visualization of subject by institutions (Foucault, 1982). When students, the graduated teachers did not report about wages, or social mobility, but when they narrated about school authorities, they would desire a position of supported authority by society. Moreover, in an authority is implied a financial status (imaginary status) that allow to the teachers stay in a high strata imaginary (without money) (Medina, 2011).

In the question: does the academic capital (teacher degree) allow the social mobility?, the responses were divided in two topics: 1) in theory, “the graduation (degree/diploma) is the turning point to social mobility”; 2) in practice, “the degree allows the access to specific labor, but it did not ensure the social mobility”. This ambivalence was unanimity from responses. The new worker or producer of goods and services did not necessary got a graduate degree or academic capital (Cabral, 2012). So, what is the importance of graduated teachers on social stratification (their class position)? and, what is the importance of social mobility for teachers to national plan of education and federalism strategies? The responses indicated: “With education the teachers could discuss the social classes and why do we desire a mobility? Just by consumption?”. And this issue is important to national plan of education and federalism strategies. The discussion of status and profession on consume issue is fundamental to discuss the constructed structuralism by capitalism system. Is necessary the structure to be maintained? The education for reduction of class inequalities is more important than an education for developmentalism (Santos, 2000), and the status position constructed on goods is a producer of in equalities (Harvey, 1978). Thus, the empathy of collectives and cultural contexts will be federalism strategies to the development human, instead of capital human formation priority in Brazil.

So, would teachers break with the social reproduction? and, would teachers stimulate the changing of habitus? In all the demarches, the response for these questions was “yes”. The university could be conservative, regenerative and generating of knowledge (Morin, 2000), and this last the main for identity of university and of the university agents (local and context needs). Other response of interview to these questions was: “The importance of education is to teach to live in cooperation and in the horizon of equality in relation the institutions (justice).” This breaks would the future of education because it will be support by reduction of consume (freedom principle and sustainability principle) and reduction of inequalities (Moore, 2005).

4. Conclusion

In Brazil, from the method perspective of this work, the main conclusion was that most of the graduated teachers do not obtain a social mobility from undergraduate to exercise of profession. The students became teachers by vocational choice and by an imaginary status of teacher in society (knowledge authority). The rise of cultural access by teachers could represent a cultural mobility. The teachers are important for federalism strategies by their disposition of live in areas with lower Human Development and lower incomes than other Brazilian professionals. The presence of teachers in number per inhabitants is related with the low number of homicides per inhabitants, and this could be an important topic to federalism strategies. The breaks with economic habitus (consumption) and social structure in classes could be the future of education way. These breaks are fundamental for the National Plan of Education and for a Project of Nation.

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