

Widening Access to Higher Education in Brazil: A document analysis of assessment policy, purpose and practice

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Abstract

To what extent did the changes in purposes of the Brazilian National Upper-Secondary Exam (ENEM) in 2009 affect the social equality gap and widened the access to higher education? Policy making can be a process where social inequalities are maintained, produced or tackled, affecting or being affected by a large-scale and high-stakes assessment as is the case of the ENEM. From 1998 to 2015, the assessment underwent major reformulations with the explicit intent to widen the access to higher education, especially to the socially underprivileged. With that context in mind, I perform a policy cycle analysis of the ENEM purposes in relation to its practical uses when connected to other related policies. My theoretical framework was informed by a literature review on assessment purposes, as discussed by Pellegrino, Chudowsky, and Glaser (2001) and Newton (2007); specific literature on equality of opportunities in the access to education, with a focus on the Maximally Maintained Inequality hypothesis (Raftery & Hout, 1993) and on the Effectively Maintained Inequality conjecture (Lucas, 2001); and Ball's Policy Cycle (Ball, 1994; Bowe, Ball, & Gold, 1992). The data collected consisted of policy, legislation, technical, report, institutional and academic texts, searched in specialised databases. My results uncover patterns that indicate that the uses proposed to the ENEM, in connection with a broader network of educational and social reforms, can indeed tackle the inequality of opportunities in the access to higher education. This could add to the international literature on the subject not only for the focus on the ENEM, which presents a rare case in the international assessment literature; but also as a counter-example to the reasonably consensual Maximally Maintained Inequality; and by providing a more comprehensive understanding of assessment not only as a policy in isolation of context, but as part of a larger policy framework.

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1. Introduction

To what extent did the changes in purposes of the Brazilian National Upper-Secondary Exam (ENEM) in 2009 affect the social equality gap and widened the access to higher education? Within the period from 1998 to 2015, the ENEM had two very singular phases marked by a reformulation that focused on its purposes: from a self-evaluation assessment into a higher education entry assessment. The change in purposes was a political decision, part of a larger set of policies made by a new government of a different position in the political spectrum, with the explicit intent to widen the access to higher education, especially to the socially underprivileged. Policy making can be a process where social inequalities are, maintained, produced or tackled, affecting or being affected by a large-scale and high-stakes assessment as is the case of the ENEM. With that context in mind, I perform a policy cycle analysis of the ENEM purposes in relation to its practical uses when connected to other relating policies. Although my results are inconclusive, they uncover patterns that indicate that the uses proposed to the ENEM, not the assessment alone, in connection with a broader network of educational and social reforms, can indeed tackle the inequality of opportunities in the access to the higher education. This could add to the international literature on the subject as a counter-example to the reasonably consensual Maximally Maintained Inequality (MMI) hypotheses (Raftery & Hout, 1993), which states that despite any expansion of education provision over time, enabling an increase in the number of students staying in school beyond basic education, that expansion do not coincide with a decrease in the social equality gap in educational attainment at that same level of education. Currently, the studies that indicate this contrast either do not have a focus in the role of policy or only analyse specifically educational policies, missing the broader social context and policies that can influence the education field. There are, however, a few cases identified in the literature in which the reforms observed were socially extensive, instead of purely educational, and the policy reforms did impact the educational social equality gap, the most prominent being the case of Sweden (Erikson & Jonsson, 1996).

The ENEM, however, is administered in one of the most socially unequal countries in the world (Souza, 2017), with a colonial and slavery history that has affected the equality gap in education since its independence in 1889 (Carnoy, 2013: 41). This context is very distinct from that observed in the advanced economies the MMI usually verifies, especially the Swedish. Created in 1998 during a neoliberal period of government, the ENEM is a non-mandatory annual assessment administered by the Ministry of Education. Its official purpose was to evaluate the individual achievement of students leaving the upper-secondary education and to determine if they attained the basic competencies necessary to the full observation of citizenship (INEP, 1999). In 2009, after the election of a left-wing party, the assessment was transformed into an explicit selection tool, as part of a larger higher education policy-making context with the intention to democratize the access to tertiary education (INEP, 2009b; INEP, 2013a).

In order to investigate if those changes in the purposes of the ENEM affected the social equality gap and widened the access to higher education, I have first revised the literature on assessment purposes, including how reliability, validity and fairness are critical to the uses to be made of any large-scale assessment that has high stakes. Subsequently, I have revised the specific literature on equality of opportunities in the access to education, with a focus on the Maximally Maintained Inequality hypothesis (Raftery & Hout, 1993) and on the Effectively Maintained Inequality conjecture (Lucas, 2001). Both the EFI and mainly the MMI provide a theoretical framework for interpreting the differences shown in educational attainment in relation to the provision of education and to social class inequalities.

Afterwards, I explain the methodology carried out on my dissertation, starting by explaining the choice for a qualitative approach, induced by both the type of data available to me and, as a consequence, by the nature of this investigation, concerned more with the causal processes at work and the linkage between a variety of factors, than with the effects of one or more independent variables. Policy analysis is concerned with a complex causal process, which led me to the application of the Ball's Policy Cycle (Ball, 1994; Bowe, Ball, & Gold, 1992) to the analysis. The choice for that method was made mainly because it is the more widely used framework in educational

policy analysis literature, including scarce Brazilian studies. Additionally, it considers the policy process as a cyclic, rather than linear, production process. This aspect will be shown relevant in the case of ENEM because the analysis focuses on two subsequent correlated eras. Further, I explain the data collection, coding and sorting methods. The data collected consisted of policy, legislation, technical, report, institutional and academic texts, searched in specialised databases by using three keywords: ENEM, assessment and educational assessment. The texts were then fit into the final analytical framework, and data questions were generated, based on Vidovich and Porter (1999) and Mainardes (2006), to interrogate them. Afterwards, I present in the Results chapter the answers ensuing from the interrogation of the texts.

In the Discussion chapter, I return to the literature reviewed and argue that it is not good enough to identify that the number of students taking the ENEM increased over the analysed period. Turning again to the data collected, I try and find how the changes in purposes of the assessment and the practice of its use could affect the social equality gap and widen the access to higher education.

Concluding, this dissertation has the ambition to contribute to the current assessment literature in two ways. First, because of the focus on the ENEM, which presents a rare case in the international assessment literature, as the vast majority of countries analysed are of developed economies, which is not the case of Brazil. Secondly, the proposed work is potentially unconventional in the national assessment literature as it performs a policy cycle analysis of the assessment in order to investigate the practice of its purposes, what is rarely done. All considerations made, I believe that the contribution of this dissertation is to provide a more comprehensive understanding of assessment not only as a policy in isolation of context, but as part of a larger policy framework.

2. Literature Review

The purpose of this section is to situate my dissertation within the larger philosophical, theoretical and conceptual framework existing in the educational assessment field. I attempt to achieve that purpose mainly by reviewing the literature on educational assessment focused on the issue of purposes, followed by a review of the literature on

theories that relate the overarching concepts of class and inequality to educational access and retention.

2.1 Educational assessment purposes

The design of any educational assessment must necessarily take into consideration the underlying purposes of that assessment. As Pellegrino, Chudowsky, and Glaser (2001: 40) highlight, one single type of assessment does not fit all purposes. This is a crucial consideration for policy making (Newton, 2007: 149), and for this reason we may well benefit from getting some perspective on the practice side of educational assessment and from defining the use of the term ‘purpose’ in this dissertation.

Newton (2007: 150) identifies three different interpretations for the term ‘purpose’ when it refers to educational assessment. The first is at the *judgment* level, which concerns the underlying technical aim of an assessment event, or test; in this case the purpose can be, for example, to offer the student a reference to her level of attainment so that she can carry out her self-assessment. The second is at the *decision* level, which relates to the uses made of an assessment judgment; in this case, the purpose can be, for example, to function as a higher education entry assessment. The third purpose derives from the design of the assessment itself and concerns the impact intended in administering it, hence it is at the *impact* level; in this case, the purpose can be, for example, to make sure all students learn a common curricular matrix.

Between the three interpretations, Newton (2007: 150) considers that the term ‘purpose’ is most significantly used in the literature at the decision level, and categorises eighteen purposes for educational assessment within that level – meaning eighteen different uses of the assessment event to support decisions (Newton, 2007: 161-2)¹.

That is a relatively large number of purposes if compared to other widely accepted definitions of the term found in the literature. Harlen (2007: 18-19), for instance, identifies two purposes of assessment: formative, which the main use is to help

¹ For easiness of access a table with the 18 purposes is reproduced in full in Appendix 1.

learning, and summative, used in several ways, including reporting student achievement, tracking progress, or providing certification and accreditation. Black (2002: 35), on his turn, makes a distinction similar to that of Harlen describing three different purposes of assessment: from one side, there is a type of assessment which purpose is ‘formative, to aid learning’. The two other types are considered to have other purposes than to directly support learning: ‘summative for review, transfer and certification’; and ‘summative for accountability to the public’. And even Pellegrino et al. (2001: 17-8) that, as we saw above, is concerned with the practice of giving a single assessment multiple purposes, identifies only two main purposes of educational assessment: ‘assessment to assist learning’ (or formative assessment) and ‘assessment of individual achievement’ (or summative assessment).

All alternatives to Newton’s (2007) account of the term ‘purpose’ in educational assessment have the dichotomy between formative and summative assessment in their centrality. However, that dichotomy is as unhelpful as it is misleading when it comes to assessment policy. That is because, as Newton explains (2007: 150), while the term ‘summative’ applies to the *results* of an assessment, the term ‘formative’ only applies to one kind of *use* of assessment results, the *formative use*: for the enrichment of the student experience in the learning process. Thus, in this dissertation it would be inadequate to give the formative use the same status as given to summative results, considering that this work is about the purposes of assessment.

Moreover, Newton’s (2007) more granular account of the term ‘purpose’ is pertinent to assessment policy because it foregrounds the different decision makers and user groups involved in each use, especially depending on the stakes involved. Drawing upon the differentiation made by Baird, Andrich, Hopfenbeck, and Stobart (2017) between Large-Scale National or International Assessments (LSAs)², which are commonly high stakes, and Assessment for Learning (AfL), which are usually low stakes, we can notice that Newton’s (2007) eighteen uses of assessment are primarily serving LSAs’, or high stakes, uses. We can reach that conclusion by first, looking at the verbs used by Newton

² Baird et al. (2017) focus their analysis using data from *International*, rather than *National*, Large-Scale Assessments, therefore they use the acronym ILSA(s). I’m using LSA(s) as I’m making a point that should be valid for virtually any Large-Scale Assessment, National or International.

(2007: 163-5) to categorize the ‘decision, action or process supported by assessment results’: evaluate, decide, place, diagnose, judge, predict, identify, adjust, evaluate, etc. The same is true regarding the terminology used by Black (2002: 35): review, transfer, certification, and accountability. Secondly, by noticing that the stakeholders linked to those uses or purposes are usually playing a role in the decision making of a high-stakes type of assessment. We can without any mistake categorize the ENEM as LSA given the high stakes involved, as will become clear in the Background chapter; and, as with any high stakes educational assessment, one of its main characteristics is that its results must have high reliability.

Reliability, as explained by Miller, Linn, and Gronlund (2009: 107), refers to how consistent assessment results (such as test scores) of one test are from one measurement to the other. Reliability is, therefore, a quality of the test, more specifically about how a test is capable of making distinctions between two different cohorts of examinees (Traub & Rowley, 1991: 44). However, reliability is a matter of degree, and it depends on the purposes and uses to be made of the results (Miller et al., 2009: 108). Validity, according to Miller et al. (2009: 70), is the ‘adequacy and appropriateness of the interpretations and uses of assessment’. Validity is, therefore, intrinsically related to purposes and uses of the results of a test, and there is no assessment that can be valid for all purposes (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999: 23). Consequently, the validity of an assessment has implications for its fairness. Fairness, from its side, can be understood as a necessary part of the broader concept of validity (Miller et al., 2009: 70). If validity is related to the appropriate interpretation and use of test results, ‘the lack of fairness would lead to a negative evaluation of the validity of the interpretation or use of assessment results’ (Miller et al., 2009: 70). There are many factors that can threaten validity and elicit unfair results if not appropriately considered in the assessment purposes, such as race or ethnicity, socioeconomic status, gender, etc. (Furr, 2018). Therefore, if the equality of opportunity in the access to higher education is among the factors to be considered in the design of any assessment, the test must elicit fair results.

In summary, any assessment process must have clarity of the different purposes of testing, because it cannot serve for all purposes at the same time. After all, the validity of an assessment will be tied up not only to the accuracy and interpretation of the measures (reliability), but also to the uses made of it, what has social consequences, including equality of opportunities (fairness). Therefore, it must carefully consider not only the underlying technical aspects of assessment design and testing, but also the objectives lying behind it, including to whom it is serving; otherwise, the assessment risks reproducing or producing inequalities of opportunities, subject I address in the next section.

2.2 Equality of opportunities in the access to education

This dissertation proposes a document analysis of assessment policy, purpose and practice in order to investigate if the ENEM produced, reproduced or tackled the equality gap in the access to higher education in Brazil. For that reason, in this section I review literature regarding models developed to identify and explain the mechanisms of social inequality in education access and retention.

Maximally Maintained Inequality

In their analysis of how social class of origin affects educational transitions, Raftery and Hout (1993: 56) make two conjectures. First, that inequality in a certain educational system will only be reduced when the enrolment rate of the most advantaged social classes for a certain level of education reaches its saturation. Or, as explained by Paterson and Iannelli (2007: 330):

[...] relative inequality remains unchanged until almost everyone in the most advantaged class reaches that threshold, after which the next most advantaged class catches up, and so on.

Second, Raftery and Hout (1993: 56-7) show that although class differences in educational attainment declined in the period encompassed by the studied cohort, that was not due to any social change, but simply because enrolment expansion created more opportunities, making the educational system less selective. On that same line, Paterson and Iannelli affirm that (2007: 351):

[e]ven though inequalities may decline because of the [enrolment] expansion, country differences in inequality do not change much and change at all mostly by a process of maximally maintained inequality, unless (as in the Scandinavian countries) wider social reforms reduce inequality more generally.

Those two conjectures roughly encompass what Raftery and Hout (1993) called the hypothesis of Maximally Maintained Inequality (MMI), accounting for the limitations imposed to strategies focused on reducing inequality by providing more access to the least advantaged classes alone.

Effectively Maintained Inequality

An alternative explanation to the MMI, the Effectively Maintained Inequality (EMI) conjecture questions the MMI take on the very core concept of inequality. According to this theory, the saturation of a certain level of education does not reduce educational inequalities, but solely transfers it to other educational or social spheres. That would happen because the socially privileged classes would seek to secure their advantages in any situation, changing their means depending on the context (Lucas, 2001: 1652):

On the one hand, if quantitative differences are common, the socioeconomically advantaged will obtain quantitative advantage; on the other hand, if qualitative differences are common the socioeconomically advantaged will obtain qualitative advantage.

When considering educational achievement, the socially privileged classes will initially seek to maintain their advantages by ‘quantitative’ methods, such as the achievement of certain levels of education, as for example the access to higher education or a higher degree. However, if the socially underprivileged classes are granted access to that certain level of education by increase in enrolments to the point it reaches saturation, the socially privileged classes will pursuit to maintain their social advantages by other, ‘qualitative’ means, such as prestige, as for example access to prestigious (many times international) institutions.

As put by Lucas (2001: 1653):

Both [MMI and EMI] highlight class competition between families, but MMI suggests competition will be nil for any level of education that is universal. In contrast, EMI implies that for levels of education that are universal, competition will occur around the type of education attained.

Class (or social class), is usually employed to explain inequalities because it has theoretical and empirical implications to life chances, including to the chances of access to higher education. As Tyler (2015: 493) debatably summarizes in her review of recent scholarship on class analysis, the ‘problem that the concept of ‘class’ describes is inequality’. The This proposition is not alien to sociological studies, which have vast literature showing that students from disadvantaged social classes do not perform academically as well as their peers from advantaged backgrounds.

Giddens proposes that class is the main form of social stratification in the modern capitalist society (Giddens, 1973 78). Marx (1991) proposes that the capitalist society tends to polarize its social structure between two classes: those who own the means of production, the capitalist, and those who only own its own labour force, the working class. It is important to note that this simplified bipolar stratification is obviously a rhetorical device used by Marx, who acknowledges that ‘this class articulation does not emerge in pure form. [...] middle and transitional levels always conceal the boundaries’ (Marx, 1991: 1025). To a Marxist theory of education, therefore, class (and consequently class struggle and class stratification) is as a key concept to the understanding of the social reproduction of inequalities fostered in the educational systems of a capitalist society. At the core of a Marxist theory of education is the idea that, in a capitalist society, labour force and social relations must be not only be maintained, but also reproduced. As Marx (1990: 718) states, ‘[t]he maintenance and reproduction of the working class remains a necessary condition for the reproduction of capital’.

The idea of reproduction is also at the core of Bourdieu’s (1984) class analysis, and it is used to explain the concept of cultural capital, frequently applied to educational theories. According to Bourdieu, there are three different forms of capital: economic, cultural and social: economic capital is the monetary form of it capital, and includes anything that can be turned into money; social capital is the individual’s social network; and cultural capital can be seen as the cultural and symbolic goods such as artworks, books, and, distinctively, educational qualifications. In all its forms, capital is used by those who possess them to obtain or perpetuate any kind of advantages and privileges; it is the social recognition of any of these forms of capital that grants its their owner's

social status. Cultural capital, therefore, is key to the understanding of the concept of reproduction (Bourdieu, 1984: 132). Bourdieu argues that formal education perpetuates class relations (and consequently inequality) by perpetuating, or reproducing, under the illusion of neutrality, the culture and values of the dominant class under the illusion of neutrality.

The importance on the Marx's and Bourdieu's concepts of class that considers economic, cultural and social status resides on the fact that, despite the many strategies to calculate the socioeconomic status of a population, the international literature, as the ones discussed in this Review, traditionally uses family income, parental education and parental occupation as the main measures of social class (Buchmann, 2002; Sirin, 2005). Consequently, both the explanations of inequality (MMI and EMI) and the methods used to describe and calculate it depend on the theoretical approach one is inclined towards. This includes the decision whether the universal provision of access to a certain level of education alone can be considered a valuable way to address inequality. Furthermore, the interpretation drawn from the results of large-scale national assessments, the theme of this paper, are subject more to the political use governments, institutions and the society will make of it than to technical definitions per se.

Meanings and measures of inequality of opportunities in education

However, neither the MMI nor the EMI alone can explain the patterns observed by Raftery and Hout (1993) or by Paterson and Iannelli (2007); they only describe it. The models exist in coordination with meaning and measurements of inequality. Essentially, it is possible to identify two main theoretical and methodological streams that aim to explain the inequality of opportunities in education.

From one side, a group of researchers that became known as the 'Nuffield class analysts' (Breen & Goldthorpe, 1997; Swift & Marshall, 1999), that advanced their work under the rational action (RA) theory. From the theoretical perspective, the rational choice model states that students and their families make 'rational informed' educational choices, especially about going further on their education, making a cost versus benefits evaluation. From a mathematical perspective, the rational choice

explanation measures transition rates and inequality by odds ratios, which assess three factors that students consider when pursuing an educational option: the costs, the likelihood of success, and the value and utility attributed to this option by students and their families.

From another side, scholars like Hellevik (1997) and Ringen (1997; 1998), critics of the former group, favour methods such as the Gini coefficient as the more appropriate to measure inequality. To Hellevik and Ringen, there is a crucial difference between measures of association and the actual measures of inequality. From a mathematical point of view, they argue that the odds ratio will solely account for the first, and only indices like the Gini coefficient will be adequate to the calculation of inequality, as it captures changes in class composition. However, to scholars linked to the 'Nuffield school', defend that since odds ratio indicates the chances that one individual has to change from one category (that indicates the individual's class) to another, it measures what they call 'localized' relative inequalities' Swift and Marshall (1994: 244). Odds ratio will not account, however, for measuring 'inequality of position (the size of the gap) between social classes, or of the distribution of a good (such as education)' Swift and Marshall (1999: 246). Hence Hellevik and Ringen criticism, asserting that the relevant indices to measures of inequality would be exactly the ones that allow to compare the distribution of a good within a population, such as the Gini coefficient (Hellevik, 1997: 389).

According to the first group (Breen & Goldthorpe, 1997; Swift & Marshall, 1999), reforms aiming to address class inequality in access to higher education have been ineffective, while the second group (Hellevik, 1997; Ringen, 1997; 1998) affirms the opposite may be true. Both groups will agree, though, that the difference in their findings are in fact due to the different understanding they have in both the definition of inequality and the measures to be used to calculate it: Swift and Marshall (1999: 242) summarize the debate by stating that the two groups have a disagreement about what can be considered as inequality, an opinion concurred by Hellevik (1997: 340), who affirms that the disagreement refers to 'how trends in inequality are to be captured'.

A more detailed account of the benefits and limitations of the various indices used to calculate inequality has been provided, for instance, Brown (1988). It remains, however, that the choice between the two types of measure can be further complicated because, if measure and theory must be adequate to each other, they also must be adequate to the object and context to which they would apply. With that in mind, some background information on the Brazilian educational, social, economic and political contexts is necessary to situate, not only the literature reviewed, but also the reader, considering that neither the ENEM nor the country are prominent in the international literature on educational assessment.

3. Background

I write this background in order to contextualise the Literature Review within the ENEM and the Brazilian educational, social, economic and political contexts and to prepare the reader for the data I expose in the Results chapter.

3.1 The ENEM

The ENEM (Portuguese acronym for Upper-Secondary National Exam) is a non-mandatory annual assessment administered by the National Institute for Educational Studies and Research (INEP). This research agency, affiliated to the Ministry of Education (MEC), is presently responsible for assessing education in all levels (INEP, 2015a).

The assessment was created in 1998 with the official purpose of evaluating the individual achievement of students leaving the upper-secondary education in order to determine if they attained the basic competencies necessary to the full observation of citizenship - and so it remained until 2008 (Brazil, 2002). Aiming students, that purpose can be matched to the category 'social evaluation' in Newton's (2007: 163) framework, which also includes the 'self evaluation' use. The purpose of the exam changed in 2009, transforming it into a selection tool for granting access to universities and federal institutions (Diário Oficial da União, 2009). Hence, the reformulation placed the assessment into the 'selection' use category (Newton, 2007: 164). Both the old and new

purposes are at the *decision* level of Newton's (2007: 150) framework, a level that encompasses the uses made from an assessment judgment.

In order to design the assessment, the INEP created a reference matrix to establish 'abilities' and 'competencies' to be measured, but subject-specific content was not a priority, which was an important decision, because Brazil does not have a national curriculum. Instead, the country adopts the National Curricular Parameters (PCN) (MEC, 2000), a high-level indication of the content to be taught, granting schools and educational systems the freedom to make decisions on a more granular level. Another important characteristic of the documentation made publicly available by the INEP was that it does not make explicit how choices regarding the design, development and interpretation of the ENEM were made.

The original exam itself was composed of two parts: a 63 multiple-choice items test and an essay. The students would be awarded a grade from 0 to 100 on each part (to be summed up afterwards), arguably composing an ordinal scale. Its development process is reported by Fini (2005), the assessment director, who details how the creation of items took place, including selection of writers, revision and approval, and how it was connected to the criteria established during the design phase. Due to the lack of technical documentation currently publicly available indicating which was the design and development approach adopted, the only relevant technical information about the assessment design we can learn from the official documentation (Brazil, 2002) and from the assessment director (Fini, 2005) is that the underlying measure methodology chosen was a Classical Test Theory (CTT). The same is true regarding the interpretation of scores. As it was discussed in the Literature Review, however, an assessment is reliable in the same degree as its results (such as test scores) are consistent from one measurement to the other. In 2009, when the ENEM was transformed into an explicit selection tool, as part of a larger higher education policy (to be discussed in the Results chapter), the Classical Test Theory was replaced by an Item Response Theory (IRT), allowing, according to the INEP (2013a: 8-9, 31-32), for a more sound measurement methodology for comparing between cohorts and papers - a consideration disputed in the specialized literature about psychological measurement (Borsboom & Mellenbergh, 2004; Borsboom, 2005; Borsboom, 2008; Haig &

Borsboom, 2008; Michell, 1999; Michell, 2000; Michell, 2008; Michell, 2011; Psychometric Society, 2018), and as put by Maul (2013: 5):

There is not a single consensus definition of measurement accepted by all human scientists, or indeed by all physical scientists, and debates over the meaning of measurement will likely not see resolution any time soon.

Because of this change in the main purpose of the ENEM, the whole design of the assessment had to be reformed, as shown in table 1:

Table 1
The two historical ENEM frameworks

Characteristic	ENEM From 1998 to 2008	New ENEM From 2009 to 2015
Main objective	To evaluate the preparedness for citizenship	To evaluate the readiness for tertiary education
Specific objectives*	3	7
KSAs Matrix/Targets of inference	Focus on skills and abilities: 21 abilities organically related to 5 underlying competencies	Knowledge is equated in importance to skills and abilities: · 4 knowledge areas with clarification of the content as a target of inference · 5 cognitive streams · 120 abilities hierarchically connected to 30 competencies
Intended outcomes/Scores generated	5 scores from multiple-choice items and 5 scores from the essay (related to the competencies)	4 scores from the multiple-choice items (related to content knowledge) and 5 scores from the essay (related to the competencies)
Test format	1 test (63 multiple-choice items) + 1 essay	4 tests (45 items each) + 1 essay
Test duration	5 hours straight	Two events: 4.5 and 5.5 hours, in two different days
Underlying measurement methodology	Classical Test Theory (CTT)	Item Response Theory (IRT)
Items	Contextualized; not focusing on curricular knowledge	Contextualized; require curricular knowledge

* The detailed description of the specific objectives will be discussed in the chapter Results.

Source. Translated and adapted from Travitzki (2013: 187).

Building from the reviewed literature about educational assessment, we can conclude that in redesigning the assessment, the Ministry of Education was trying to make it more adequate and appropriate for its new purposes (to evaluate the readiness of test takers for tertiary education), and consequently enhance its validity. Having an assessment that is reliable (with consistent results) and valid (with results appropriate interpreted for its purposes), means it elicits fair results, suitable to its purposes.

As noted by Pellegrino et al. (2001: 40), ‘the purpose of an assessment determines priorities’, and the history of the ENEM can clearly illustrate that affirmation: from a tool to evaluate individual achievement with no consequences to the education track of the student, to a formal higher education entry assessment. Claims about validity and reliability of the ENEM or of the New ENEM, nonetheless, are still to be confirmed by further research, but that surpasses the objectives of this dissertation, which is preoccupied with a social aspect of the assessment more connected to its fairness: the role it plays in widening the access to higher education in Brazil.

3.2 The Brazilian higher education system

Although the Brazilian privileged were always able attend universities abroad, mainly in Portugal, it was only after the independence of the country in 1889 that higher education would become locally attainable. This happened through the creation of private and State public institutions (Carnoy, 2013: 41). The expansion and universalisation of higher education in the country during the 20th century was slow and driven by the private sector, specially by Catholics: in 1930, from the approximately 33,000 higher education students, 44% was enrolled in Catholic institutions (Carnoy, 2013: 41).

The first Statute of the Brazilian universities, from 1931 (Brazil, 1981), was promulgated under an authoritarian government recently established after the brief republican period that lasted from 1889 to 1930. The statute established the autonomy universities and determined that the State was the regulator of the higher education system, including the private one. It also ‘reinforced the belief that the main role of higher education was to provide training and certification for the established professions Balbachevsky and Schwartzman (2011: 36). According to da Cunha (1980:

264), considering the authoritarian ideology permeating the higher education system at that moment, the stature would only serve to a paternalist elite, maintaining the inequality in access to higher education existing since the colonial times.

That scenario did not change much, not even during the second democratic period (1946-1964), until the military coup of 1964. Then it was imposed a strict State control of the higher education system, aiming for a ‘unitary higher education system, exclusively constituted by public, tuition-free, research oriented universities’ Balbachevsky and Schwartzman (2011: 37). Despite the stringent control of the higher education system by the military regime, the expansion of the public institutions were relatively slow in relation to the private sector: while only 39 new public universities were created in the period from 1970 to 2000, 70 new private universities were established (Carnoy, 2013: 42).

The promulgation of the new democratic Brazilian Constitution in 1988, after three years of transition from the military dictatorship, initiated the changes that shaped the current higher education landscape in the country. Among many democratic and egalitarian advances, the Constitution established not only a mandatory minimum spend in education for states and municipal governments (25% of their tax and transfer revenues) and for federal government (18%), but also other determinations, such as ‘equal conditions of access and retention in school’ (Brazil, 1988a: 166). The text was the base for a series of reforms, both educational and socio-economic more generally, that the Brazilian government sought to implement with the intention to expand access to higher education to the underprivileged classes. According to the 2018 Census of Higher Education (Brazil & Inep, 2019), in 2018 the Brazilian higher education system comprised 2,537 institutions, of which 11.8% are public, divided in three different administrative categories: Federal (4.3%), State (5.0%), and Municipal (2.4%) institutions. Public institutions include Universities, University Centres, Colleges, Federal Institutions and Federal Centres of Technological Education.

It is in this context of a new democratic regime and expansion of the higher education system that the ENEM was created and advanced. The political, economic and social context is relevant because, however scientifically sounding, the theories of the MMI

and the EMI described in the Literature Review were fostered in developed countries and the research on educational inequalities generated by their use were mainly performed in those countries. Besides the foundational texts of Raftery and Hout (1993) and Lucas (2001) and the widely cited case study from Paterson and Iannelli (2007), all regarding the UK or Ireland, the most extensive study in the expansion and inequality of educational opportunity that could be found in the literature is the comparative study from Bar Haim and Shavit (2013) of 24 European countries. However, if measure and theory must be adequate to each other, they also must be adequate to the object and context to which they would apply. Therefore, they may require some fitting to the Brazilian context, a developing country in the global South with a history of colonialism, slavery, and small and intermittent democratic regimes.

Using data from the Brazilian Demographic Census generated by the Brazilian Institute of Geography and Statistics (IBGE) between 1960 and 2010, studies by Brito (2014) and Ribeiro, Ceneviva and Brito (2015) indicated that, despite the expansion in the number of higher education institutions in the country and in the number of enrolments in that period, the inequality in the access to higher education was aggravated. In another study, Prates and Collares (2014), using data from the National Household Sample Survey (PNAD) from 1982 to 2006, found an increase in the heterogeneity and selectivity of students enrolling into higher education in the period. Both studies, therefore, corroborate the first conjecture of the MMI hypothesis, in which the most advantaged social classes will be the most benefited in a scenario of expansion in the provision of opportunities to enrolment for a certain level of education. That is, at least in a first moment, until saturation for that class is reached. However, since saturation was not yet reached, the second conjecture of the MMI could not be verified.

This current study goes a little further in time and investigates the period covered by the ENEM, in which a wide framework of educational and social political reforms was put in place. In doing so, I hope to be able to find data that allows to investigate, first, if there was a decline in class differences in the access to higher education in that period; and second, if positive, whether that decline was simply because the system became less selective (proving the MMI hypothesis), widening the opportunities for all, or if

there was a change in the equality gap in general due to wider social reforms, as the one already mentioned observed in Sweden (Erikson & Jonsson, 1996).

That investigation, however, was not made using any mathematical model. First, because, as it will be better accounted within the limitations in the Discussion chapter, the Brexit event and the Covid-19 pandemic imposed a significant change in the resources available to me in 2020, the year my project was written. Secondly, and equally relevant, since this study is interested in social political reforms, a qualitative study using a document analysis of assessment policy was proven to be a more than suitable method. This suitability will be further sustained next, when I explain in detail the methodology used in this dissertation.

4. Methodology

In the Literature Review chapter, I articulated the theoretical framework grounding this dissertation, first by considering the theoretical and conceptual aspects of the purposes of educational assessment and their connection with the concepts of reliability, validity and fairness. Further, I discussed the international literature about inequality in education and social class and explained how that theoretical framework informed the methodology of this work. Finally, I made a descriptive analysis of the ENEM and provided an overview of the educational and socio-political context by which the exam is encompassed, especially in relation to social class inequality in the access to higher education. In this chapter, I describe the methods used in this dissertation, starting by explaining the adoption of Ball's (Ball, 1994; Bowe et al., 1992) Policy Cycle framework as the most suitable method to analyse the educational policy texts available to me. Next, I detail the method used to collect, code and sort the data within that framework.

4.1 Data analysis methodological framework

Among the literature about qualitative methods of research, specific instruction for the analysis of educational policy is often ignored, even in some widely referenced manuals. It was in the methodology section of published papers that I was able to

identify Ball's Policy Cycle (Ball, 1994; Bowe et al., 1992). Besides being widely adopted in the educational policy analysis literature, including in the rare occasion that type of analysis is made in Brazil, what provides more confidence in the method for the present purpose, it also provided the best fit to the structure of this dissertation, as will become clear in the exposition to follow.

The policy cycle defined in Bowe et al. (1992) is comprised by three contexts in which the lifecycle of virtually every educational policy could take place: the context of influence, the context of text production and the context of practice. Those are interconnected in a circular process, intended to allow for the 'notion of a continuous policy cycle', highlighting the process of 'policy recontextualization' (Bowe et al., 1992: 19), as shown in figure 1 below:

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Source. (Bowe et al., 1992)

The context of influence is considered 'where public policy is normally initiated' (Bowe et al., 1992), largely comprising the debates that informed the generation of the policy. A few examples of the players that can take part in those debates are previous legislation and policies, academic articles, discourses of politicians, demands or instructions from international organizations, and agents from the private sector, national or international.

The context of text production is represented by the policy and legislation texts per se. The law that first institutionalized the ENEM (INEP, 1999), for instance, can be sorted within that context. Authoritative but non-legal texts, such as a Minister of Education

discourse on the subject, can also be part of this context. Therefore, this is in some extent the consolidation of the debates that occurred in the context of influence.

The context of practice is the moment and place in which the policies (and laws, discourses, and other texts that comprise or complement the given policy) are enacted. It is in this context that the educational policy will actually be implemented, interpreted and misinterpreted, not only by the responsible government or private institutions and students, but also by schools, colleges and universities, parents, politicians, and any other individual or institution that has an interest on the matter. As a consequence of the different uses given to any policy in the context of practice, this stage will later also function as a major influencer in the context of influence of future policies, closing the cycle.

Bowe et al. (1992), however, did not sufficiently emphasize two aspects of the policy making process in this original proposition: the outcomes of the implementation of the policy in the context of practice, and the strategies that could result from that initial cycle. Afterwards, Ball (1994) developed an extended version of the policy cycle with two additional stages: the context of outcomes and the context of the political strategy.

The context of outcomes is of special interest to this dissertation because it is concerned with issues of justice and equality. Additionally, it acknowledges that different policies within a sector or area have interconnected effects, instead of standalone results: therefore, policies should be analysed in terms of their connection with other sectoral policies, allowing for a more holistic and comprehensive interpretation of their impacts in complex issues such as social inequalities.

Encompassing the context of the political strategy is a range of actions proposed and implemented in order to cope with inequalities that were identified, generated or intensified by the policy investigated, among them probably new policies. As such, this cycle functions as a context of influence in itself, closing the cycle. In fact, in later publications (2009), Ball revised its 1994 framework of a policy cycle with five contexts and proposed a return to the 1992 cycle (Bowe et al., 1992), connecting and merging the context of the political strategy with the context of influence, and integrating the context of outcomes within the context of practice.

Clarifying and summarizing: it is this revised three-phased approach of the framework (context of influence; context of text production; context of practice and outcomes) that I adopted for this dissertation, for two reasons: first, the data collected showed that the vast majority, if not all of the texts placed in the context of practice, would be equally suitable for the context of outcomes and vice-versa; second, not only the same phenomenon occurred regarding the context of the political strategy and the context of influence, but, additionally, analysing a 'pure' context of the political strategy would be out of the scope of this dissertation. For the economy of writing and easiness of reading, I use from hereafter the term 'Ball's Policy Cycle' in reference to the method just described that combine both frameworks (Ball, 1994; Bowe, Ball, & Gold, 1992).

However convenient, the Ball's Policy Cycle is a method and as such it does not account for interpretations of the texts. For that, additional descriptive tools such as Barthes' concepts of writerly and readerly texts (Barthes & Miller, 1990) are commonly used in conjunction with Ball's Policy Cycle for the interpretation of policy texts. Bowe et al. (1992: 22) themselves employ the terminology when they explain that '[p]olicy texts may be 'readerly' or 'writerly', according to the degree of interpretation allowed to the reader'. According to that usage of Barthes's terminology, readerly policy texts are considered prescriptive with little or none margin for interpretations or co-creation from their user groups. On the other hand, writerly policy texts are considered permissible of interpretation and co-creation by user groups. That differentiation is useful, for instance, to identify if the purposes of an educational assessment policy as it is written in the official texts grants interpretations that allow the user groups to infer other purposes, or if the policy text is so strict that the purpose in practice can be only one.

Finally, it is necessary to acknowledge one limitation of the Ball's Policy, despite its usefulness. This framework is a post-structural approach (Ball, 1994: 1-4), and as such it does not give the proper weight to the power of the State as the definite producer of policies and its relations with economic interests (Hatcher & Troyna, 1994; Lingard, 1993). That is relevant by itself because, as Ball admits in answer to that criticism, '[a]ny decent theory of education must attend to the workings of the state'. Policies are

implemented by States, which requires the acknowledgement of the defining power of States in shaping class dynamics.

Having clarified the policy cycle framework that is the backbone of the methodology of this dissertation, next I explicate the data collection, coding and sorting methods used in this work.

4.2 Data collection method

The types of texts that can be included in the various contexts of the policy cycle can be numerous, varying from legislations and discourses of politicians, to manuals and reports of education boards, and academic papers. Hence, many are the sources theoretically available to the researcher, who must decide, based both on suitability and availability of the data, what should be collected, organised and analysed.

Considering the scope of this dissertation, the following types of texts were searched:

- **Legislation:** the laws that created or modified certain policies. They are among the main source of data for the contexts of influence and text production;
- **Policy:** a regulation of the law that provides details of implementation. Next to the legislation texts, are among the main source for the contexts of influence and text production;
- **Technical:** texts that establish the parameters of the ENEM (curriculum, design, format, etc.). They provide information about the assessment itself and the contexts of text production and practice;
- **Report:** results and analysis of the ENEM provided by the INEP. A main source of official data for the contexts of practice and outcomes;
- **Academic:** peer reviewed papers about the ENEM and other policies and laws relevant to the analysis. These are the most scientific, therefore supposedly less biased, accounts of policies; source for information in all contexts;
- **Institutional:** academic papers published by the INEP. Relevant to provide context, specially of influence and practice. They are not peer reviewed, therefore may be supposedly subjected to governmental bias.

The websites of the Brazilian Chamber of Deputies (Brazil, n.d.a) and of the Presidency (Brazil, n.d.b) were searched for legislation and policy texts. Further, the INEP publications website (INEP, 2015b) was searched for technical, report and institutional texts. Finally, three databases were considered for academic texts: SciELO (SciELO, n.d.) (the Scientific Electronic Library Online, an electronic library covering a selected collection of Brazilian scientific journals), PBI: (USP, n.d.) (the University of São Paulo Integrated Search Engine) and SOLO (University of Oxford, n.d.) (the Search Oxford Libraries Online).

In the case of all repositories, exception made for the INEP website, the search was conducted using one of the following keywords:

- ENEM
- *Avaliação* (Assessment)
- *Avaliação Escolar* (Educational Assessment)

The INEP website does not allow for keyword search, therefore the publications had to be identified one by one, following the organization of the site, and selected according to the theme and keywords of the text.

4.3 Data coding and data sorting methods

After this selection was finished, the texts had to be coded: initially, to be sorted into one of the contexts of the Ball's Policy Cycle; finally, to be analysed considering the proposed data questions. In order to sort the texts within the policy cycle framework, one important methodological decision was to group them chronologically in intervals based on the two distinct phases of the ENEM. The two intervals were named 'eras', following the method used by Childs and Baird (2020) in their analyses of assessment of science practical work in England:

- First era: ENEM: 1998-2008: it starts with the first year of administration of the ENEM in 1998, during the right-wing PSDB government. It ends in 2008, five years after the beginning of the left-wing PT government, when new comprehensive, affirmative, and inclusive social policies started to be implemented, and the last year the assessment used the CTT;

- Second era: New ENEM: 2009-2015: it started in 2009, when the exam introduced the use of IRT and expanded the reach of systems of access to the Higher Education Federal Institutions. It ends in 2015, the last year of the administration of the ENEM before a coup d'etat (Alves, Gonçalves, Tonelli, & Ramos Filho, 2017) against the left-wing PT government in office at the time.

Table 2 presents the policy cycle framework that, subdivided by the two different exam eras, becomes a matrix with two variables (context and era) inside which the texts were sorted:

Table 2

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Bowe, R., Ball, S.J., & Gold, A. (1992). *Reforming education and changing schools: Case studies in policy sociology*. N.i.: Routledge

In order to code and sort the documents, I used (with the necessary adaptation to the research context) the data questions developed by Vidovich and Porter (1999) and by Mainardes (2006) to interrogate them. Both authors' data questions were originally developed to fit Ball's Policy Cycle, therefore their suitability for this research. For each context, the questions used were as follows:

Context of influence data questions:

1. Which national or international government bodies, representative groups and institutions, etc. influenced the policy?
2. In contrast, which other groups influenced or tried to influence the policy, but did not have as much power in contributing to the final text?
3. What is their origin and where do they sit in the political spectrum?
4. Why was the ENEM created at that time?

Context of text production:

1. What policies were published in each of the eras and which was its content?

2. Which groups of interest among those mentioned in the context of influence were represented or excluded in the process of text production and can be identified in the text?
3. How inclusive was the text in reference to the groups of interest: which ‘voices’ were listened to, and which were not?
4. How is the language of the text: is it possible to identify it as a writerly or a readerly text, or a combination of both to any extent?

Context of practice and outcomes:

1. How was the policy received and interpreted?
2. Which were the impacts of the policy to their receptors in general and to specific social class groups?
3. Does the policy reproduce or create inequalities?
4. To which extent the policy contributed to raise the patterns of access, opportunity and social justice, and, more specifically, of the inequality of access to Higher Education in the country?

Question 3 and 4 of the context of practice and outcomes are very much related to the comparison of the policy outcomes of the whole period analysed, therefore, not constrained to the context of only one of the eras, hence they were better addressed in the Discussion chapter.

The coding was performed in two levels. The initial reading of the texts generated, on the go, several first level codes, more ‘descriptive, low inference codes, which are very useful in summarising segments of data’ (Punch, 2013: 174). This coding was used mainly to sort the texts within the policy cycle framework. The thorough analytical reading was done only after the questions were used to generate what Punch (2013: 174) called ‘a pattern code’, that is, ‘a more abstract concept that brings together less abstract, more descriptive codes’. Pattern codes, also called themes in the literature (Elliott, 2018: 5), can be created by identifying similarities, that, according to (Saldaña, 2009: 6), can be of the following types:

- difference (they happen in predictably different ways);
- frequency (they happen often or seldom);
- sequence (they happen in a certain order);
- correspondence (they happen in relation to other activities or events);
- causation (one appears to cause another).

All types of similarities had to be considered during the reading and were proved useful to create the code patterns from the data questions and to identify additional ones that were revealed through the first level coding. The action of identifying similarities is what best describes the coding method applied; after all, as Elliot (2018: 3) conceptualised, coding is as a ‘decision-making process, where the decisions must be made in the context of a particular piece of research’. In the next chapter, I present the results of that process.

5. Results

In the previous chapter, I articulated how the Ball’s Policy Cycle has been adopted as the most suitable analytical framework for educational policy texts in the context of this dissertation. I also described the methods I used to collect, sort and analyse the data.

The current chapter presents the findings of the text interrogation process undertaken for documents from each of the eras and contexts of Ball’s Policy Cycle as tabulated in table 3 below. A total of 73 texts were initially selected, and from them a sum of 64 texts were maintained for analysis after the coding process. The exclusion of 9 texts was made because, during the analysis process, they could not answer any of the questions used to interrogate them. In any case, table 3 contains only the texts that contributed to answering the data interrogation questions and they may appear in more than one context, given their comprehensiveness in addressing the questions.

Table 3

Policy cycle framework including the texts selected for coding and analysis.

		Policy Cycle		
		Context of influence	Context of text production	Context of practice and outcomes
Eras	First era: ENEM 1998-2008	(Brazil, 1996) (Brazil, 1988b) (Gomes, 2016) (Brazil, 1998) (Gomes, 2012) (MEC/INEP/COMPED, 2001)	(INEP, 1999) (Brazil, 2001b) (Brazil, 2001a) (Minhoto, 2008) (MEC, 1998) (Silva & Melo, 2018) (INEP, 2012a)	(MEC & Inep, 1999) (Santos, 2011) (INEP, 2001a) (INEP, 2001b) (da Costa, 2004) (INEP, 2007a) (INEP, 2007b) (INEP, 1998) (INEP, 2002) (Freitas, Freitas, Garcia, & Birenbaum, 2009)
		(Vianna, 1992) (Vianna, 1993) (Vianna, 1995) (Saul, 1992)		

			(Santos, 2011)
			(INEP, 2009b)
			(Lopes, 2018)
			(Mello, 2019)
			(INEP, 1998)
			(INEP, 2000)
	(Ristoff & Sevegnani, 2006)	(INEP, 2009b)	(INEP, 2001a)
Second era:	(Brazil, 2004b)	(INEP, 1999)	(INEP, 2001b)
New ENEM:	(Brazil, 2004a)	(Andriola, 2011)	(INEP, 2002)
2009-2015	(Brazil, 2007)	(Brazil, 2011)	(INEP, 2004)
	(Andriola, 2011)	(Brazil, 2012b)	(INEP, 2007a)
	(Brazil, 2001a)	(Brazil, 2012a)	(INEP, 2007b)
		(INEP, 2012a)	(INEP, 2008a)
			(INEP, 2008b)
			(INEP, 2009a)
			(INEP, 2013a)
			(Cordeiro, 2014)

Note. Some of the texts equally coded and sorted, were used in the analysis of the context of practice and outcomes of the whole historical period of the ENEM analysed and, in answering mainly the questions 3 and 4 of that context, were used not in the Results chapter, but mainly in Discussion. They are the following: Pires (2015), Caseiro (2016), Prates and Collares (2014), Ribeiro et al. (2015), Lopes (2018), Barros, Senkevics, de Oliveira, and Borgatto (2019), and Brazil (2004a).

First era: ENEM: 1998-2008 - Context of influence

An exposed in the chapter Background, the context in which the ENEM was created was unarguably one of great political changes in Brazil, as an authoritarian government had crumbled down and the country sworn in its only second democratically elected president, after two decades of military dictatorship. In that unsteady scenario it was created the ‘magna carta’ of Education in Brazil, the Law of Directives and Bases for Education (LDB in the Brazilian acronym) (Brazil, 1996), published in 1996. The creation of the LDB, for its turn, had been stipulated in the new democratic Brazilian Constitution (Brazil, 1988a), published in 1988.

The Constitution was the result of a process called ‘the Constituent’, an assembly which took place in the years of 1987-88, in the transitional period between a military dictatorship and the institution of a democratic state. In power at the time, was the right-wing party PMDB, composed majorly of politicians previously affiliated with the MDB party, created during the military dictatorship. Also from the PMDB was the representative of the Education, Culture and Sport (ECS) Sub-Committee in the Constituent Assembly. The debate in the ECS Sub-Committee was centred in the roles of the State and of the private sector in offering education, especially regarding the ‘transference of public resources to the private sector’ (Gomes, 2016: 14). The main opposition to the text prepared, discussed, and approved in the ECS sub-Committee,

was posed by politicians that were also from the PMDB party, showing that the debate was in fact controlled by the same right-wing party. In its final text, the Constitution determined that the private sector would be free to provide education, but that the public investment in education should be destined only to the public schools, and that the assessment of the educational institutional quality is a prerogative of the State (Brazil, 1988a: 90). Predictably, the text did not include any policy regarding assessment of educational achievement: that would start to be regulated by the LDB.

Immediately after the promulgation of the Constitution in 1988, the bill that would result in the creation of the LDB was proposed in the Chamber of Deputies by a PMDB congressperson. It did not encompass the concept of assessment of educational achievement per se, but one of ‘verification of educational efficiency’ (Brazil, 1998). The bill had a long and complex processing in the National Congress, and even before its implementation in 1996 two large-scale assessments were created in the light of these discussions: the National Evaluation System of Basic Education (SAEB), to evaluate the student performance in the primary and lower secondary; and the National Examination of Courses (ENC), also known as the *Provaão*, to evaluate higher education courses. The SAEB was created in 1991 during the mandate of the right-wing party PRN. The ENC, on its turn, was created in 1995, while the neoliberal party PSDB was in power.

Despite the overwhelming right-wing political environment that surrounded the creation of the LDB, its final text is reasonably progressive in its consideration that the student is the agent of its own education (Gomes, 2016: 63). Regarding the assessment of educational achievement, the LDB established the ‘system of continued progression, with no detriment of the teaching-learning process’ (Brazil, 1996: art. 32 §2). Therefore, by 1998 the country had not only passed a legislation suitable to the new democratic political environment that was taking shape, but also implemented two large-scale assessments of educational achievement, one for the basic education, the SAEB, and another for higher education, the ENC.

Likewise, the academic discussion was permeated by the scenario of social change in the country and impregnated by political discussions. According to INEP

(MEC/INEP/COMPED, 2001: 63), two institutions highly influenced the discussions regarding educational assessment, concentrating the vast majority of academic papers about the subject in the 1990s: Fundação Carlos Chagas, that publishes the journals *Estudos em Avaliação Educacional* (Studies in Educational Assessment) and *Cadernos de Pesquisa* (Research Papers) and Fundação Cesgranrio, that publishes the journal *Ensaio* (Essay). Both institutions are NGOs created during the military dictatorship regime and both focused on different types of educational assessment services, especially exams, but also including certifications. Few were the articles that focused on the evaluation of public policies in the area of educational assessment, and some of them in fact reflected the government official discourse (MEC/INEP/COMPED, 2001: 64). The academic debates on educational assessment during the period were concentrated, as argues Vianna (1992; 1993; 1995), around the scarcity of professionals experienced in educational assessment in the country and the need for proper standards for the exams (Vianna, 1995). The author points out that the various projects of assessment in the country during the 1960s military dictatorship until that point in time lacked continuity, validation of methodology, and transparency, compromising the results and uses of the assessments in place (Vianna, 1992). The author adds that the assessment process in place during the period was only focused on the final results, ignoring the formative aspect (Vianna, 1993). Saul (1992) adds to the criticism of the educational assessment professionalism in the country pointing out that the Brazilian assessment culture presented authoritarian characteristics (punishing the student and serving as a bureaucratic instrument of control to educational administrators) and that it needed to change to a new paradigm that privileges an emancipatory and democratic assessment.

Summing up, the context that advanced the creation of the ENEM was marked, from one side, by the publication of two foundational legislations: the Brazilian Constitution and the LDB, both majorly written by right-wing politicians with sparse influence of left-wing politicians; from another side, by an academic and technical debate concentrated on the hands of two NGOs, centred on the need for professionalization of the assessment field in the country, but with virtually no consideration of social aspects such as social class inequality.

First era: ENEM: 1998-2008 - Context of text production

The last section covered the context of influence that paved the road to the development of the ENEM in 1998. The LDB, created two years earlier, established that the Federal Government had the responsibility to ‘secure the national process of educational assessment on the primary, secondary and higher education’ (Brazil, 1996: art. 9, VI). Under that premise, the ENEM was promulgated by the *Portaria 438* (MEC, 1998) and defined by the policy text entitled *ENEM - Basic Document* (INEP, 1999), informing the development of the assessment intended for students concluding or egressing from the upper-secondary level of education. The policy defined its main objective as to evaluate the student preparedness for citizenship (INEP, 1999: 2). Nonetheless, it is interesting to notice the emphasis given in the text to the preparation for the labour market, under the justification of alignment with ‘international tendencies’ (INEP, 1999: 1). In their analysis of the upper-secondary education reforms implemented after the years 1990, Silva and Melo (2018: 1400) point out that the ENEM is part of an educational system with a structural duality: from one side, it is a model of education focusing on the formation of the working masses, but from another side it is focused to the formation of citizens that will have professions demanding high skills. That emphasis in the labour market is in fact transparent in the three specific objectives deriving from the main one (INEP, 1999: 2):

- I. to offer a reference so that each citizen can carry out their self-assessment with a view toward future choices, both in relation to the labour market and in relation to the continuation of studies;
- II. to structure an assessment of basic education that serves as an alternative or complementary to selection processes in different sectors of the labour market;
- III. to structure an evaluation of basic education that serves as an alternative or complementary modality to exams for access to post-secondary vocational courses and higher education.

Overall, the policy is a very straightforward and pragmatic text that in no more than two pages establishes a large-scale assessment of educational achievement for students egressing or concluding the upper-secondary, whose results can be used majorly for three different purposes: self-assessment, as an alternative or complementary

assessment for access to higher levels of education, or even as a selection process in sectors of the labour market. The remaining 13 pages of the document provides detailed information about the examination process and practicalities, and about the Matrix of Abilities and Competencies (INEP, 2012a). The matrix for the ENEM was developed by a multidisciplinary team composed of subject matter specialists, developmental psychology researchers, and psychometricians, coordinated by the ENEM director from 1998 until 2002 Professor Maria Inês Fini.

Despite the text of the policy suggesting that the ENEM can be used as an alternative or complement for access to higher levels of education, it does not mention any mechanism of how that could or should be done. As such, despite its readerly nature given for the fact that the practice of application of the assessment depend solely of the government and the potentially high stakes purposes the nascent ENEM could assume, it was in fact a surprising writerly text in its uses, allowing even for that potential use being completely ignored. What raises the question if the use in practice of the assessment was in fact in accordance to its intended purpose. However, it is only usual that a policy is complemented or connected to others in order to make sense in a more comprehensive context or for wider objectives, possibly arriving at a more nuanced ideological context. As a matter of fact, two other major educational policies were published in 2001, not as a consequence, but following the establishment of the ENEM. The first one, intended to address the very issue of social class inequalities, was the *Bolsa Escola* programme (Brazil, 2001b), a conditional cash transfer scheme implemented in 2001. It intended to pay a scholarship to students from low income families who were enrolled and regularly attending school. The second major relevant policy that followed the implementation of the ENEM was the National Plan of Education (Brazil, 2001a): a ten year strategic plan detailing the national educational objectives for the period, abiding to the relevant legislation, that is, the National Constitution and the Law of Directives and Bases for Education. The *Bolsa Escola* did not present in its text any recommendation specific to the assessment of educational achievement, and it did not clearly indicate whether it was intended to address social class inequalities in education that could possibly affect the performance of students in the ENEM, or if it had any other social aims. The National Plan of Education, however,

reinforced the importance of the ENEM to ‘track the results of the upper-secondary education and to correct its flaws’ and to ‘improve student performance’ (Brazil, 2001a: 25), which means that it had a focus on educational achievement the *Bolsa Escola* did not. But like the *Bolsa Escola*, it failed to mention social class inequalities in the context of the ENEM, even though it did have as one of its three objectives and priorities ‘the reduction of social and regional inequalities in the access and continuity of the public educational system’ (Brazil, 2001a: 5).

Finally, it is worth to acknowledge that Cesgranrio was chosen as the solo institution to deliver every stage of the ENEM: from collecting enrolment records composed of the fees receipts and the socioeconomic questionnaires (Minhoto, 2008: 73), to printing, packing, transporting and collecting the physical test papers (INEP, 1999: 19), and even participating in the marking (INEP, 1999: 24). That choice was possible due to its special status granted by Federal law 8.666 in 1993 (Brazil, 1993), which allowed Cesgranrio to be commissioned by any public agency.

In summary, the context of text production in which the ENEM was created followed suit with the context of influence: all major policy texts published were written under a neo-liberal presidency and Cesgranrio, one of the major institutions that published academic papers on educational assessment and responsible for some of the principal higher education entry examinations in the country, was chosen as the solo third-party to deliver the assessment.

First era: ENEM: 1998-2008 - Context of practice and outcomes

The context of practice and outcomes is in a great measure about: the implementation and reception of the policy; the actual use made of it, notwithstanding its intended, unintended and unrevealed purposes; and its impact on the receptors, including in relation to inequalities. Moreover, since the period this study focuses on was divided in two cycles, the first and the second era, it is important to notice the impact the outcomes that an era can have on the next one.

In its first year of administration, the ENEM had 157, 221 enrolments from a total of almost 2 million students attending their last year of upper-secondary school (MEC &

Inep, 1999: 51); that is, approximately only 7.8 % of the population apt to take the ENEM actually enrolled. Only two universities accepted the ENEM as an entry assessment that year (Santos, 2011: 199). In practice, from the students' perspective, the ENEM had no useful purpose, therefore it was not worth taking (Santos, 2011: 198). Consequently, if the ENEM had the purpose to function as an entry assessment for higher education and replace the very traditional selection process in place, called *vestibular*, in which each institution has its own assessment process, as it was suggested in the policy text (INEP, 1999: 2), much had to be done. In order to achieve its objectives, the Ministry of Education initiated a lobby to convince a larger number of universities to accept the ENEM in their selection process. In a public speech made in December 1998, for instance, the Minister of Education appealed to the universities to accept the ENEM as their main entrance assessment (Santos, 2011: 198). Additionally, in 2001 the government waved the enrolment fee for students egressing from public schools. As a result, the number of test takers soared from 390,574 students in 2000 to 1,624,131 in 2001, a rise of more than 300% (INEP, 2001a; INEP, 2001b). Those figures trigger the question whether the ENEM as a standalone policy, without any inclusive mechanism, would be merely reproducing or increasing inequalities in the access to higher education. Despite the Government's demonstration of power to attach the ENEM to access to higher education (da Costa, 2004), no formal mechanism was put in place to support universities or students into making the connection between the ENEM and their application to a university. In fact, the INEP (INEP, 2002: 41), found an unexpected declining pattern in the proportion of students declaring to sit for the assessment in order to use the scores to compound their grades in the assessments of universities utilizing the ENEM partially (from 50% in 2001 to 43% in 2002), despite the raising number of higher education institutions accepting it. The hypothesis raised by the INEP was that the raising number of students from lower income families taking the assessment were deliberately using the ENEM exclusively for other purposes.

Another purpose of the State in implementing the ENEM, according to (da Costa, 2004: 5), was to induce a new curriculum, based on abilities and competencies, instead of subject content. Again, this was not explicitly stated in the policy; however, it was maybe implicit in the fact that the items were constructed using the Curriculum Matrix

for the Upper-Secondary (INEP, 2012a), developed by the same team that created the ENEM and included it in its policy. The research done by Santos (2011) seems to corroborate this claim. In a series of interviews, teachers, considered important user groups of the policy alongside students, explained that they started to change their practice to teach to for the ENEM and overwhelmingly compared it with a new type of vestibular. That writerly interpretation of the assessment caused the introduction of a new curriculum to the upper-secondary, adapted to the assessment (da Costa, 2004: 5) giving the ENEM a new purpose.

In 2003, the political context changed drastically again, after the first left-wing president democratically elected took office. The period from 2003 to 2008 (the last year of the first era of the ENEM) can be considered, as it will be described in the next section, the context of influence of the new era of the ENEM. However, from 2003 until 2008 no significant changes were made in the ENEM, while its outcomes were greatly impacted by some major policies directed to tackle social class inequalities in the access to higher education.

In 2004, the first policy consequential to the outcomes of the ENEM was the University for All Program (ProUni). The Program granted scholarships to economically disadvantaged students depending on family income, allowing them to enrol in private higher education institutions. Because of the new available funding, the number of ENEM test takers almost doubled from 2004 to 2005, rising from 1,552,316 to 3,004,491 (INEP, 2007a; INEP, 2007b). More significantly, while in the first year of the ENEM in 1998 only 18% of test takers declared to belong to a family with income lower than two times the minimum wage, that figure raised to 26% in 2001 (when the enrolment fee was waived) and to an impressive 46% in 2005, with the creation of ProUni (INEP, 1998; INEP, 2001b; INEP, 2007b).

Summarizing, the ENEM remained, in the first era, fundamentally the same from the year of its implementation in 1998 until 2009, when it was re-designed with the addition of new purposes and a reformulation of its methodology and design.

As noted by Freitas et al. (2009: 107), the main purpose of the ENEM when it was created was to provide the students concluding the upper-secondary with subsidies to

make decisions regarding their continuity in the educational system or their entrance in the labour market. However, the assessment was acquiring other purposes such as an entry assessment to higher education, an assessment to be used by the labour market or even a ranking of upper-secondary schools, mischaracterizing its initial purposes. As such, the ENEM started to be considered in practice a high-stakes assessment, not only by students and their families, but also by schools, teachers and the society in general, imposing a change in its official purposes. Additionally, as briefly mentioned before and further delineated in the next section, those changes did not occur in isolation, they were inserted in a new political and socio-economic context.

Second era: New ENEM: 2009-2015 - Context of influence

In 2009 the ENEM was reformulated, marking the start of its second era, when it became known as the New ENEM. In this section, I examine the conditions that influenced such change, starting in 2003 when the left-wing Workers Party (PT) took office. That same year, a commission of rectors from the Federal Universities was invited to a meeting with the Federal Government. According to an account from Professor Wreana Maria Panizzi, rector of the Federal University of Rio Grande do Sul at the time and a member of that commission, they were invited to bring suggestions regarding the education in the country and to discuss their conception of higher education institutions and their role in the country (Ristoff & Sevegnani, 2006: 176).

Still, as explained by Panizzi, they tried to enlighten the politicians in charge that in order to allow educational policies to work, they must be accompanied by socioeconomic policies to tackle inequalities. The ENEM, for instance, was already considered, by the National Plan of Education of 2001 (Brazil, 2001a: 24), as part of a network of assessments and other mechanisms used to evaluate the student performance in the primary and lower secondary, and to promote the efficiency and the equality of the lower and upper-secondary education offered in all regions of the country. But the rectors suggested that it was necessary to promote an expansion of the public universities as well: the existing plural system mixing private and public universities was acceptable, according to them, but given the sharp social class inequalities in the

country, the Government ‘almost had to pay students to be able to attend the universities’ (Ristoff & Sevegnani, 2006: 176).

Interestingly enough, as we saw in the last section, the first major policy from this Government that impacted the ENEM was precisely the ProUni (Brazil, 2004b), that provided full and partial scholarships to students from the lower social classes egressing from public schools. Professor Eliezer Moreira Pacheco, while acting as National Secretary of Professional and Technological Education, highlighted, in 2006, the importance the ENEM had as an entrance gate to ProUni (Ristoff & Sevegnani, 2006: 104). In 2007, the Government launched the Programme of Support to Plans of Restructuring and Expansion of Federal Universities (REUNI), aiming to expand the number of places available in the public higher education in the country (Brazil, 2007). As a consequence, 14 new Federal Universities were established by 2010 (first year of university entrance after the creation of the New ENEM), an addition of 31% to the 45 Federal Universities that existed in 2003 (Andriola, 2011: 114). Additionally, new courses and new positions were created: the Ceará Federal University, for instance, almost doubled the number of courses available, offering 103 courses in 2010, against 53 that were available in 2003, and more courses were being offered in the countryside of the Ceará state, decentralizing the coverage of the university (Andriola, 2011: 115).

Coincidentally, therefore, four years after that first meeting with the federal university rectors, the government had implemented the *Bolsa Família*, the REUNI and the ProUni, addressing wider social inequalities, expanding public universities and even paying students to stay in the university. It seems clear that the context that preceded the creation of the New ENEM was influenced not only by politicians belonging to a different position in the political spectrum, but also by different institutional agents, this time the federal universities, instead of NGOs such as Cesgranrio as was the case in the first era of the assessment. Further, by the content of the policies published in that context, the New ENEM was being turned into a central piece in the expansion of the access to higher education.

Second era: New ENEM: 2009-2015 - Context of text production

A new policy was published in 2009, reformulating the ENEM into what became known as the New ENEM (INEP, 2009b). Table 1 in the Background chapter provides an overview of the changes in objectives, design, and structure of the ENEM.

There are two main changes worth noting. The first, regarding objectives, and the second, in relation to the design and structure of the ENEM. Previously, in a backwash effect, the ENEM was already being used as an entrance test for higher education institutions, despite the lack of any mechanism to facilitate that use and the fact that its main objective was the self-evaluation of the preparedness of students to become good citizens. The ENEM reformulation in 2009 was therefore the aftermath of that mismatch between the text produced in 1998 and the actual use made of it by all its user groups. The new text added four specific objectives to the former three, making it clear the repurposing the Government was making of the ENEM (INEP, 2009b: 1):

- IV. to facilitate the participation and create conditions of access to government programmes;
- V. to promote the certification of young and adult persons egressing from the upper-secondary education in the terms of the art. 38, §§ 1º and 2º from the Law nº 9.394/1996 - Lei das Diretrizes e Bases da Educação Nacional (LDB);
- VI. to promote the evaluation of academic performance in the upper-secondary schools, so that each school will receive their overall results;
- VII. to promote the assessment of the academic performance of students entering the Institutions of Higher Education.

Summing up the new specific objects, from 2009 on the ENEM started to have as its main purpose to assess the readiness for tertiary education. The original three objectives were kept basically the same, only having two very subtle but significant changes in the wording. Where before we could read ‘to structure an evaluation of basic education’ (INEP, 1999: 2), the text now reads ‘to structure an evaluation at the end of the basic education’ (INEP, 2009b: 1), making it clear that the assessed is the student, not the system. Second, the previous wording ‘labour market’ (INEP, 1999: 2) had been changed for ‘world of labour’ (INEP, 2009b: 1).

As seen in the context of practice of the first era of the ENEM, despite intended as a readerly text under the control of the State, the stakes for those taking the test were not immediately high because it was in practice a surprising writerly text many times being ignores. In the reformulation to the New ENEM, in order to make the assessment useful for its new purposes, it also underwent a redesign of its structure. The first main change was the replacement of the underlying measurement methodology, consisting of the Classical Test Theory, with the Item Response Theory (INEP, 2013a: 8-9, 31-32). As already discussed in the ENEM Background section, that is a consideration disputed in the specialized literature about psychological measurement. As a matter of fact, the adoption of the IRT in the ENEM itself is not a consensus. Cordeiro (2014: 293) argues that the Item Response Theory grades are combined with essay marks which are obtained through a completely different measurement scale, generating incompatible numerical grades causing a distortion in the approval rates: in the New ENEM, up to 76% that fails the test would have been approved if the Classical Test Theory were used as the measurement methodology.

The second relevant change in the assessment structure and design was in regards to the construction of the items, as they now needed to assess the content from the subjects expected to be reached in the upper-secondary education (added to the Matrix of Abilities and Competencies (INEP, 2012a)) instead of the abilities and competences, which remained as higher level organizers of the content implemented (INEP, 2013a: 8). In assessing the content covered in the upper-secondary curriculum (Andriola, 2011: 115), the Government addressed, as we saw in the context of practice and outcomes of the first era of the ENEM, a writerly reading of the policy text, making it official an interpretation of its uses. The ENEM was in fact becoming a new type of vestibular.

However, the reformulated ENEM must not be considered as an isolated policy. Besides the ProUni (the program that granted scholarships to low income students attending private universities), a series of policies were implemented to create a system connecting the results of the ENEM with access to higher education and to other government programs, contemplating the four new objectives of the policy. In 2010, the Government put in place the Unified Selection System, allowing students that took the ENEM to enrol in higher education institutions accepting the ENEM as its entry

assessment in its totality or partially (Brazil, 2010). In 2011, the Government created the program Science Without Borders, that granted scholarships for undergraduate and postgraduate students and researchers for study abroad (Brazil, 2011). The ENEM was included in the selection process for Science Without Borders, and the students applying had to have a minimum score to be eligible. In 2012, a major affirmative policy was implemented: the Quotas Law (Brazil, 2012a; Brazil, 2012b). According to this affirmative policy:

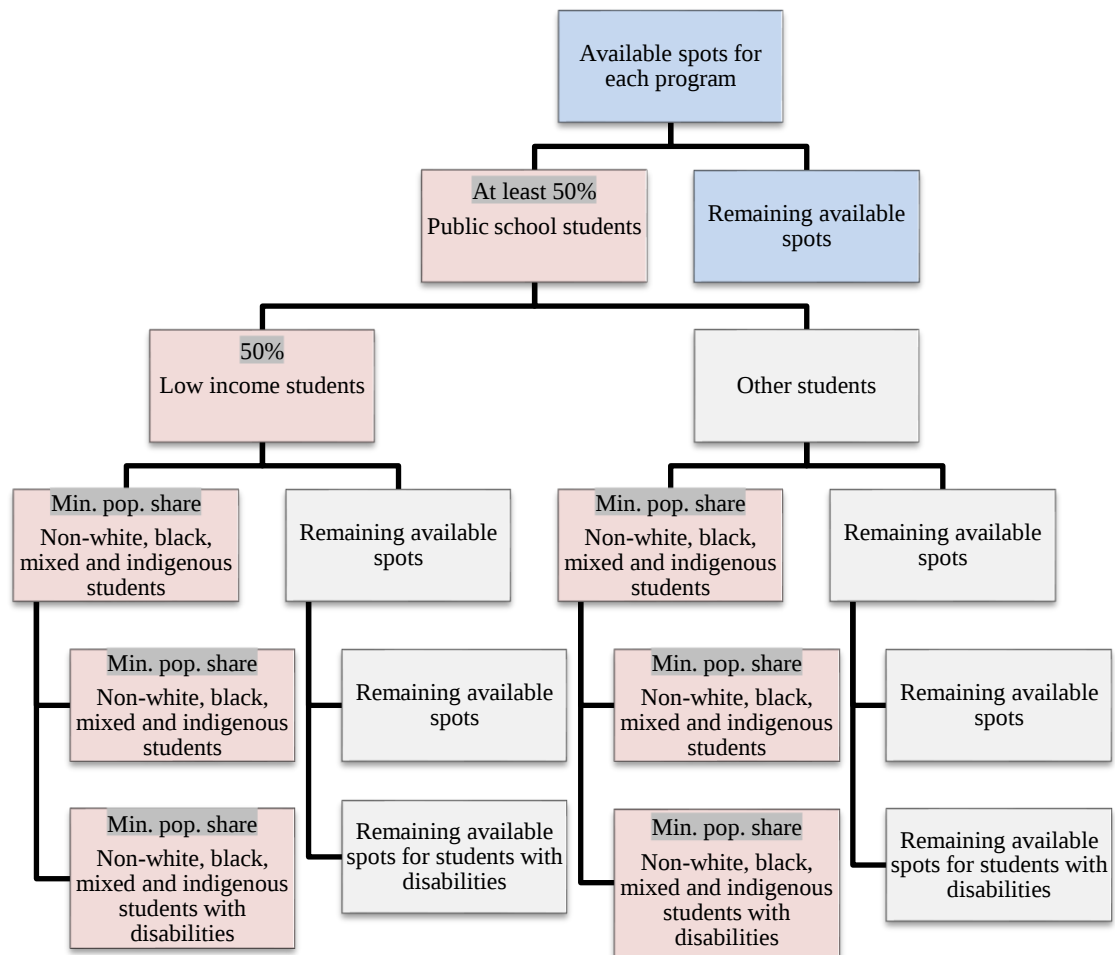
- 50% of the available places in all Federal institutions should be reserved to students that attended all three years of upper-secondary in public institutions;
- the other 50% would remain open to any applicant;
- among the reserved spots, 50% must be reserved to students from low income family (with gross per capita income of 1.5 minimum wages or less);
- among the remaining 50% and the reserved low income quota, 50% of the spots should be reserved to non-white, black, mixed and indigenous students, according to the percentage of these groups in the population of each state (defined by the Brazilian Institute of Geography and Statistics Census).

For easiness of understanding, Figure 2 pictures the scheme described above.

Concluding, the New ENEM context of text production was in fact a network of interconnected policies that in practical terms centralized the admission to tertiary education in the country. The outcomes of that arrangement of policies will become clear in the next section.

Figure 2

Schematic representation of the distribution of spots in the Federal institutions according to the Quotas Law.



Note. Non-white in the context of the Quotas Law includes black, mixed and indigenous students.

Source. Adapted and translated from <http://portal.mec.gov.br/cotas/sobre-sistema.html>

Second era: New ENEM: 2009-2015 - Context of practice and outcomes

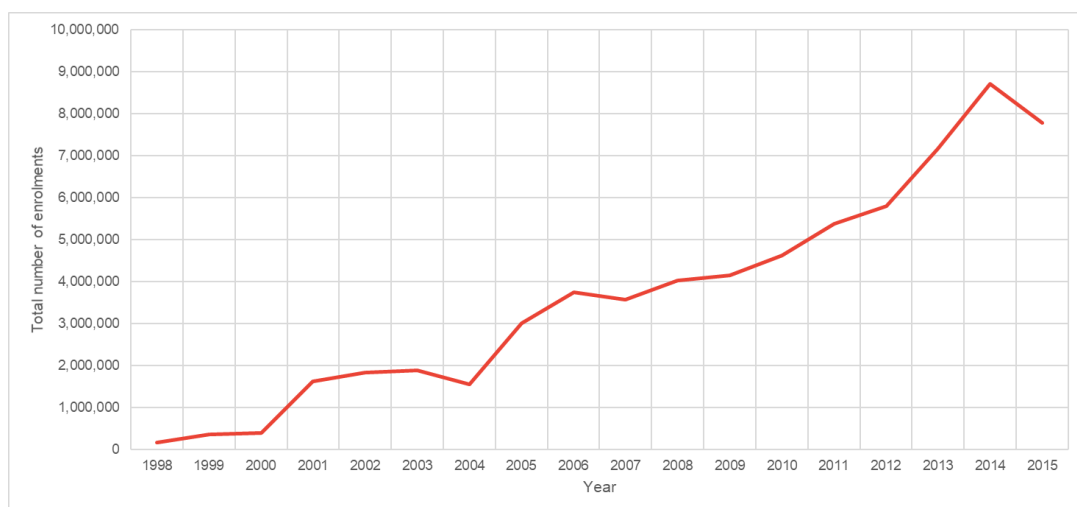
The primary question to be answered in the context of practice and outcomes is regarding the reception and interpretation of the policy. As it was exposed in the last section about the context of text production, the main change the ENEM received in 2009 was regarding its objectives, that is, regarding its purpose: from an assessment for

self-evaluation of the preparedness to higher education, it would be now a tool to ‘promote the assessment of the academic performance of students entering the Institutions of Higher Education’ (INEP, 2009b: 1). Interestingly enough, the ENEM was already being used as an entrance test for higher education institutions, consequently the reception of that new policy was of general acceptance, what made the change almost seamless from the point of view of students, teachers, upper-secondary schools and universities.

From a purely numerical point of view, we can see on figure 3 that enrolment to the assessment continued to increase after its reformulation, with a small peak in 2013 and 2014, the years that followed the implementation of the Quotas Law in 2012.

Figure 3

Number of enrolments for the historical series from 1998 to 2015



Source: Built with data from *Microdados ENEM* (INEP, 2020b).

The Centralized Admission System (SISU), created alongside the implementation of the New ENEM, provided a mechanism that facilitated the adoption of the assessment as a selection tool to higher education. As can be seen in table 4, an increasing number of institutions adopted the system every year from its implementation in 2010 (to receive the first cohort taking the New ENEM), and in 2015 108 out of 131 public institutions adopted the ENEM fully or partially in their admission process (Mello, 2019: 33), showing how the State can command the context of practice in the implementation of a policy.

Table 4

*Expansion of the Centralized Admission System (SISU)
in the Brazilian Higher Education Institutions.*

Year	All Public Institutions (total = 131)	Public Federal Institutions (total = 94)
2010	55	52
2011	73	68
2012	82	75
2013	88	77
2014	102	89
2015	108	92

Source: Adapted from (Mello, 2019: 33)

Another purpose clearly stated in the policy was to ‘Facilitate the participation and create conditions of access to government programmes’ (INEP, 2009b: 1). As a matter of fact, in 2011 the ENEM started to open doors way beyond the country borders or even Portugal, as the assessment became one of the three possible way of access to the scholarship program Science Without Borders. From 2011 until 2015, 73,352 undergraduate students received scholarships to study abroad in countries from all continents (Lopes, 2018: 81). It is interesting to note that the number of students contemplated by the Science Without Borders steadily increased from 2011 until 2014, and then had a huge reduction in 2015, the year the left-wing president was impeached by a coup d’état. Not coincidentally, we can also see a reduction of 11% in the number of enrolments for the ENEM in that year, as noted in figure 3.

Based on the figures exposed on table 5, it seems that the students perception, and consequently reception, of the New ENEM has changed significantly in relation to the first era ENEM, when they did not see a point in taking the assessment because it would not generate any further benefit than self-assessment (Santos, 2011: 198).

However, all these figures refer to the total number of students and, although they can provide an important metric of the expansion of access to higher education, they inform little about social class inequalities among the cohort taking the exams. We must now analyse if the policy had any impact in reducing social class inequalities or, on the

contrary, if it reproduced old ones, or even created new ones. That will be done in the next chapter.

Table 5

*Number of Undergraduate Scholarships by
Year of the Science Without Borders Programme*

Year	Number of scholarships
2011	910
2012	10,279
2013	19,562
2014	29,846
2015	12,755
Total	73,352

Source: adapted from (Lopes, 2018: 81)

6. Discussion

The present study was designed to determine to what extent the changes in purposes of the Brazilian National Upper-Secondary Exam (ENEM) widened the access to higher education in the country. In order to do that, a document analysis of assessment policies was performed. The review of the literature on educational assessment emphasized the relationship between the purpose of the assessment and the practice of its uses, highlighting the notion that any such assessment must have clarity of its purposes because, as put by Pellegrino, Chudowsky and Glaser (2001: 40), one type of assessment does not fit all purposes. According to Newton (2007: 149), that is the most important message for policy making. Additionally, in order to understand the influence of assessments in matters of social inequality, I reviewed the literature on the Maximally Maintained Inequality hypothesis (Raftery and Hout: 1993), and on the Effectively Maintained Inequality conjecture, as developed by (Lucas: 2001). Further, after providing a contextualization of the ENEM and the Brazilian higher education system, I explained the methodology I followed, first by identifying Ball's Policy Cycle framework as the most suitable method to analyse the educational policy texts available, and second by explaining the methods I used to search, code, sort, and further

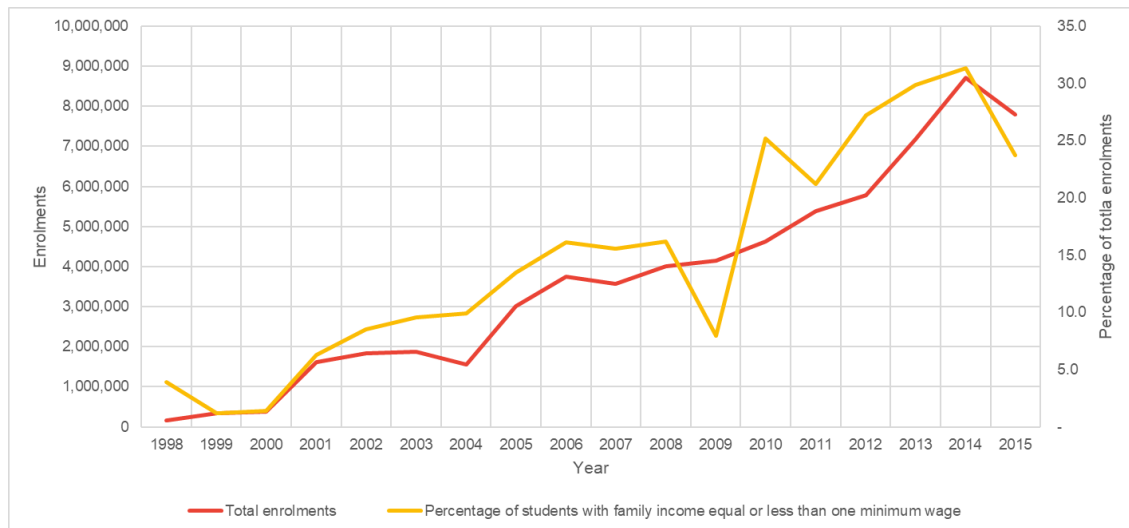
analyse the texts. Finally, using those methods, I showed the findings of my analysis in the chapter Results. That chapter was structured in accordance to the policy cycle framework: divided in six sections, three for each context of the first era of the ENEM, and another three for each context of the second era of the assessment, known as New ENEM. In the current chapter, I expand my analysis and the data showed in the results in order to interpret the findings, and indicate the limitations of my dissertation, suggesting possibilities for future research.

The Results, as previously mentioned, covered figures referring to the total number of enrolments that, despite providing an interesting picture of the coverage of the ENEM, say little about the social equality gap among the cohorts taking the assessment. Continuing to build on the data searched and sorted for this dissertation, I would like to provide a descriptive picture of the socio-economic background of test takers through the period the data covers. This should allow me to interpret the outcomes of that policy cycle and to investigate how the policy is situated in the widening of the access to higher education in Brazil. With that aim, I start by adapting figure 3 from the Results chapter, that represents the total number of enrolments from 1998 to 2015. This time, however, I add to it two pieces of information: the percentage of students taking the ENEM in that period who had family income equal to or less than one minimum wage, extracted from the ENEM reports coded into the policy cycle framework, and the other policies created in the period, also coded into the policy cycle framework. This results in figure 4.

It is interesting to notice in figure 4 that the raising pattern of students taking the assessment was in a great measure accompanied by the increase in the proportion of low-income students taking it. From one side, that data shows a positive picture, indicating that the ENEM attracted more students from economically disadvantaged families through the years. However, this does not necessarily translate into a larger participation in higher education. A study of the 2012 cohort from São Paulo, the economically most prosperous Brazilian state, shows that class of origin affects both the performance of the test takers, and also their aspirations (Pires, 2015: 523).

Figure 4

Percentage of students with family income equal or less than one minimum wage taking the ENEM per year from 1998 to 2015 in relation to the total number of enrolments.



Note. In the year 2009, there was an average of 47% of ‘I do not have the information’ answers in all categories of the socioeconomic questionnaire, causing an outline data point that can be observed in figures 4, 5 and 6. No information regarding the reasons for that discrepancy was encountered in the texts analysed.

Sources. Built with data from: INEP (1998); INEP (2000); INEP (2001a); INEP (2001b); INEP (2002); INEP (2004); INEP (2007a); INEP (2007b); INEP (2008a); INEP (2008b); INEP (2009a); INEP (2010); INEP (2011); INEP (2012b); INEP (2013a); INEP (2013b); INEP (2014); INEP (2015c); INEP (n.d.).

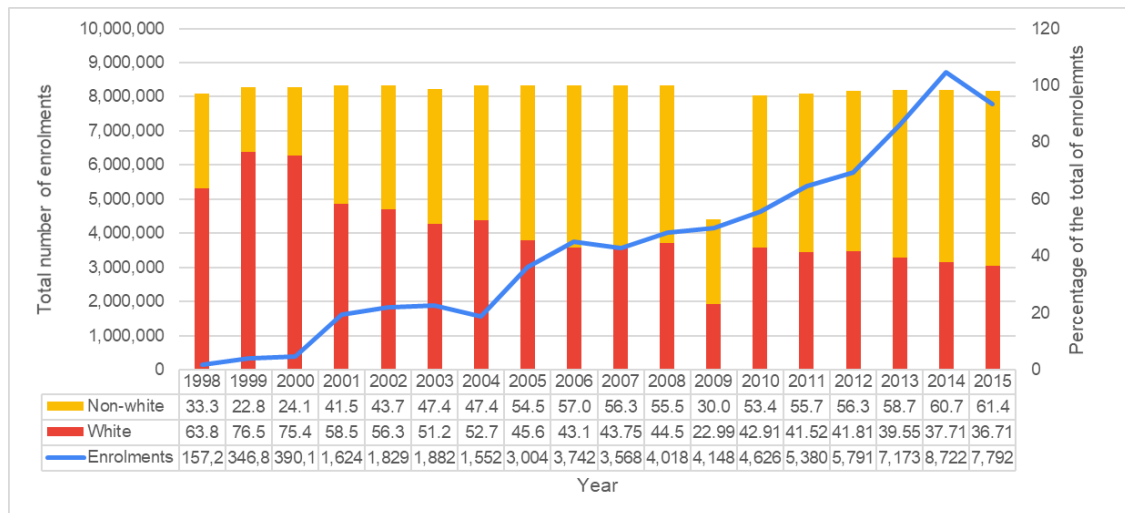
Grouping results by student family income, the difference between the average grades was 30.7% in favour of the wealthier (Pires, 2015: 537). The author also identified that not only the increase in income, but also of schooling of parents has a positive effect on the average grade. For the subgroup drawn from parents' education, the difference between the average grades was 9.6% in favour of those whose father or mother has a college degree. Additionally, the author demonstrates that students with higher income and parental education aspire to enter the free public higher education (known for its excellence) with a good deal of confidence, while the poorest and with less educated parents, although they desire to enter the public higher education, believe the obvious choice for them would be to enter the less competitive private institutions, as long as they can count on aid to pay tuition (Pires, 2015: 539).

Figueirêdo, Nogueira, and Santana (2014) found similar patterns in their analysis of the equality of opportunities in the cohort sitting for the ENEM in 2010. According to the authors, factors such as family income and parental schooling, especially of the mother, are essential in determining unequal opportunities. They show that those from underprivileged social backgrounds need to strive around 99.38% more than an individual with a high background to be among the 5% with the best grades (Figueirêdo et al., 2014: 389-90). The most outstanding find in their research is that the indirect effect of maternal schooling in student performance in the ENEM is 2,36 times higher than direct effects such as effort and ability (Figueirêdo et al., 2014: 174). That study corroborates the importance to consider how class affects the inequalities in the access to education under the both frameworks of Marx's stratifying concept of class, useful to understand social reproduction of inequalities fostered in the educational systems of a capitalist society (Marx, 1990: 718), and of Bourdieu's cultural capital concept influence on educational success (Bourdieu, 1984), useful to understand the reproduction of inequalities through symbolic goods such as access to resources and parental educational influence.

The third and last indicator of social inequality I want to add to this discussion, also collated by the ENEM socioeconomic questionnaire, is the ethnicity (race or colour) of those taking the assessment. In a similar pattern seen in figure 4, figure 5 shows an increase in the participation of ethnic minorities (non-white: mixed, black, yellow and indigenous) at the same time that the total number of enrolments increased. As in the case of the family income, however, the absolute increase numbers of non-white test takers do not show the full picture. Regarding colour and race, Pires (Pires, 2015) found that the higher the parental income and education, the greater the number of students that self-declared white. Conversely, the chances of identifying oneself as black or brown increased considerably in subgroups with lower parental income and education. This suggests that an analysis inequality based on one single factor only may not provide the full picture of how the most advantaged classes are keeping their privileged. I will return to this issue further ahead when I look at the results of the policies in separate and together.

Figure 5

Percentage of students from non-white ethnic background enrolled in the ENEM in relation to the total number of enrolments per year from 1998 to 2015.



Source. Built with data from: INEP (1998); INEP (2000); INEP (2001a); INEP (2001b); INEP (2002); INEP (2004); INEP (2007a); INEP (2007b); INEP (2008a); INEP (2008b); INEP (2009a); INEP (2010); INEP (2011); INEP (2012b); INEP (2013a); INEP (2013b); INEP (2014); INEP (2015c); INEP (n.d.).

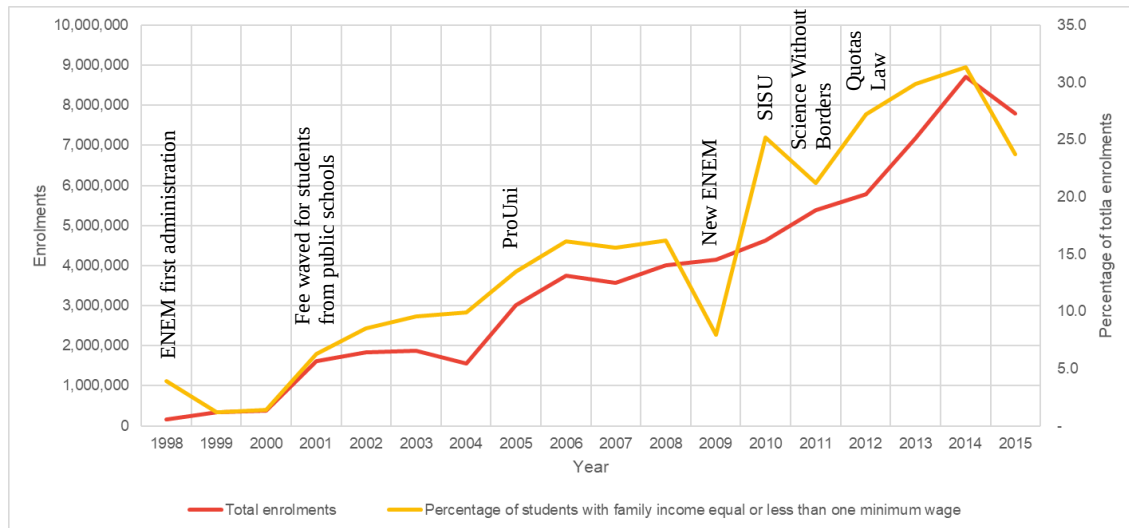
Family income, parental level of education, and ethnic background are only a few possible variables that allow for an analysis of social background; but, regarding the case of the ENEM, they have shown to be fundamental for an evaluation of the suitability of MMI or EFI propositions. Raftery and Hout (1993) and Paterson and Iannelli (2007), for instance, use parental occupation as established in the Goldthorpe class scheme (Erikson & Goldthorpe, 1992), while Lucas (2001) uses a more comprehensive set of variables that includes parental education and family income. As I mentioned in the Literature Review, however, the choice between any the types of measure can be complicated because, as a matter of fact, if measure and theory must be adequate to each other, they also must be adequate to the object and context to which they would apply. This matter of adequacy could be approached in this study by the adoption of the Socioeconomic Level Indicator (INSE). Created by the INEP in 2014 with the specific Brazilian context in mind, it uses data from the Basic Education Assessment System (SAEB) and the ENEM as a synthetic measure of family socioeconomic characteristics of students in Brazilian elementary and high schools. In its construct, it considers family income, parental schooling and familiar patrimony.

According to Barros et al. (2019: 8), its theoretical framework is based on Bourdieu's concept of reproduction of social inequalities as explained in the Literature Review. However, mine is a qualitative, not a quantitative analysis, hence I am not dealing directly with numerical variables. I am building my argument based on two types of qualitative data. First, on texts of research done by other academics – researches that make use mostly of family income and ethnic background. Second, on policy texts that, as I am going to demonstrate, were planned, produced and put in practice in a context where those very categories of family income and ethnic background were relevant.

Returning to the cycle of policies, in figure 6 (reproduced from figure 4 and added incremented with the policies in the year they were created), we should be able to notice that during the years of the first cycle, where the policy making was influenced by the PSDB right wing government, no policy or formal mechanism was put in place either to support the connection between the ENEM and entrance to a university, nor to address social inequalities related to the assessment (with the exception of the waving of the enrolment fee for students egressing from public schools in 2001). This raises the question whether the ENEM alone, without any inclusive mechanism, would be merely reproducing or increasing inequalities in the access to higher education. From another perspective, however, that would not necessarily be an issue, since the very purpose of the ENEM in its first era, as it became clear in the Results and in the Background chapters, was to evaluate the preparedness for citizenship, and not to widen the access to the higher education or to address the issue of social inequality.

Figure 6

Policies plotted within the figure representing the percentage of students with family income equal or less than one minimum wage taking the ENEM per year from 1998 to 2015 in relation to the total number of enrolments.



Source. Built with data from: INEP (1998); INEP (2000); INEP (2001a); INEP (2001b); INEP (2002); INEP (2004); INEP (2007a); INEP (2007b); INEP (2008a); INEP (2008b); INEP (2009a); INEP (2010); INEP (2011); INEP (2012b); INEP (2013a); INEP (2013b); INEP (2014); INEP (2015c); INEP (n.d.).

The policy strategy from the left-wing government that took office in 2003, based on the data analysed in the Results chapter and plotted in figure 6, was openly intended to widen the access to higher education and to reduce social class inequalities in the country. When the New ENEM was created in 2009, with the specific purpose to evaluate readiness for higher education, the political scenario was already set for that use of the assessment. It is true that it was redesigned aiming for a greater reliability of the measures, but what would make the test have great validity of its results would be the uses made of it: its fairness, how it would allow for widening the access to higher education, including reducing the social class inequalities reflected in the performance of test takers. In order to account for the uses of the exam, the context of policy making had to be considered – in the case of figure 6, represented by related policies.

The first one to mention, intrinsically connected to the New ENEM itself, was the creation of the Centralized Admissions System in 2010, to be used to centralize admissions to federal and state higher education institution using exclusively the

ENEM results. For the first time there was in place a formal mechanism to allow the ENEM this purpose for which it was created. As a consequence, out of the 131 public federal and state institutions existing in 2010, 108 had adopted the SISU over the next five years (Mello, 2019: 33). If only federal institutions were considered, from the 94 institutions in existence in 2010, only 2 had not adopted the SISU by 2015. Although those numbers show that the ENEM was, in practice, being used for the purpose it was designed, they do not show any democratization in the access to higher education. In fact, Mello (2019: 17) shows that the opposite was true: if the ENEM and the SISU were to be considered as a standalone enrolment system, the enrolments of students from low income families egressing from public upper-secondary schools would be reduced in 4.1 percentage points.

The scenario changed with the creation of another policy in 2012, the Quotas Law. Still according to Mello (2019: 17), the Quotas Law alone increased the participation in the higher education system of students from low income families egressing from public upper-secondary schools by 2.4 percentage points. Finally, Mello (2019: 17, 27, 35) shows that the conjoint system formed by the interaction of both the SISU and the Quotas Law with the ENEM boosts the participation of those students in the higher education system.

That whole mechanism together seems to work well for the purpose of using the ENEM as the centralized assessment for access to higher education. However, as mentioned above, Pires (2015: 539) demonstrated that the test takes egressing from low income families with low parental schooling would only consider determined higher education institutions as long as they could count on aid to pay for tuition. Or, as put by the rectors that met with the (left-wing) government in 2003, some of the students would have to be paid to attend universities (Ristoff & Sevegnani, 2006: 176). So, even before the mechanism of admissions to the higher education composed by the ENEM, the SISU and the Quotas Law was put in place, the government had already addressed social and class inequalities in the access to higher education by creating, in 2005, the University for All Program (ProUni), that granted scholarships to economically disadvantaged students depending on family income, allowing them to enrol in private higher education institutions.

Comparing the inequality in access to the higher education using data from the cohorts taking the ENEM in 2004 (second year of the new left-wing government and still in the first era of the assessment) and in 2014 (the second era of the assessment and already within the influence of the Quotas Law and of the Centralized Admissions System), Caseiro (2016: 22) shows that there is a reduction in the effects of socioeconomic variables such as race/colour and family income per capita in the rate of access of that population to the higher education.

Table 6

Rate of access to higher education for the population from 18 to 24 years old egressing from the upper-secondary education – 2004 and 2014 (%).

Group		2004	2014
Race / colour	Non-white	117.9	144
	White	38.5	44
Family income <i>per capita</i>	10% poorer	6.3	12
	10% richer	67.7	69.4

Source. Translated and adapted from Caseiro (2016: 22).

Caseiro's (2016) research suggests that the inequalities in access to higher education begin to decline even before the access to that level of education is universalized among the most privileged social classes. Consequently, the research suggests that the Maintained Inequality hypothesis (Raftery & Hout, 1993) does not apply to the expansion of higher education that occurred in the period of left-wing government, from 2004 to 2014 (Caseiro, 2016: 27-8), in Brazil. That is very significant because it signifies a reversion of the MMI confirmation shown in the Background chapter about the Brazilian educational system observed both by Ribeiro et al. (2015) in their analysis covering the years from 1960 until 2010 and of Prates and Collares (2014), covering the years from 1982 until 2006, (both, therefore, in the period before the second era of the assessment, the New ENEM). That data raises two related questions: first, has the New ENEM and the policies surrounding it (ProUni, SISU and Quotas Law) been more effective than the one in practice in the first era of the ENEM (and even before it), in

allowing students to continue in the educational system, making their way to higher education? Second, is Brazil, despite its context of colonialism, slavery and persistent social inequality, another example where wider social reforms reduced inequality more generally, like the Scandinavian countries cited by Paterson and Iannelli (2007: 351), therefore affecting not only the number of people enrolling to the assessment and actually accessing higher education, but also the composition of the cohort, making it less unequal?

Those are questions that cannot be answered by the data collected for this dissertation, and that is among the limitations of this work, that envisages to investigate that question exactly. Additionally, even if we could answer positively to those questions, according to the EMI conjecture (Lucas, 2001), that would not mean necessarily a reduction of the gap in access to education overall since, according to that conjecture, not even with the saturation of a certain level of education those inequalities are reduced, but solely transferred to other educational or social spheres. That is, the socially privileged classes would qualitatively advantages, such as prestige gained in accessing renowned (many times international) institutions (Lucas, 2001: 1653). That is, the ‘prestige of the qualification’ add to the cultural capital of the student, giving them social advantages (Bourdieu, 1984: 25). A possible example of EMI manifesting in the Brazilian context would be the Science Without Borders programme. Lopes (2018: 13-14) shows that, in the same period where Caseiro (2016) found a reduction in inequality in the access to higher education institutions using the ENEM scores, students with parents with high level of schooling and higher family income were more likely to receive a scholarship for Science Without Borders using their ENEM results. This suggests, by the model of the EMI, that the reduction in the inequality in the access to the higher education within the country was being ‘qualitatively’ transferred to the access to the international institutions, adding prestige to the cultural capital of the privileged in form of scholarships. However, as in the case of the MMI, the EMI conjecture cannot be verified by this dissertation.

The limitations regarding lack of data are partially due, I must acknowledge, to the Covid-19 pandemic of 2020, that affected my research more than I could expect. The pandemic reached Brazil in a period when I had just moved to the country from the

United Kingdom, due to problems related to Brexit. Beyond the impact caused by personal issues, centred on the contamination of a family member, what forced me to implement strict lockdown measures to protect the most vulnerable members of my family, the national scope of effects of the pandemic imposed the main restraints to my work. First, I literally saw myself without the basic resources to work: the closing of public and university libraries meant I not only lost access to some academic sources, but also to an adequate place to work. Second, and even more relevant, due to lockdown measures in some institutions I was prevented to search and collect data from some sources that could add much more insight to this dissertation. The INEP, for instance, was also closed, blocking access to both qualitative and quantitative data that I planned to gather from different data bases, which caused the original design of my dissertation to change significantly. Additional types of texts, such as political discourses, could also have added much insight to this work, especially regarding the types of influencers that acted on the policy production, but were also unavailable to me within the period of my research. Hence, three months before the submission of this dissertation, its design had to change from a mixed method work to a pure qualitative one, with an impact on the data collection, methodology, and literature review I had done so far. Despite that scenario, I was prevented from requesting an extension of the submission because of other work-related commitments, and so I proceeded within those constraints.

Therefore, independently of the reasons that constrained the search and collection of the data, it is clear that my conclusion will lack a more definite positioning if either the Maximally Maintained Inequality hypothesis or the Effectively Maintained Inequality conjecture can be identified in the case of the widening to the access to the higher education as it was investigated through a policy cycle review of the purposes of the two historical period of the ENEM. That is an investigation for future research, especially by those with not only access to the quantitative databases, but with the ability to cross the different data bases generated by the application of the policies investigated in this dissertation: the ENEM, the Centralized Admissions System, the Science Without Borders, the Quotas Law, and the ProUni. Moreover, that investigation may benefit from including in the data analysed the outcomes of the world

famous programme *Bolsa Família* (Brazil, 2004a), known as the largest cash transfer program in the world, benefiting poor and extremely poor families, especially those with children (Souza & Medeiros, 2013: 14). According to Souza and Medeiros, the program had a positive effect on reducing inequality in the country (2013: 25); if it is the case that educational reforms intended to reduce inequality of opportunities in the access to education only work in countries where there has been a wider social reform, any future investigations should consider the effects that a proved successful cash transfer program had.

7. Conclusion

In this dissertation, I used a policy cycle analysis method in order to determine to what extent the changes in purposes of the Brazilian National Upper-Secondary Exam (ENEM) widened the access to higher education in the country. At the time of the assessment creation in 1998, each and all higher education institution administered its own entry exam, generically called *vestibular*, that invariable followed (and continues to follow) a competitive and individualistic reasoning (Barros, 2014). The ENEM, however, did *not* came to replace the vestibular. Its sole purpose was, as it became clear in this dissertation, to serve as a self-evaluation mechanism for those egressing from the upper-secondary education and to determine if they attained the basic competencies necessary to the full observation of citizenship (INEP, 1999). That is, in my opinion, a much more noble purpose than a test whose main purpose is to select those who can proceed in the educational system. However, despite its noble official intentions, two outcomes in the context of practice of the original assessment fed back its policy development, as demonstrated by Santos (2011). For one side, students found the ENEM had no useful purpose, thus were not interested in sitting for it – despite, contradictorily, teachers having started to read the policy in a writerly way (Barthes, 1990) and interpreting it as a new kind of *vestibular*. On the other hand, when the assessment was reformulated in 2009 into the New ENEM, to serve the purpose of an entry examination to higher education (INEP, 2009b), the general interpretation was of a readerly text, and the data analysed show an expansion of students taking the exam and higher education institutions accepting. Allowing myself again to provide my

opinion, an assessment that is deliberately turned into what can be considered a social sieve to a level of education does not look very democratic, let alone egalitarian. However, the assessment in itself, no matter which underlying theory of measure it uses or its official purpose, is socially less relevant than the context in which it is inserted and the purposes it *actually* puts into practice. The New ENEM was only one piece in a set of policies whose purpose was to widen the access to higher education, in especial to socially disadvantage groups. And, as shown by the limited data I had access to and could analyse, the growth in absolute numbers (of test takers, institutions accepting, etc.) of the New ENEM was in fact followed by a growth in the rate of socially disadvantage population sitting for the assessment *and* accessing higher education. That data show that the New ENEM is, therefore, not only widening the access to higher education, but it does it in such a way that may suggest a contradiction (Caseiro, 2016) of the Maintained Inequality hypothesis (Raftery & Hout, 1993). Maybe it confirms the possibility, derived from a Marxist perspective of education, that in a capitalist society the reproduction of inequalities is nurtured in the educational systems.

References

- Alves, G., Gonçalves, M., Tonelli, M. L. Q., & Ramos Filho, W. (2017). *Enciclopédia do golpe*. Bauru, Brazil: Canal 6 Editora.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: Standards for educational and psychological testing.
- Andriola, W. (2011). Doze motivos favoráveis à adoção do exame nacional do ensino médio (Enem) pelas instituições federais de ensino superior (IFES). *Ensaio: Avaliação E Políticas Públicas Em Educação*, 19(70), 107-126.
- Baird, J., Andrich, D., Hopfenbeck, T. N., & Stobart, G. (2017). Assessment and learning: Fields apart? *Assessment in Education: Principles, Policy & Practice*, 24(3), 317-350. doi:10.1080/0969594X.2017.1319337.
- Balbachevsky, E., & Schwartzman, S. (2011). Changing governance and management in higher education, in W. Locke, W. K. Cummings, & D. Fisher. (eds.) *Brazil: Diverse experiences in institutional governance in the public and private sectors* (pp. 35-56). New York, NY: Springer.
- Ball, S. (1994). *Education reform: A critical and post-structuralist perspective*. Oxfordshire, England: McGraw-Hill Education.
- Bar Haim, E., & Shavit, Y. (2013). Expansion and inequality of educational opportunity: A comparative study. *Research in Social Stratification and Mobility*, 31, 22-31. doi:10.1016/j.rssm.2012.10.001.
- Barros, G. T. de F., Senkevics, A. S., de Oliveira, A. S., & Borgatto, A. F. (2019). *Indicador de nível socioeconômico dos inscritos no ENEM: Conceção, metodologia e resultados*. Retrieved from <http://rbep.inep.gov.br/ojs3/index.php/td/article/view/4045/3599>.

- Barthes, R., & Miller, R. (1990). *S/z*. Oxford, England: Blackwell.
- Black, P. J. (2002). *Testing: Friend or foe? Theory and practice of assessment and testing*. London, England: Routledge.
- Borsboom, D., & Mellenbergh, G. J. (2004). Why psychometrics is not pathological: A comment on Michell. *Theory and Psychology*, 14(1), 105-120.
doi:10.1177/0959354304040200.
- Borsboom, D. (2005). True scores, in D. Borsboom (ed.), *Measuring the mind: Conceptual issues in contemporary psychometrics* (pp. 11-47). New York, NY: Cambridge University Press.
- Borsboom, D. (2008). Latent variable theory. *Measurement: Interdisciplinary Research and Perspectives*, 6(1-2), 25-53. doi:10.1080/15366360802035497.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, MA: Harvard University Press.
- Bowe, R., Ball, S. J., & Gold, A. (1992). *Reforming education and changing schools: Case studies in policy sociology*. N.i.: Routledge.
- Brazil. (2002). *ENEM documento básico 2002*. Brasília, Brazil: Inep/MEC.
- Brazil, & Inep. (2019). *Censo da educação superior 2018: Notas estatísticas*. Retrieved from
http://download.inep.gov.br/educacao_superior/censo_superior/documentos/2019/censo_da_educacao_superior_2018-notas_estatisticas.pdf.
- Brazil. (n.d.a). *The chamber of deputies*. Retrieved from
<https://www2.camara.leg.br/english>.
- Brazil. (n.d.b). *Homepage Governo federal do Brasil*. Retrieved from
<https://www.gov.br/pt-br>.

- Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society*, 3, 275–305.
- de Brito, M. M. A. (2014). A dependência na origem: Desigualdades no sistema educacional brasileiro e a estruturação social das oportunidades (Unpublished doctoral thesis). Universidade de São Paulo, São Paulo, Brazil.
- Brown, H. P. (1988). *Egalitarianism and the generation of inequality*. Oxford, England: Clarendon Press.
- Buchmann, C. (2002). Measuring family background in international studies of education: Conceptual issues and methodological challenges, in A. C. Porter & A. Gamoran (eds.) *Methodological Advances in Cross-National Surveys of Educational Achievement*, (pp. 150-197). Washington, D.C: National Academy Press.
- Brazil. (1981). Decreto nº 19.851, de 11 de abril de 1931.
- Brazil. (1988a). Constituição da república federativa do Brasil.
- Brazil. (1988b). Projeto de lei nº 1.258, de 28 de novembro de 1988.
- Brazil. (1993). Lei nº 8.666, de 21 de junho de 1993.
- Brazil. (1996). Lei nº 9.394, de 20 de dezembro de 1996.
- Brazil. (2001a). Lei nº 10.172, de 9 de janeiro de 2001.
- Brazil. (2001b). Lei nº 10.219, de 11 de abril de 2001.
- Brazil. (2004a). Lei nº 10.836, de 9 de janeiro de 2004.
- Brazil. (2004b). Medida provisória nº 213, de 10 de setembro de 2004.
- Brazil. (2007). Decreto nº 6.096, de 24 de abril de 2007.
- Brazil. (2010). Portaria normativa nº 2, de 26 de janeiro de 2010.

- Brazil. (2011). Decreto nº 7.642, de 13 de dezembro de 2011.
- Brazil. (2012a). Decreto nº 7.824, de 11 de outubro de 2012.
- Brazil. (2012b). Lei nº 12.711, de 29 de agosto de 2012.
- Carnoy, M. (2013). *University expansion in a changing global economy: Triumph of the BRICs?* Stanford, CA: Stanford University Press.
- Caseiro, L. C. Z. (2016). *Desigualdade de acesso à educação superior no brasil e o plano nacional de educação*. Retrieved from <http://rbep.inep.gov.br/ojs3/index.php/seriepne/article/view/3757/3486>.
- Childs, A., & Baird, J. (2020). General certificate of secondary education (GCSE) and the assessment of science practical work: An historical review of assessment policy. *The Curriculum Journal*. doi:10.1002/curj.20.
- Cordeiro, L. (2014). Sobre a inadequação da metodologia de cálculo das notas do SISU. *Educação & Sociedade*, 35(126), 293-320.
- da Costa, C. F. (2004). O ENEM e o desenvolvimento de competências no contexto da educação para o trabalho e a cidadania. *Revista Teias*, 5(8-9), 1-9.
- da Cunha, L. A. C. R. (1980). *A universidade temporã: O ensino superior da colônia à era de Vargas*. Rio De Janeiro, Brazil: Editora Civilização Brasileira, Edições UFC.
- Elliott, V. (2018). Thinking about the coding process in qualitative data analysis. *The Qualitative Report*, 23(11), 2850-2861.
- Erikson, R., & Goldthorpe, J. H. (1992). *The constant flux: A study of class mobility in industrial societies*. Oxford, England: Clarendon Press.
- Erikson, R., & Jonsson, J. O. (1996). *Can education be equalized: The Swedish case in comparative perspective*. Boulder, CO.: Westview Press.

- Figueirêdo, E., Nogueira, L., & Santana, F. L. (2014). Igualdade de oportunidades: Analisando o papel das circunstâncias no desempenho do ENEM. *Revista Brasileira De Educação*, 68(3), 373–392.
- Fini, M. E. (2005). Erros e acertos na elaboração de itens para a prova do Enem: As técnicas de elaboração de itens e as questões objetivas de múltipla escolha do Enem, in INEP/MEC (ed.) *Exame nacional do ensino médio (ENEM) fundamentação teórico-metodológica* (pp. 101-105). Brasília, Brazil: INEP/MEC.
- Freitas, A. H., Freitas, E., Garcia, V. C., & Birenbaum, R. (2009). ENEM: Um demonstrativo das mudanças socioeconômicas no perfil dos participantes. *Meta: Avaliação*, 1(1), 104-124.
- Furr, M. R. (2018). *Psychometrics: An introduction*. Thousand Oaks, CA: Sage.
- Giddens, A. (1973). *The class structure of the advanced societies*. London, England: Hutchinson.
- Gomes, C. A. (2012). *A educação em novas perspectivas*. São Paulo, Brazil: EPU.
- Gomes, C. A. (2016). O tema da avaliação educacional na constituinte de 1988 e na lei de diretrizes e bases da educação nacional de 1996. *Em Aberto*, 29(96), 53-69.
- Haig, B. D., & Borsboom, D. (2008). On the conceptual foundations of psychological measurement. *Measurement: Interdisciplinary Research and Perspectives*, 6(1-2), 1-6. doi:10.1080/15366360802035471.
- Harlen, W. (2007). *Assessment of learning*. London, England: SAGE.
- Hellevik, O. (1997). Class inequality and egalitarian reform. *Acta Sociologica*, 40(4), 377.
- INEP. (1998). *ENEM - exame nacional do ensino médio: Relatório final 98*. Retrieved from <http://inep.gov.br/documents/186968/484421/ENEM+->

+Exame+Nacional+do+Ensino+M%25C3%25A9dio+relat%25C3%25B3rio+final
+98/f4cf226a-6961-4289-9afb-da8c0032ff89?version=1.2.

INEP. (1999). *ENEM – documento básico*. Retrieved from

<http://inep.gov.br/documents/186968/484421/Exame+Nacional+do+Ensino+M%25C3%25A9dio+-+ENEM++documento+b%25C3%25A1sico/e2cf61a8-fd80-45b8-a36f-af6940e56113?version=1.1>.

INEP. (2000). *Exame nacional do ensino médio – ENEM: Relatório final 1999*.

Retrieved from <http://inep.gov.br/documents/186968/484421/ENEM+-+Exame+Nacional+do+Ensino+M%25C3%25A9dio+Relat%25C3%25B3rio+Fina1+1999/77da3469-833f-4bec-86f8-10dcd882e262?version=1.2>.

INEP. (2001a). *ENEM - exame nacional do ensino médio: Relatório pedagógico 2000*.

Retrieved from <http://inep.gov.br/documents/186968/484421/ENEM+-+Exame+Nacional+do+Ensino+M%25C3%25A9dio+Relat%25C3%25B3rio+Pedag%25C3%25B3gico+2000/87c79c40-96b6-4734-9d76-f7c1d607b8e3?version=1.2>.

INEP. (2001b). *ENEM - exame nacional do ensino médio: Relatório pedagógico 2001*.

Retrieved from <http://inep.gov.br/documents/186968/484421/ENEM+-+Exame+Nacional+do+Ensino+M%25C3%25A9dio+Relat%25C3%25B3rio+Pedag%25C3%25B3gico+2001/9dba4bbd-9b76-4d81-97b7-f6ded09bb454?version=1.2>.

INEP. (2002). *ENEM - exame nacional do ensino médio: Relatório pedagógico 2002*.

Retrieved from <http://inep.gov.br/documents/186968/484421/ENEM+-+Exame+Nacional+do+Ensino+M%25C3%25A9dio+Relat%25C3%25B3rio+Pedag%25C3%25B3gico+2002/75dea654-518f-4c69-9621-8daf020cbc1d?version=1.2>.

INEP. (2004). *Relatório final ENEM 2003*. Retrieved from

<http://inep.gov.br/documents/186968/484421/ENEM+->

+Exame+Nacional+de+Ensino+M%C3%A9dio+Relat%C3%B3rio+Fina
l+2003/c1e33a49-1635-45eb-94fd-618445c832d7?version=1.1.

INEP. (2007a). *ENEM: Relatório pedagógico 2004*. Retrieved from
[http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatori
o_pedagogico_enem_2004.pdf](http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatorio_pedagogico_enem_2004.pdf).

INEP. (2007b). *ENEM: Relatório pedagógico 2005*. Retrieved from
[http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatori
o_pedagogico_enem_2005.pdf](http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatorio_pedagogico_enem_2005.pdf).

INEP. (2008a). *ENEM: Relatório pedagógico 2006*. Retrieved from
[http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatori
o_pedagogico_enem_2006.pdf](http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatorio_pedagogico_enem_2006.pdf).

INEP. (2008b). *ENEM: Relatório pedagógico 2007*. Retrieved from
[http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatori
o_pedagogico_enem_2007.pdf](http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatorio_pedagogico_enem_2007.pdf).

INEP. (2009a). *ENEM - exame nacional do ensino médio: Relatório pedagógico 2008*.
Retrieved from
[http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatori
o_pedagogico_enem_2008.pdf](http://download.inep.gov.br/educacao_basica/enem/relatorios_pedagogicos/relatorio_pedagogico_enem_2008.pdf).

INEP. (2009b). Portaria INEP nº 109 de 27/05/2009 (2009b).

INEP. (2010). *Sinopse estatísticas do exame nacional de ensino médio 2009*. Retrieved
from
[http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses
_enem/2009/Sinopse_Enem2009.zip](http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2009/Sinopse_Enem2009.zip).

INEP. (2011). *Sinopse estatística do exame nacional do ensino médio 2011*. Retrieved
from
[http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses
_enem/2011/Sinopse_Enem2011.zip](http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2011/Sinopse_Enem2011.zip).

- INEP. (2012a). *Matriz de referência ENEM*. Brasília: Retrieved from http://download.inep.gov.br/download/enem/matriz_referencia.pdf.
- INEP. (2012b). *Sinopse estatística do exame nacional do ensino médio 2012*. Retrieved from http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2012/Sinopse_Enem2012.zip.
- INEP. (2013a). *Exame nacional do ensino médio (ENEM): Relatório pedagógico 2009-2010*. Retrieved from <http://inep.gov.br/documents/186968/484421/Relat%25C3%25B3rio+Pedag%25C3%25B3gico+ENEM+2009-2010/70890e24-a78a-44f8-a909-b235f02948f2?version=1.1>.
- INEP. (2013b). *Sinopse estatística do exame nacional do ensino médio 2013*. Retrieved from http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2013/Sinopse_Enem2013.zip.
- INEP. (2014). *Sinopse estatística do exame nacional do ensino médio 2014*. Retrieved from http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2014/Sinopse_Enem2014.zip.
- INEP. (2015a). *About INEP*. Retrieved from <http://portal.inep.gov.br/web/guest/about-inep>.
- INEP. (2015b). *Publications*. Retrieved from <http://portal.inep.gov.br/publications>.
- INEP. (2015c). *Sinopse estatística do exame nacional do ensino médio 2015*. Retrieved from http://download.inep.gov.br/informacoes_estatisticas/sinopses_estatisticas/sinopses_enem/2015/Sinopse_Enem2015.zip.

- INEP. (2020a). *ENEM Portugal*. Retrieved from <http://portal.inep.gov.br/enem/enem-portugal>.
- INEP. (2020b). *Microdados ENEM*. Retrieved from <http://inep.gov.br/microdados>.
- Lopes, A. (2018). International mobility and education inequality among Brazilian undergraduate students. *Higher Education*. doi:10.1007/s10734-020-00514-5.
- Lucas, S. (2001). Effectively maintained inequality: Education transitions, track mobility, and social background effects. *American Journal of Sociology*, 106(6), 1642-1690. doi:10.1086/321300.
- Mainardes, J. (2006). Abordagem do ciclo de políticas: Uma contribuição para a análise de políticas educacionais. *Educação & Sociedade*, 27(94), 47-69. doi:10.1590/S0101-73302006000100003.
- Marx, K. (1990). *Capital: A critique of political economy, volume 1*. Harmondsworth, England: Penguin.
- Marx, K. (1991). *Capital: A critique of political economy, volume 3*. Harmondsworth, England: Penguin.
- Maul, A. (2013). Method effects and the meaning of measurement. *Frontiers in Psychology*, 4, doi:10.3389/fpsyg.2013.00169.
- MEC. (1998). Portaria MEC nº 438 de 28/05/1998 (1998).
- MEC, & Inep. (1999). *Sinopse estatística da educação básica: Censo escolar 98*. Retrieved from <http://inep.gov.br/documents/186968/484154/Sinopse+estat%C3%ADstica+da+educa%C3%A7%C3%A3o+b%C3%A1sica+censo+escolar+98/b89105af-f321-47f7-a7d8-a9105e6c9677?version=1.2>.

- MEC. (2000). *Parâmetros curriculares nacionais para o ensino médio (PCNEM)*. Retrieved from <http://portal.mec.gov.br/busca-geral/195-secretarias-112877938/seb-educacao-basica-2007048997/12598-publicacoes-sp-265002211>.
- MEC/INEP/COMPED. (2001). *Avaliação na educação básica (1990-1998)*. Retrieved from <http://rbep.inep.gov.br/ojs3/index.php/estadoconhecimento/issue/view/413/50>.
- Mello, U. (2019). *Centralized admissions, affirmative action and access of low-income students to higher education*. São Paulo, Brazil: FGV.
- Michell, J. (1999). *Measurement in psychology: A critical history of a methodological concept*. Cambridge, England: Cambridge University Press.
- Michell, J. (2000). Normal science, pathological science and psychometrics. *Theory & Psychology*, 10(5), 639-677. doi:10.1177/0959354300105004.
- Michell, J. (2008). Is psychometrics pathological science? *Measurement: Interdisciplinary Research and Perspectives*, 6(1-2), 7-24. doi:10.1080/15366360802035489.
- Michell, J. (2011). Qualitative research meets the ghost of Pythagoras. *Theory & Psychology*, 21(2), 241-259. doi:10.1177/0959354310391351.
- Miller, M. D., Linn, R. L., & Gronlund, N. E. (2009). Reliability and other characteristics, In M. D. Miller, R. L. Linn & N. E. Gronlund (eds.) *Measurement and assessment in teaching* (pp. 108-138). Upper Saddle River, N.J: Merrill.
- Minhoto, M. A. P. (2008). Da disseminação da cultura de avaliação educacional: Estudo sobre a institucionalização do Enem. *Poiésis-Revista do Programa De Pós-Graduação Em Educação*, 1(1), 67-85.
- Newton, P. E. (2007). Clarifying the purposes of educational assessment. *Assessment in Education: Principles, Policy & Practice*, 14(2), 149-170. doi:10.1080/09695940701478321.

- Paterson, L., & Iannelli, C. (2007). Social class and educational attainment: A comparative study of England, Wales, and Scotland. *Sociology of Education*, 80(4), 330-358.
- Pellegrino, J. W., Chudowsky, N., & Glaser, R. (2001). The nature of assessment and reasoning from evidence, in J. W. Pellegrino, N. Chudowsky & R. Glaser (eds.) *Knowing what students know: The science and design of educational assessment* (pp. 37-54). Washington, D.C.: National Academies Press.
- Pires, A. (2015). Renda familiar e escolaridade dos pais: Reflexões a partir dos microdados do Enem 2012 do estado de São Paulo. *Educação Temática Digital*, 17(3), 523-541.
- Prates, A. A. P., & Collares, A. C. M. (2014). *Desigualdade e expansão do ensino superior na sociedade contemporânea: O caso brasileiro do final do século XX ao princípio do século XXI*. Belo Horizonte, Brazil: Fino Traço.
- The philosophy of psychometrics*. Psychometric Society (Director). (2018). [Video/DVD] Vimeo. Retrieved from <https://vimeo.com/256145513>.
- Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches*. London, England: Sage.
- Raftery, A. E., & Hout, M. (1993). Maximally maintained inequality: Expansion, reform, and opportunity in Irish education, 1921-75. *Sociology of Education*, 66(1), 1642-1690.
- Ribeiro, C. C., Ceneviva, R., & Brito, M. M. A. (2015). Estratificação educacional entre jovens no brasil: 1960 a 2010, in M. Arretche *Trajetórias das desigualdades: Como o Brasil mudou nos últimos cinquenta anos* (pp. 79-108). São Paulo, Brazil: Editora Da UNESP.
- Ringen, S. (1997). *Citizens, families and reform*. Oxford, England: Clarendon Press.
- Ringen, S. (1998). The great British myth. *Times Literary Supplement*, 23, 3-1.

- Ristoff, D., & Sevegnani, P. (2006). *Universidade e compromisso social*. Retrieved from http://inep.gov.br/informacao-da-publicacao/-/asset_publisher/6JYIsGMAMkW1/document/id/489839.
- Saldaña, J. (2009). *The coding manual for qualitative researchers*. London, England: Sage.
- Santos, J. C. T. (2011). Exame nacional do ensino médio: Entre a regulação da qualidade do ensino médio e o vestibular. *Educar Em Revista*, 40, 195-205.
- Saul, A. M. (1992). Avaliação emancipatória: Uma abordagem crítico-transformadora. *Tecnologia Educacional*, 25, 17-24.
- Scielo. (n.d.). *Homepage Scielo*. Retrieved from <https://www.scielo.br>.
- Senkevics, A. S., Machado, T. de S., & de Oliveira, A. S. (2016). *A cor ou raça nas estatísticas educacionais: Uma análise dos instrumentos de pesquisa do INEP*. Retrieved from <http://rbep.inep.gov.br/ojs3/index.php/td/article/view/3880/3556>.
- Silva, R. C. D., & Melo, S. D. G. (2018). ENEM: Propulsão ao mercado educacional brasileiro no século XXI. *Educação & Realidade*, 43(4), 1385-1404. doi:10.1590/2175-623684906.
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453.
- Souza, P. H. G. F., & Medeiros, M. (2013). *The decline in inequality in Brazil, 2003 – 2009: The role of the state*. IRLE Working Paper No. 154-13.
- Souza, P. H. G. F. (2017). *A desigualdade vista do topo: A concentração de renda entre os ricos no brasil, 1926-2013* (Unpublished doctoral thesis). Universidade de Brasília, Brasília: Brazil.
- Swift, A., & Marshall, G. (1999). On the meaning and measurement of inequality. *Acta Sociologica*, 42(3), 241-250.

- Traub, R. E., & Rowley, G. L. (1991). An NCME instructional module on understanding reliability. *Educational Measurement: Issues and Practice*, 10(1), 37-45. doi:10.1111/j.1745-3992.1991.tb00183.x.
- Travitzki, R. (2013). *ENEM: Limites e possibilidades do exame nacional do ensino médio enquanto indicador de qualidade escolar* (Unpublished doctoral thesis). Universidade de São Paulo, São Paulo: Brazil.
- Tyler, I. (2015). Classificatory struggles: Class, culture and inequality in neoliberal times. *The Sociological Review*, 63(2), 493-511. doi:10.1111/1467-954X.12296.
- University of Oxford. (n.d.). *SOLO - search Oxford libraries online*. Retrieved from <http://solo.bodleian.ox.ac.uk/>.
- USP. (n.d.). *PBi - portal busca integrada*. Retrieved from <http://www.buscaintegrada.usp.br>.
- Vianna, H. M. (1992). Avaliando a avaliação: Da prática à pesquisa. *Estudos Em Avaliação Educacional*, (05), 65-76.
- Vianna, H. M. (1993). Avaliação do rendimento escolar e a interação professor/aluno. *Estudos Em Avaliação Educacional*, (07), 89-94.
- Vianna, H. M. (1995). Avaliação educacional: Uma perspectiva histórica. *Estudos Em Avaliação Educacional*, (12), 7-24.
- Vidovich, L., & Porter, P. (1999). Quality policy in Australian higher education of the 1990s: University perspectives. *Journal of Education Policy*, 14(6), 567-586. doi:10.1080/026809399286099.

Appendix 1

The Eighteen categories of assessment purposes identified by Newton (2007).

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