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The Capabilities Approach and Education: A Literature Overview and a Comprehensive List Proposal

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Abstract This paper proposes a list of dimensions for the assessment of education quality based on the Capabilities Approach. A literature review is conducted to select the relevant dimensions, considering the main aspects of the capabilities perspective and other contributions made by authors working specifically with education within the approach. This results in a list of nine dimensions, divided into two groups: *capabilities to access education* and *capabilities through education*, following the suggestion by Vaughan (2007) to account for two ways that education can be theorised within the approach. An illustrative application using data from Brazil is also put forward. It covers students from the 9th grade and includes variables related to students, teachers, principals, and schools, totalling 49 variables. The ranking of Brazilian States according to the index and its dimensions suggests the multidimensionality of education, as the ordering of States varies greatly by the dimensions under study. Moreover, the dimension representing a traditional view of education based on the human capital approach showed a quite weak correlation with scores on other dimensions, meaning that a narrow focus on educational results may not encompass the many aspects of education that are valued in the capabilities perspective. This calls for the need of multidimensional measures that take into account a broader notion of education.

Keywords: Education; Capabilities Approach; Education Assessment.

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1 Introduction

Nussbaum (2011) states that “[a]t the heart of the Capabilities Approach since its inception has been the importance of education” (p. 152). In fact, Amartya Sen has referred to the importance of education for the promotion of freedom in many of his works. As a consequence, in the last two decades several authors have made very interesting contributions that clarified the links between education and the Capabilities Approach (CA henceforth). These contributions span over many themes, from theoretical discussions on how education should be conceptualised within the framework, to how curricula should be developed so that normative aspects valued by the CA can be achieved. Among the theoretical proposals for the conceptualisation of education and capabilities, Vaughan (2007) suggests a differentiation between “*capabilities to participate in education*” and “*capabilities through education*”. This distinction considers, on the one hand, formal education as an valuable functioning itself, and on the other hand, formal education as a facilitator of other valuable functionings. Given the absence of any definite list of capabilities that should be used for social assessment, some have been proposed for the particular case of education, such as the ones found in Terzi (2007), Walker and Unterhalter (2007), and DeCesare (2014). However, none of these lists have paid attention to Vaughan’s suggestion of partitioning the educational capabilities into two broad groups. This paper aims at putting forward such a list.

Firstly, it reviews some of the main aspects related to the CA, specially based on Sen’s works (1985; 1992; 2001; 2011). We particularly focus on the following topics: substantive freedom, human diversity, the priority of ends above means, the individuals’ agency, the many spaces in which advantage may be assessed, the importance of practical reasoning, and the idea of democracy as public discussion. Moreover, Sen’s account on education and capabilities is also evaluated. As many authors have pointed out, although Sen recognised the importance of education to the promotion of human development, his account has generally treated education at an elementary and basic level, readily equating it with schooling and assuming that any kind of education may enhance people’s well-being.

Due to Sen’s limited account on education, many authors have delved into the discussion and put forth a series of educational analysis grounded on the capabilities perspective. The literature on education and CA now highlights the many instrumental and intrinsic values of education, and how it relates to the expansion of freedom in general, as well as other important aspects present in the perspective, such as the cultivation of democratic dispositions or its importance for the promotion of agency and autonomy. At the same time, the direct link between education and well-being has been challenged, as was argued that some situations may impair a student’s ability to fully participate in the educational process.

Considering the most important aspects of the CA and the broad discussion on educa-

tion and capabilities, a list of nine dimensions for the evaluation of education is proposed. The list is divided into two parts. The first one deals with capabilities to participate in education and includes five dimensions: i) access to educational structures; ii) social conditions to access education; iii) security; iv) respect for diversity; and v) educational agency. The second part of the list is concerned with capabilities through education and includes four dimensions: i) education for democratic existence; ii) education for practical reason; iii) vocational education; and iv) education for well-being and scientific knowledge. This list is intentionally abstract and comprehensive, so that it can guide the choice of dimension for particular contexts, being it geographical, cultural, or specific phases of the educational process.

Finally, this paper puts forth an illustrative empirical application of this list. It uses data from Brazil's biannual evaluation of education that includes questionnaires filled up by students, teachers, principals, and schools' evaluators, covering a diverse range of topics. The ranking of the Brazilian States according to the index and its dimensions suggests the multidimensionality of education, as the correlations between many dimensions are quite weak or even negative. It calls for the necessity of going further than traditional indicators of education quality, such as standardised tests. Apart from that, more adequate measures for the dimensions proposed must be developed so that a capabilities-based evaluation of education can be properly conducted, opening up an important research agenda.

The paper is organised as follows. Section 2 reviews some of the most important aspects of the CA, both to assist the selection of dimensions and to underlie the following discussion centred on education and capabilities. Section 3 considers the main contributions of the literature on education and capabilities, outlining the main themes in it. Section 4 proposes a list of dimensions for education quality assessment, at the same time that justifies it methodologically and discusses how it fits into established criteria for lists formulation. Section 5 illustrates an application of the list advocated by this paper using data from Brazil. Finally, last section concludes this paper with a few directions for further work on capabilities and education.

2 General Aspects of the Capabilities Approach

In his *Development as Freedom*, Amartya Sen asserts that his analysis “treats the freedoms of individuals as the basic building blocks” (Sen, 2001, p. 18), considering both the instrumental and constitutive roles of freedom, that is, rights and opportunities that can enhance other freedoms, and freedom as the fundamental source of human development. The aims of development should be focused on individuals and the enhancement of their substantive freedom, thus characterising them not as passive beings, but as active agents that can interfere with reality and change it.

Substantive freedoms are related to the idea of *capabilities*, which are defined as the many combinations of alternative *functionings* that a particular individual is able to achieve. Functionings are the constituents of life, they are the many things that a person can be, do, or have that are valued by this person. In this sense, “individual advantage is judged in the capability approach by a person’s capability to do things he or she has reason to value” (Sen, 2011, p.231). Consequently, Sen proposes moving the assessment of well-being away from the means towards the ends. This movement allows him to better understand the nature of human diversity and its special role in the analysis based on capabilities. As Sen notes, people are diverse, and this reflects in their conversion of means into valuable functionings. Sen (2001) mentions five sources of diversity: i) personal heterogeneities, b) environmental diversities, c) variations in social climate, d) differences in relational perspectives, and e) distribution within the family. Robeyns (2005b) groups the conversion factors into three categories: personal, social, and environmental. The first would be internal to the individual while the second and third would be external.

Thus, capabilities should be considered as the most adequate informational base for social assessment. However, equality of capabilities should not be the only concern of any society. Among other reasons, Sen (2011) points that capabilities are just one aspect of freedom, related to substantive freedom and are not capable of dealing with other aspects of it.

According to Sen (2011), there are two reasons why freedom is valuable to people: opportunity and process. In the first case, greater freedom gives people more opportunities to pursue ends they judge valuable, no matter how these opportunities are accomplished. In the second case, choice itself may be valued, and it is important that people have the ability to choose by themselves and that they are not forced to any particular choice, even if the final outcome would have been the one preferred in the first place. In this regard, capabilities are “linked closely with the opportunity aspect of freedom, seen in terms of ‘comprehensive’ opportunities, and not just focusing on what happens at ‘culmination’” (Sen, 2011, p. 232). The distinction between culmination outcome and comprehensive outcome is related to the idea of consequence-based approaches to justice, a category that includes the CA. On the one hand, the former is regarded as a “narrow” view on outcomes, as it does not consider the process by which the outcome came to happen, disregarding any concerns over the agency aspect of individuals. On the other hand, the latter takes into account the process aspect of choice in the evaluation of states of affairs and is, therefore, broader.

Agency has great importance in Sen’s framework, which he defines as someone’s capacity to act and bring about change, and “whose achievements can be judged in terms of her own values and objectives” (Sen, 2001, p. 19). In his *Dewey Lectures*, Sen (1985) highlights that his objective is to explore a moral approach that sees individuals from

two perspectives: well-being and agency, each representing a notion of freedom. In the Senian approach, agency plays an important role as it allows that people's actions can be aimed at other objectives besides well-being maximization. Thus: "[v]arious concepts of 'autonomy' and 'personal liberty', relate to this special role of agency in personal life, going well beyond considerations of well-being" (Sen, 1985, p. 186). Once the plurality of ends, objectives, obligations, affiliation, and the general notion of good are recognized, Sen is able to deny well-being as the only information necessary for the assessment of individuals' situation or state of affairs, at the same time that behaviours that departs from maximisation of well-being are not regarded as flaws in evaluation, rationality, or action, but as resulting from reflection and practical reasoning.

From the concepts above, Sen (2011) proposes two distinctions: that based on agency vis-à-vis well-being and that based on achievement vis-à-vis freedom. This, in turn, leads to four spaces in which personal advantages can be assessed: well-being achievement, agency achievement, well-being freedom, and agency freedom. In general, Sen argues that the most adequate space would be that of well-being freedom, i.e., the capabilities space. However, in some situations other spaces can be of more interest. For example, a focus on the agency aspect should be considered when individual motivation is relevant, as it considers individuals as capable of reasoning and defining their own objectives. In addition, there may be some occasions in which a focus on achievements rather than freedom is more interesting as they may involve relations of domination and power, as would be case with analysis of gender equality or distribution of resources within households.

This division also helps to make clear the idea that the set of capabilities (or functionings) relevant for social assessment is not explicitly defined and may even vary according to the use one aims at. In fact, Sen asserts throughout his works that plurality and flexibility are two advantages of the CA: "Is this plurality an embarrassment for advocacy of the capability perspective for evaluative purposes? Quite the contrary. To insist that there should be only one homogeneous magnitude that we value is to reduce drastically the range of our evaluative reasoning" (Sen, 2001, p. 77). Related to the flexibility in term of functionings and capabilities, Sen points that:

There can be substantial debates on the particular functionings that should be included in the list of important achievements and the corresponding capabilities. This valuational issue is inescapable in an evaluative exercise of this kind, and one of the main merits of the approach is the need to address these judgmental questions in an explicit way, rather than hiding them in some implicit framework. (Sen, 2001, p. 75)

As Sen, Martha Nussbaum also considers this intrinsic plurality as an important trait of the approach: "I typically use the plural, 'Capabilities', in order to emphasize

that the most important elements of people's quality of life are plural and qualitatively distinct". (Nussbaum, 2011, p. 18). However, in a certain way, Nussbaum departs from the characteristic versatility of Sen's perspective as she advocates for a list of ten Central Capabilities which satisfaction by everyone should be assured by societies as a minimal requisite for basic social justice¹. But this departure deserves some qualification, as Nussbaum's list have some flexibility, in the sense that it is sufficiently broad and can be applied to many contexts²: "The capabilities on the list are rather abstract: who specifies them further? [...] There is room for nations to elaborate capabilities differently to some extent, given their different traditions and histories" (p. 40).

Nussbaum (2011) adds other concepts in her analysis, specially that of human dignity, essential for the development of her theory. She also reinforces the complexity involved in the idea of capabilities, referring to combined capabilities which take into account the fact that freedom and opportunity are created as a combination of personal abilities with the economic, social, and political environment. Those personal abilities, which are not innate to people but developed, are called internal capabilities, whereas the economic, social, and political environment determine the conditions for the realisation of functionings. This distinction is important as there can be situations where people have the internal capabilities but lack the proper environment to make use of them, such as people who hold knowledge that could be used to criticise the government but due to censorship are deprived of this opportunity. At the same time, a country can be characterised by an environment of free speech, but its citizens do not have the internal capabilities that would enable them to properly express their feeling towards the government. Finally, Nussbaum also introduces her notion of basic capabilities, which is distinct from Sen's, as they are related to the innate powers every human being holds and that enable further development. For her, denying people the possibility for flourishing and self-realisation is to deny them a part of their humanity.

For the present paper, which aims at developing a list of items for the assessment of education, the comparative perspective of Sen's work seems more adequate than Nussbaum's, who uses her list of Central Capabilities "as a basis for the idea of fundamental political entitlements and constitutional law" (Nussbaum, 2011, p. 70). Given this theoretical aim, Nussbaum is required to compromise herself with the idea of political liberalism, and therefore to depart from the idea of capabilities as a comprehensive theory of value and quality of life. Nonetheless, her concerns with human dignity and flourishing deserve attention.

¹They are: life; bodily health; bodily integrity; senses, imagination, and thought; emotions; practical reason; affiliation; other species; play; and control over one's environment.

²Another important qualification is that Sen's and Nussbaum's theoretical objectives with the CA are not the same: "It has (at least) two versions, in part because it has been used for two different purposes" (Nussbaum, 2011, p. 19). Nussbaum's purpose is to construct a theory of basic social justice, whereas Sen aims at an alternative informational basis for evaluative exercises grounded on capabilities rather than utility or resources only. See also Robeyns (2005a).

At last, it is also interesting to discuss the idea of democracy employed by Sen, as this is a recurrent theme in the literature on education and capabilities. Sen (2011) does not see democracy simply as the existence of voting procedures and election of representatives. First, even a narrow view of democracy must include freedom of speech, information and critique, for example. But even beyond that, Sen champions a broader view of democracy, labelled “government by discussion”, which holds the idea of public reasoning as an important constituent of democracy. This perspective has gained support in academic circles, defended by philosophers such as John Rawls, Jürgen Habermas, Ronald Dworkin, among other, having its roots traced back to John Stuart Mill and James Buchanan (Sen, 2011). In spite of their different ideas on the role of public discussion, these authors agree on acknowledging that political reasoning, dialogue, and public interaction are important. Moreover, Sen links the concept of democracy closely with that of justice, being public reasoning a bridge between them. In addition to this, Sen relates the success of public policies to the existence of a broad environment of public discussion, pointing out to the case of Kerala in India and its relatively higher development when compared to other regions of the country in which public discussion have not been as disseminated.

Sen (2011) also deals with the question of minority rights in contemporary democracies. In a narrow view of democracy as majority rule, minorities’ liberties can be threatened in the case majorities decide for it. An understanding of democracy that includes public discussion could handle both the protection of minorities and majority rule. In this regard, it is essential to foster tolerant values among citizens to enable the development of a functional democracy. The rise of hostile sectarian groups could be blocked through interactive and inclusive processes of public discussion, specially if they lead people to notice that affiliations are diverse and not restricted to that promoted by rival groups. Ergo, democracy can be valued for at least three reasons: its intrinsic importance in human life, for its instrumental role in generating political incentives, and for its constitutive function in values’ formation. These three motives would be enough for considering democracy as a universal value (Sen, 1999).

Amartya Sen and Education

What are Sen’s specific contribution on education? According to Walker and Unterhalter (2007), Sen views education as being part of a short list of crucial functionings to well-being³. Moreover, for Walker (2007), Sen attributes instrumental importance to education, as a promoter of economic opportunities, social relations, and participation in the society. In fact, considering his work on capabilities that is most accessible to laymen (Sen, 2001), one comes across many references to the importance of education for the general expansion of freedom and agency, as it broads opportunities, widens people’s

³However, the passage they cite (Sen, 1992, p. 44) does not explicitly mentions education.

horizons, and increases the level of public discussion. It is no surprise that Sen advocates the expansion of public systems of education by governments.

Other authors, however, show less enthusiasm towards Sen's contributions on education. Terzi (2007), for example, acknowledges Sen's concerns over the provision of education as a basic capability, but:

[D]espite this important role, in Sen's approach education is generically referred to as basic, elementary education, and mainly expressed in terms of levels of literacy. Hence, the conceptual and normative implications of the basic capability to be educated remain unspecified. (Terzi, 2007, p. 25)

Vaughan (2007) asserts that an important aspect in the discussion is how formal education can affect women's life. According to her, Sen assumes that education can always bring about benefits for women, even if it has a patriarchal orientation. Nonetheless, as the author proposes, education can in fact exacerbate existing gender inequalities, either through unequal provision or content and pedagogy:

In relation to girls' schooling, radical feminist educationalists have argued that attending school does not inevitably challenge gender inequality, and can actually serve to perpetuate imbalances, particularly through pedagogy, content, and teacher expectations. (Vaughan, 2007, p. 121)

Unterhalter (2008) stands in a similar position as Vaughan: "Education appears untheorized in Amartya Sen's writings about the capability approach" (p. 489). For her, Sen makes a strong assumption that the form of education that is related to the expansion of substantive freedom is easily equalled to schooling. Therefore, Sen has treated education as a homogeneous product, neglecting how curricula, for example, can affect people's life. The author identifies three forms that education appears in Sen's work: i) as social opportunity, allowing greater freedom; ii) as causing more freedom; and iii) as particular knowledge that facilitates participation in society, politics, and the economy. Nonetheless, the way that education relates to those capabilities are much more subtle. For instance, literacy may not be automatically converted into more participation if some social groups are subjugated by others and denied the right to express themselves. Hence, schooling can be a necessary but not sufficient requisite for the expansion of freedom, as it also depends on how curricula are shaped and on other aspects of education that are built inside particular contexts.

Nussbaum (2011) shows a more qualified view of the relation between capabilities and education. For her, education is important for developing internal capabilities and can be thought as a fertile functioning⁴. Apart from that, education is important by

⁴Fertile functionings is a concept introduced by Wolff and De-Shalit (2007) to denote functionings that can help in the development of other functionings, and employed in Nussbaum's analysis.

itself as it can enhance people's satisfaction. Moreover, she argues that the emphasis placed on education by the CA should not be restricted to basic issues, such as literacy or elementary mathematical notions, even though those abilities are extremely relevant. An education truly designed for human development must go further:

Uses of the Capabilities Approach need to attend carefully to issues of both pedagogy and content asking how both the substance of studies and the nature of classroom interactions (for example, the role given to critical thinking and to imagining in daily study of material of many types) fulfil the aims inherent in the approach, particularly with regard to citizenship. (Nussbaum, 2011, p. 156)

In fact, Nussbaum's writings go deeper into the understanding of education than Sen's, specially in relation to gender issues (Nussbaum, 2003) and what kind of education is necessary to promote democratic values (Nussbaum, 2006). These works are further discussed later. Unterhalter (2003), however, criticises Nussbaum (2011) for her lack of engagement with the literature that deals specifically with education and CA, even though Nussbaum recognises that education is a central aspect of it. The next section considers those contributions.

3 Expanding the Approach

What are the roles education plays when one assumes the capabilities perspective? Flores-Crespo (2007), when discussing how education can be understood within the Capabilities Approach, points out that since Socratic times education and knowledge acquired from it were considered relevant to "clear our minds, awaken our consciousness, inform our actions, and enrich our lives" (p. 46). In ancient Greece, education has been related to the critical examination of beliefs. In Renaissance, it was seen as a way to allow people to live their life to the fullest. Rousseau has argued for the necessity to stimulate feelings of compassion through education. Kant, in turn, considers that people are not naturally good or bad, and education is essential for developing reasoning abilities, making it possible that people can distinguish vice from virtue and hence act in accordance to morality (Flores-Crespo, 2007).

As for the CA, Robeyns (2006) proposes a distinction between education's intrinsic and instrumental roles. In the case of intrinsic values, people would simply value education for some particular knowledge they can acquire, such as mathematics or the ability to speak a foreign language. Going beyond this intrinsic value, education would also have a series of other instrumental roles to play, which are divided into two axis: personal and collective, and economic and non-economic.

The economic instrumental roles are connected to the higher economic productivity that educated people attain. In the personal space, people may find it easier to get a job, become less vulnerable, etc. In the collective space, education facilitates economic growth.

As for the non-economic roles, at a personal level, a good education allows people to read the newspaper or a medical instruction leaflet, to better understand health issues, or to communicate with others. At a collective level, a good education can contribute to a more tolerant and democratic society. Men and women can also benefit from a better understanding on how their social roles were historically built, helping women to achieve less submissive positions and men to engage more actively in domestic tasks.

Apart from the instrumental and intrinsic values of education, Unterhalter and Brighthouse (2007) also add the positional value of education. In this case, the benefits of education for a given person depend on how well-educated she or he is in relation to other people. An example would be the relative position of students in universities' entrance exams. At the same time, reputation and location also play a role in determining the positional value of education. Although relevant, specially for a deeper understanding of issues related to social inequality, this aspect of education has not received much attention from the literature on education and capabilities.

Once the roles and motives for which education is valued are established, it is necessary to consider some normative aspects related to education. As pointed out by Vaughan and Walker (2012), education is inescapably normative as it seeks the betterment of individuals. Hence, it must be asked what one understands as better and what ideal educational model comes to mind once existing educational conditions are accessed. In this sense, Robeyns (2006) mentions three models for education: human capital, rights discourse, and capabilities. Given its importance among economists, policy-makers, and its presence in public discussion, the following analysis is restricted to the human capital and capabilities models⁵.

The education model based on human capital has been discussed by many authors from the capability perspective (Robeyns, 2006; Wigley and Akkoyunlu-Wigley, 2006; Tikly and Barrett, 2011; Walker, 2012). Robeyns (2006), for example, argues that models based on human capital are focused exclusively on the economic instrumental values of education. Wigley and Akkoyunlu-Wigley (2006) affirm that these models are restricted to a narrow set of functionings related to the development of productive abilities. Tikly and Barrett (2011) argue that quality education in this perspective is only seen as a necessary factor for economic growth. Walker (2012) points to the emphasis given by this approach to questions essentially related to the economic field while “removes education

⁵Although Robeyns (2006) champions for a capabilities model of education, she concedes that it is important to consider strategically the rights approach to education as it may have more acceptance in some political contexts.

from the realm of the social and the political” (p. 386), in a movement that resembles the one describe by Polanyi (1944) where important social activities have their provision trusted solely on market mechanism. This particular model of education also relates to a particular approach to educational assessment. Tikly and Barrett (2011) criticises the emphasis placed on standardised evaluation, a critique that can also be found in Vaughan (2007) and Unterhalter (2007).

Following Robeyns (2006), a model of education based on the CA would value both intrinsic and instrumental roles of education, being them economic or non-economic. This point is clear in both Sen and Nussbaum, as they highlight the important instrumental role that education plays in the expansion of several capabilities, not only economic ones. What are these intrinsic and instrumental values? Before answering this question, it is necessary to start with a clarification.

Vaughan (2007) distinguishes between *capabilities within the educational experience* and *capabilities gained through education*. The former considers that being educated is a functioning and its related capability is the freedom to fully participate in the educational process. In this case, the questions raised should deal with factors that may restrict children’s access to education, such as availability and accessibility to educational facilities, student’s physical health, or social norms that may impair one’s learning. Here, well-being is thought as full participation in education, while agency can be associated to educational functionings valued by children, such as picking one’s preferred course, enrolling in a specific school, or obtaining some particular score in a proficiency exam.

Capabilities through education are those capabilities and functionings that are possible to obtain once full participation in education is assured. Here, the analysis is focused on the direct and indirect contribution that education can make to other capabilities valued by people. In this sense, formal education can help people to get a job, to have a more active participation in society, or increase the range of choices available to an individual. Hence, the capabilities space encompasses several dimensions of people’s life apart from education.

Although the distinction between capabilities to participate in education and through education seems to be linked to education’s instrumental and intrinsic values, this association is wrong. Firstly, capabilities through education embodies both values. Secondly, the concept of capabilities to participate in education is better thought as access to education. Considering the categories of well-being, agency, achievement, and freedom, it can be said that in capabilities to access education these concepts are related to education only, whereas in the case of capabilities through education these concepts can be applied to general aspects of life, such as employment, health, participation, etc. Advances in those dimensions can happen through abilities acquired in the educational process or by the reasoning attached to the process of choice and valuation that could have been affected by education, that is, directly or indirectly. This distinction between capabilities

through education and to access education has not yet been incorporated in the design of lists of capabilities for education's assessment, as the following section discusses.

Linked to this discussion is another peculiarity of education once the capabilities perspectives is considered. As Vaughan and Walker (2012) have pointed out, people's values are crucial within the approach, as they determine what capabilities are valued by them. At the same time, one of the aims of educational policies in the CA is to expand people's capabilities. However, given the complex role played by education, the capability set can be altered either through the development of new abilities and knowledge or through direct influences on the values individuals hold, thus altering their capability set. This means that education can contribute by means that go beyond the simple expansion of opportunities as values can also be affected.

Once these general characteristics of education and capabilities are outlined, how can one proceed to an assessment of education? What are the normative aspects that should guide the choosing of particular dimensions for education evaluation?

As was discussed on Section 2, the CA gives special importance to democracy, understood not only as balloting, but something that goes beyond and encompasses the idea of public discussion (Sen, 2011). Many authors have dealt with the role education should play within the CA in the promotion of democratic values and citizenship. For example, Nussbaum affirms that “[n]othing could be more crucial to democracy than the education of its citizens. Through primary and secondary education, young citizens form, at a crucial age, habits of mind that will be with them all through their lives” (Nussbaum, 2006, p. 387). She shows some concern over current curricular approaches that are only focused on the teaching of science and technology. For her, arts and humanities are essential so that contemporary democracies can “survive”. Ergo, education must help in the development of three capabilities: critical thinking, global citizenship, and narrative imagination.

The first, critical thinking, is related to individuals' capacity of critically exam themselves and their traditions. Nussbaum links these capabilities to Rabindranath Tagore, Indian philosopher and poet, and Socrates, who incited their students for the necessity of an “examined life”. Hence, formal education should equip students with reasoning abilities that can lead to the questioning of traditions and habits, avoiding the acceptance of any belief for its authoritative character, accepting only those judgements that can survive the scrutiny of reason. This capability would be responsible for making students respect their intellectual opponents and develop new attitudes towards those that do not share their point of view on a given subject.

The second capability, global citizenship, relates to the ability of democratic citizens not seeing themselves simply as being a member of a particular group, but as human beings bound to other human beings “by ties of recognition and concern” (Nussbaum, 2006, p. 389). In this regard, learning about history and culture of different nations

and social groups inside one's own country is paramount. As was asserted by Nussbaum (2006): "There is no easier source of disdain and neglect than ignorance and the sense of the inevitable naturalness of one's own way" (p. 390).

This capability can be linked to Sen's writings on identity and violence (Sen, 2000, 2007). One of his arguments is that people should not be taken as being part of an exclusive group, as it greatly narrows their identities, leaving room for conflicts that could be avoided if the plurality of affiliations were recognised. Individuals should not see themselves and others only in terms of their nationalities, religion, or some other local group, but as individuals that hold several affiliations.

At last, the third capability, narrative imagination, takes the stand that no citizen can rightly think on the sole basis of factual knowledge. It is imperative that individuals develop the ability of narrative imagination so they are able to think about what might be like to be in someone else's shoes, to reason about how it would be like to live in a context different from the one she or he is used to. This ability is cultivated mainly through the arts and literature⁶, and it is an important component of John Dewey's and Tagore's pedagogical proposals. Nussbaum also argues for the role of arts in forging strong ties among communities and in challenging rooted traditions.

DeCesare (2014), taking into consideration Sen's point of view on democracy and capabilities, discusses how would a Senian Democratic Education (SDE) be. He differentiates two SDE's, one democratic education developed inside schools (SDEs) and another developed through people's engagement in democratic practices (SDEp). He focuses on SDEs, although he argues that both have influence on one another. It would be a function of schools to equip their students with instruments and functionings that can facilitate the emergence of their "democratic existence". It is important, however, to make it clear that it is not schools' responsibility to deliver "complete democratic citizens", as this very notion does not make sense given the dynamic nature of a democratic existence. Schools need to develop a democratic culture that can serve as a model for students and include them in democratic processes so they can foster their agency and empowerment. Schools should also assume a role of encouraging students to discuss and conceptualise their valued capabilities, stimulating self-reflection and a better understanding of what a good life is. Other interesting functionings are the capacity of students to conduct critical readings, thinking critically about history, culture, his or her own life and society; to be well-informed; to engage in discussions with others in a respectful manner; and to strength democratic life and schools.

Combining the works of Nancy Fraser, Sen and Nussbaum, Tikly and Barrett (2011) consider how a democratic education can promote social justice. For them, education

⁶This argument can be related to the one developed in Nussbaum's *Love's Knowledge* (1990), where she discusses the importance of form in philosophical arguments and literature for dealing with questions related to the good life.

should empower those whose voices are silenced and excluded from democratic participation. Besides that, non-democratic practices within schools and classrooms that suppress basic freedoms, such as corporal punishment or sexist and racist practices, should all be eradicated. This would lead directly to the challenge of established traditions, norms, and values if social justice is to be promoted.

Walker (2012) discusses the potential that Sen places on education and how it can help in the development of democratic societies, specially through critical reasoning as a moral and political imperative. As was mentioned earlier, in the Senian conception of democracy as “government by discussion”, critical scrutiny is essential for participation. Hence, it is important that students develop abilities that allow them to express their voices in processes of public discussion and decision-making. The works of John Dewey and Paulo Freire, although much more focused on a social perspective, may help to inform a pedagogy suitable for the CA. Vaughan and Walker (2012) also stress the important role that education plays in the formation of democratic citizens: “in education we have the opportunity to practise what it means to become and be democratic citizens; to practise the necessary behaviour in order to acquire a democratic (or respectful, or compassionate, or critical, etc.) disposition”. (p. 506). At the same time, they argue in favour of spaces for discussion of controversial subjects in a respectful way inside schools, as it can help students to cultivate their ability of engaging in public discussion with those to whom they hold disagreement, stimulating the use of pedagogies that endorse the respect for evidence and deliberation, building up respect and tolerance and even change of opinions when the previous one cannot be held before scrutiny.

It is interesting to note another limitation on Sen’s view on education. In discussing the importance of cultivating tolerance and respect in contemporary democracies, Sen (2011) highlights the role that media can play in advancing such values. However, he does not mention the role that education itself could have in fostering it, a important aspect of education that many authors have dealt with⁷.

Agency and autonomy are two recurrent themes in the literature on capabilities and education. For example, Saito (2003) affirms that “the kind of education that best articulates the concept of Sen’s capability approach seems to be the one that makes people autonomous and, at the same time, develops people’s judgement about capabilities and their exercise” (p. 23). Flores-Crespo (2007) defends that the kind of education that best adapts to the demands of CA is the Liberal Education, which seeks to liberate people’s mind from habit and custom. Reasoning, personal autonomy, and independence are all aspects of human beings that should be cultivated by a Liberal Education. Moreover, it is necessary a re-approximation between Liberal and Vocational Education, as they are

⁷Sen (2007) sketches an analysis of how values and behaviour can be influenced by social changes, for instance, the expansion of educational systems. Nonetheless, he does not spend much time dealing with it.

not necessarily incompatible. Terzi (2007), discusses how education is able to expand the set of choices and capabilities people have in their lives.

Walker (2012) argues that the CA sees education as empowering, emancipatory, and freedom making. Formal education should be responsible for equipping students with the capability for practical reason, allowing them to form a conception of the good and critically reflect about the planning of their life. Vaughan and Walker (2012) assert that, given education's capacity of moulding people's values, it is important that formal education does not impute a given set of values into passive students, but that it stimulates them to learn and develop by themselves their own values and agency. Consequently, students should be exposed to situations in which they have the opportunity to reflect about their values and society's reality. They must not be told what to value, as this is essentially against the very own nature of the capabilities approach and its emphasis on plurality of values. Again, the cultivation of practical reason is paramount in this process.

Wood and Deprez (2012) point out to that schools should provide opportunities to their students for the exercise of their autonomy and agency. These opportunities should not only be available during the learning process, but also during examination, so that students can express themselves authentically and critically assess their own behaviour and identities. Teachers should also assess how their pedagogical practices allow students to explore critically their values, at the same time that they must make explicit and open to criticism the values associated with their approaches. It is important that teachers consider how what students are learning can contribute to the formation of their values and what they would like to become in the future.

Gender issues have also been addressed in the CA in several works (Nussbaum, 2003; Unterhalter, 2003, 2007, 2008; Walker and Unterhalter, 2007). Unterhalter (2007) exams what does gender equality in education mean. She points to three different notions of equality, all of them important in their own and complementary to each other. One of them relates to equality in distribution and focus on equal amounts of education for boys and girls. A second approach focus on equality of condition, going beyond outcomes and considering how gendered relations may be reproduced in classrooms. A third perspective is focused on capabilities, and share some similarities with the previous two. A capabilities approach towards equality in education would not only look at equality from the point of view of capabilities, but also would reflect on how social structures may influence the way girls and boys form they values. Therefore, it is important not only to think about whether there is open access to education for both boys and girls, but go beyond the school environment and ask to what extent social and cultural factors may affect preferences, ambitions, and aspirations. According to her, governments that aim to follow the CA "have an obligation to establish and sustain the conditions for each and every individual, irrespective of gender, ethnicity, race, or regional location to achieve valued outcomes"

(Unterhalter, 2007, p. 102). Nussbaum (2003) shows similar concerns related to female education, arguing that governments must support it. Specially, Nussbaum mentions the capacity that education has in promoting the very own humanity among those that engage in it:

The girls in Bihar were learning useful skills, but they were also learning to value their own humanity. The pride and confidence of their stance as they performed the play, their happy giggles as they told us how they first shocked, then influenced, their village—all this shows us that what is at stake in literacy is no mere skill but human dignity itself and the political and social conditions that make it possible for people to live with dignity. (Nussbaum, 2003, p. 335)

Surely, the lessons learned from issues related to gender must not be restricted to this particular case, as it can be more or less extended to other minority groups that may suffer from similar, although certainly not equal, subjugation as those of women under patriarchal societies.

Unterhalter (2008), still dealing with questions related to gender issues inside schools, highlights how this can add many layers of complexity in the study of education from the capabilities perspective. In this sense, she argues that “[a] theory which makes a causal link between education and capability is problematic because sometimes education, particularly that in schools, is not an enlargement of freedom” (Unterhalter, 2008, p. 494). For instance, teaching a particular language in a multicultural society can lead to a reduction in ethnic minorities’ freedom. Her greater concern, however, is with the situation of girls and young women in South African and the high incidence of HIV/AIDS among them as compared to men of the same age. This difference, she argues, is a consequence of recurrent cases of sexual harassment, inside or on the way to schools, both by teachers and classmates. For this reason, attending school can become a serious deprivation in the freedom that these South African girls have, as it could amount to the exposure to HIV/AIDS infection. Hence, simply assuming that any sort of education is directly linked with advances in capabilities would be misleading.

Parallels can be made in relation to schools where violence is widespread, not only inside it but also in its neighbourhood: “the failure of management in schools with regard to providing a safe environment for education places the assumption of education simply and unproblematically on enhancing capabilities in question” (Unterhalter, 2008, p. 500). At the same time, curricula and conducts inside schools should be re-evaluated so that practices that may impair the capabilities of some students are removed, such as gender bias in curricula or bullying.

Finally, the way in which children’s well-being is considered in the capabilities perspective has been dealt with recently. In general, it was assumed that, given their lack of

maturity, concerns over children’s choices and agency should be relegated to the future and the focus should be placed on their functionings, as to allow a larger capability set in the future when their choice and agency could be exercised at its fullest (Saito, 2003). Nevertheless, recent developments in the role children play in the CA have valued their capacity for agency and autonomy and have stressed the importance of early stimuli in these domains. Ballet et al. (2011) mention four ways in which children’s agency and autonomy can be analysed: i) restrict the focus on functionings; ii) consider autonomy to be relevant only in the adult phase; iii) assume that children’s capacity for reasoned choice is limited and create spaces where such choices are constrained to those that may favour them; and iv) assume that opportunities for agency and autonomy should evolve as children’s maturity grows. The last two options are linked to the idea of *evolving capabilities*. This process incorporates concepts such as opportunity, capacity, and agency in a dynamic framework that changes as times goes by. As a consequence, capabilities and opportunities for autonomy that are valued for children would not be the same as that for adults, at the same time that they can change relative to children’s age. As pointed out by Ballet et al. (2011), “children are not a unified category” (p. 33).

Following this approach that stresses children’s well-being and agency, Biggeri and Santi (2012) emphasise the necessity of including children in decision-making processes, as it can help them in the development of their autonomy and agency. The authors suggest that the pedagogical proposal put forward by Philosophy for Children may be specially useful for this objective, as it promotes spaces for discussion inside schools and allow children to cultivate their critical thinking and agency, both essential for democratic citizens. The idea of agency in education is also highlighted by Vaughan (2007) when she conceptualises “educational agency”, relating it with educational aspects that are valued by individuals and the ability to choose, including what schools to attend, what subjects to study, or what level of effort to exert.

4 A List Proposal

This section presents a list of dimensions that should guide the choosing of variables for education’s assessment from the capabilities perspective. It is important to outline the main dimensions associated with education, as traditional studies on education, specially those on the field of economics, tend to focus on a rather narrow set of variables, such as attendance rate, performance in standardised tests or age-grade distortion. These variables can be associated with a human capital account of education, and therefore are not sufficient for a comprehensive evaluation of education (Robeyns, 2006; Vaughan, 2007; Unterhalter, 2007). Moreover, to explicitly state a set of dimension makes clear what is the normative stand taken, something that is valued inside the CA but is neglected in other fields.

As a first step, Table 1 summarises a few lists of dimension that have already been proposed in the capabilities literature. They are the one proposed by Terzi (2007), two lists proposed by Walker and Unterhalter (2007) and a list proposed by DeCesare (2014).

Table 1: Lists of dimensions by other authors

Terzi (2007)	Walker (2007) - I	Walker (2007) - II	DeCesare (2014)
Literacy	Independent and critical thought	Autonomy	Being critically literate Being informed about current social-political events at local and global levels
Numeracy	Knowledge	Knowledge	Thinking critically about local and world history and culture
Sociability and participation	Bodily integrity	Social relations	Exercising critical reasoning and reflection about one's life and the society in which one lives
Learning dispositions	Respect	Voice	construct meaning collectively
Physical activities		Bodily integrity and bodily health	Initiating and engaging in discussions characterized by various forms of communication
Science and technology		Emotional integrity and emotions	
Practical reason		Aspiration Respect and recognition	

The lists summarised vary considerably in their motivational purposes. Terzi (2007) aims at outlining the basic aspects related to the capability to be educated, and her list focus on elementary abilities such as literacy, even though she considers education broadly, including dimensions such as practical reason and sociality and participation. Walker and Unterhalter (2007) present two lists, the first related to the basic capability to be educated, formulated in very general terms, and the second designed specifically for gender inequality in education, although many of these dimensions can be easily applied in a general assessment of education. DeCesare (2014) is strictly focused on beings and doings that are “essential to the emergence and exercise of children’s individual and collective democratic existence” (p. 166). His list encompasses many dimensions which can also be related to the three capabilities proposed by Nussbaum (2006), but in a more

concrete and disaggregated level.

All these lists share many points in common. Among them are knowledge, for obvious reasons. But all of them are also concerned with the the promotion of autonomy, agency, and learning dispositions by students, as well as respect, sociability, and participation. DeCesare (2014) is the outlier, but this is due to his strict focus on a particular aspect of education, i.e., promotion of democratic dispositions among students.

Considering the lists above and the discussion conducted in the previous section, it is proposed a two-folded list of dimensions for education's assessment based on the CA. The list is divided in two, taking into account the suggestion made by Vaughan (2007), who differentiates between capabilities to access education and capabilities gained through education. This distinction is adequate as it groups together different aspects of education that can be confused. Although the distinction between them may not be always clear and straightforward, as Vaughan herself admits, it may prove helpful both theoretically and methodologically.

In fact, none of the lists considered above distinguishes capabilities to access or through education, what can lead to confusion or ambiguity, as one cannot tell if a particular dimension is necessary for a full participation in education or if it is an important capability that schools should foster. Taking Walker's list as an example, sometimes it may be hard to tell if a dimension refers to participation in the learning process or is something that schools should help students develop. Autonomy, with its far-reaching meaning, may be related to both. Even if one opens up this broad title and looks at its description ("being able to have choices, having information on which to make choices, planning a life after school, independence, empowerment" (Walker, 2007, p. 189)) the ambiguity remains. The same can be said about other dimensions and lists, for instance, Terzi's "sociability and participation", which is defined as "being able to establish positive relationships with others and to participate in social activities without shame" (Terzi, 2007, p. 37). The present list seeks to avoid this sort of problem and divides it up into two domains.

The first set o dimensions refers to capabilities to participate in education:

- *Access to educational structures*: It is necessary that there is access to educational infrastructures in adequate conditions and within reasonable range.
- *Social conditions for education access*: Families, society and governments must make sure that there is material support in order that children and youths are able to fully participate in education.
- *Security*: Students must have their security guaranteed, both physical and mental. It includes issues related to physical violence, sexual harassment, and psychological distress in their many forms.

- *Respect for diversity*: Schools must be an environment that welcome students from diverse backgrounds in a way that does not impair their educational development. This relates to the intrinsic human heterogeneity in individual, social, and environmental levels.
- *Educational Agency*: The educational system must offer spaces and opportunities that allow students to exert their agency, autonomy, and participation in accordance to their age and maturity.

The first two items refer to the existence of material resources that enable students to be educated. These include nearby schooling infrastructure, as well as material conditions that can support their study. Although these dimensions display a rather resourcist bias that may make some capabilities enthusiasts uncomfortable, it is paramount that students have these material conditions available to them, as without them there would be no resources to be converted into functionings and capabilities. The aspects related to the conversion of these resources are left to another dimension.

Security is motivated by the contribution of Nussbaum (2011) related to bodily health and integrity, as well as the importance of emotions and absence of factors that can prompt anxiety or fear. These points have been stressed by authors dealing specifically with education, specially Walker and Unterhalter (2007). It is also important to mention Unterhalter (2008) and her discussion on how schooling and potential HIV/AIDS infections can affect students well-being. Vaughan (2007) too has raised important questions related to security and violence in schools.

The fourth dimension, respect for diversity, refers specifically to human heterogeneity and how this can affect the conversion of educational resources into valuable educational capabilities. It is concerned with how individual, social, and environmental factors may embarrass this conversion, meaning that it is necessary that schools interfere and assure effective access to educational capabilities. This item is particularly important to dismiss any resourcist character that can be associated with the list, as it focuses exclusively on student's capacity to achieve valuable educational functionings, following the critique made by the CA to other models of education, including the one based on human rights (Robeyns, 2006; Walker, 2012).

The last dimension aims at introducing into the list the idea of educational agency, as discussed by Vaughan (2007). It stresses the importance of providing students with spaces in which they can cultivate their autonomy and agency in accordance to their age and maturity, in a direct link with the discussion over children and capabilities, specially the idea of evolving capabilities (Biggeri et al., 2011). Among the spaces of agency highlighted by Vaughan is the choice of courses, schools, and a particular score in a exam. In this sense, to fully participate in education is associated with the intrinsic value of education, as it allows students to learn about subjects that they judge valuable,

as for example, to learn a second language or how physical phenomena happen.

The second group of dimensions encompasses those capabilities gained through education.

- *Education for democratic existence*: This refers to the role played by schools in the formation of citizens with democratic dispositions. It is linked to the capacity to participate in public life and public discussion in a respectful and critical way; to have the knowledge on history, culture, laws, society, etc. necessary for such participation; to develop argumentative abilities in order that opinions and beliefs are not subject to tradition or authority but reason and evidence; to respect the plurality of opinions and lifestyles; capacity to imagine oneself in the situation of other people and create ties of empathy towards people within and outside one's own society.
- *Education for practical reason*: This refers to the role of education in the student's values formation. It does not include schools imparting into students a specific set of values but contain the many positive opportunities that schools can offer so that students can reflect critically, individually or collectively, about one's set of values and society, so he or she can develop his or her own conception of the good and how to act.
- *Vocational education*: This dimension relates to the development of valuable skills and knowledge that can contribute to one's economic capabilities and his or her productive insertion in society; includes the general instrumental economic values of education.
- *Education for well-being and scientific knowledge*: This refers to the development of skills and knowledge that can contribute to student's present and future well-being; it is associated with knowledge that has instrumental value that goes beyond the economic sphere, as well as knowledge that may have intrinsic value for students; includes the practice of physical activities and a scientific approach to knowledge.

The first item in this second part of the list has been put forward specially by Nussbaum (2006) and DeCesare (2014), but also by other authors (Walker, 2012; Vaughan and Walker, 2012) and is an important component of any capabilities-based analysis of education. It includes the capacity for critical thinking and access to information, as well as knowledge about political structures and forces in society. It is also linked to Nussbaum's account of the global citizen and narrative imagination. The role played by arts and humanities in cultivating social ties among people is therefore stressed.

The second item, practical reason, is one of Nussbaum's Central Capabilities and the importance of education and schooling in its development has been argued by many

authors (Saito, 2003; Flores-Crespo, 2007; Vaughan and Walker, 2012; Wood and Deprez, 2012). It is closely linked to the agency aspect of individuals and how schools can have an impact on the formation of their students' values when students are provided with spaces for open discussion, without the promotion of any particular set of values.

The third item is associated with the instrumental economic value of education (Robeyns, 2006). It encompasses the provision of knowledge that is useful in the labour market, such as literacy, mathematics, or computing, including the elementary knowledge that is necessary for the advancement of one's education or access to institutions of higher education. Even though an exclusive focus on economic skills is criticised within the capabilities perspective, its value and importance is always recognised, together with a broader set of dimensions that is also valuable.

The final dimension relates to the intrinsic and non-economic instrumental values of education (Robeyns, 2006). This includes the development of many abilities and knowledge that can contribute to students' present and future well-being that are not linked to the labour market. Hence, formal education may contribute to the expansion of capabilities that are outside the productive sphere, specially those related to individual's quality of life, including here the practice of physical activities. For instance, knowledge about diseases, human body, and reproduction can result in many health benefits. The non-economic value of education has been extensively discussed by Sen and others, specially in relation to the potential benefits of education for life expectancy (Sen, 2001; Saito, 2003; Wigley and Akkoyunlu-Wigley, 2006).

Finally, it is interesting to discuss some methodological aspects of this list that goes beyond its splitting into two parts. Firstly, it can be noticed that the choice of dimensions was made in a rather abstract and wide sense, so that they can be adapted to particular contexts in which they shall be applied, either in geographical or cultural terms, but also in relation to the many phases of formal education. For instance, instead of choosing different dimensions related to literacy, numeracy or computing skills, it was preferred a much more comprehensive category, "Vocational education". On the one hand, this choice results in a list that is not related to any concrete ability, but on the other hand, the functionings that it comprises are relevant for all levels of schooling and social contexts. In this sense, a dimension such as literacy may not reflect well the demands of advanced levels of schooling, for example, the last years of secondary school. Moreover, literacy may be an important ability in many developing countries in which illiteracy levels are still high, but may not represent an important functioning in more developed countries. Therefore, an abstract list is essential to guide the choosing of concrete indicators in particular contexts. This methodological choice shares some characteristics with Nussbaum (2011), where her list of Central Capabilities is intentionally designed at a high level of abstraction, and it is society's duty to refine and make them more suitable to the concrete situation of a nation, based on its history and values.

Similarly, the dimensions chosen are a departure point for a normative reflection on what a good education means from a capabilities perspective. This principle is more important in the second part of the list where comprehensive capabilities and functionings that schools should promote are outlined. The direct consequence is that each dimension is composed of many “subdimensions” associated with specific capabilities that are part of a bigger capability. At the same time, this choice widens the possibility of overlaps among dimensions, as some functionings may be simultaneously relevant for more than one dimension.

The case of “education for democratic existence” may be used to illustrate this point. Firstly, this dimension is made up of many items responsible for the formation of citizens with a democratic disposition, as was made clear by Nussbaum (2006) and DeCesare (2014). One example of these items is “critical thinking”, which accounts for an individual’s ability to subject their positions to reasoned scrutiny. Besides being part of education for democratic existence, this subdimension is also relevant for another dimension listed: “education for practical reason”, as critical thinking is also essential for value’s formation. Therefore, a list guided by the enumeration of particular, non-reducible functionings would opt for breaking down this two dimensions into their many respective components, including critical thinking.

The reason for this methodological approach is to highlight the many educational objectives that a good-quality education should pursue if it is to take the normative stand associated with the capabilities perspective. Simply adding critical thinking as a relevant dimension would not make explicit why it is important within the normative framework of capabilities. However, when one departs from democratic existence or practical reasoning, the reasons for including critical thinking in the objectives of any educational system are made clear.

How does the list fare when it is evaluated before established criteria for list’s formulation? The criteria presented by Robeyns (2005a) are: i) explicit formulation; ii) methodological justification; iii) different levels of generality; and iv) exhaustion and non-reduction. Among them, one item that has not been accomplished yet is to formulate a list of pragmatic dimensions based on the ideal list sketched above. This, however, must only be done once empirical applications are considered, such as the one proposed in the next section. It is important to highlight beforehand that in the case of education and capabilities, as in other applications of the CA, the use of existing data may greatly limit the extent to which measures can be adequately estimated.

The list proposed may be deficient in relation to one of the criterion proposed by Robeyns: non-reduction. As was discussed above, the choice of comprehensive and abstract dimensions increases the chances of overlapping amongst them. Still, it is hoped that this flaw may be compensated by a clearer listing of capabilities that are judged relevant from the capabilities point of view, including the normative motivation for their

inclusion.

Finally, considering the classification of methods for the selection of capabilities put forward by Alkire (2007), it can be said that the present list was built based on normative assumptions, even though any empirical application of it that uses secondary data will necessarily go through the existing data filtering.

5 A illustrative application

As a final exercise, this paper puts forward an illustrative application of the list of dimensions developed. The data used come from Brazil's biannual assessment of basic education (Saeb - *Sistema de Avaliação da Educação Básica*) and includes a myriad of variables. Specifically, it employs data from urban students from the last year of primary education in 2013. It includes students from every Brazilian State and every administrative competencies (public and private schools). Apart from standardised tests of Portuguese and Mathematics, the evaluation also includes four questionnaires that have information on students, teachers, principals, and schools. A total of 49 questions were chosen from this four questionnaires aimed at representing the nine dimensions enumerated above. The items were arranged so that higher responses represent higher capabilities and functionings. For simplicity, the index uses equal weights for all dimensions and indicators within each dimension, aggregating them additively⁸.

Results, summarised by States in Table 1, reveal the multidimensional character of education. This can be seen by comparing the ranking of States in the general index and in particular dimensions. The State of Rio de Janeiro was placed as first in the general ranking, but in some dimensions it scored badly, such as agency and practical reason, while showing an overall good performance in the remaining dimensions. A similar argument can be made for the State of Alagoas, which was placed in the last position but managed to have a good score on agency and median positions in other dimensions. States on intermediary positions are characterised by diverse scores on particular dimensions too. Therefore, a good score in the overall index does not mean that every dimension has a similar performance, as all States displayed some dimensions with relatively high scores simultaneously with dimensions with bad scores. This is an evidence of independence among them, being it possible that schools may offer a good quality education in some aspects of it but not in others.

The weak relationship among dimensions is better visualised in Table 3, that shows the correlations among States' scores on each dimension. The general result is that correlations are rather weak. The highest correlation found is between Vocational Education

⁸For lack of space a detailed discussion of the index's construction was not included. For a reference that deals with its properties, see Anand and Sen (1997) and take their α to be 1. The complete list of variables and the dimensions they are associated with is available upon authors' request.

Table 2: Scores and orderings by States for the index and subindexes

Index	EW	VE	PR	ED	EA	RD	SE	AS	SC
Brazil	0,67	0,65	0,63	0,39	0,77	0,64	0,81	0,74	0,66
Rio de Janeiro	0,69	1	0,71	2	0,64	8	0,66	26	0,70
Pernambuco	0,68	2	0,63	15	0,61	18	0,73	5	0,70
Ceará	0,68	3	0,62	17	0,63	14	0,73	6	0,71
Amazonas	0,67	4	0,63	14	0,61	19	0,73	7	0,67
Piauí	0,67	5	0,59	21	0,64	6	0,71	14	0,71
São Paulo	0,67	6	0,68	7	0,65	4	0,69	21	0,64
Paraíba	0,67	7	0,62	16	0,60	22	0,71	17	0,71
Minas Gerais	0,67	8	0,64	10	0,65	5	0,72	9	0,65
Tocantins	0,67	9	0,63	13	0,63	10	0,75	1	0,70
Distrito Federal	0,67	10	0,68	5	0,66	3	0,69	22	0,65
Goiás	0,67	11	0,60	19	0,66	1	0,74	4	0,64
Acre	0,67	12	0,58	24	0,66	2	0,75	2	0,70
Maranhão	0,67	13	0,54	27	0,60	23	0,75	3	0,72
R. G. do Norte	0,66	14	0,63	12	0,61	20	0,69	24	0,71
Paraná	0,66	15	0,74	1	0,62	17	0,72	11	0,63
M. G. do Sul	0,66	16	0,68	6	0,63	12	0,70	20	0,66
Espírito Santo	0,66	17	0,66	8	0,62	16	0,69	23	0,64
Mato Grosso	0,65	18	0,59	23	0,63	9	0,73	8	0,65
Rondônia	0,65	19	0,69	3	0,63	11	0,70	19	0,65
Amapá	0,65	20	0,64	9	0,62	15	0,72	13	0,68
R. G. do Sul	0,65	21	0,69	4	0,64	7	0,65	27	0,64
Sergipe	0,65	22	0,60	18	0,59	26	0,70	18	0,67
Bahia	0,65	23	0,59	22	0,59	25	0,72	10	0,67
Santa Catarina	0,64	24	0,64	11	0,63	13	0,68	25	0,63
Pará	0,64	25	0,56	25	0,60	24	0,71	15	0,69
Roraima	0,64	26	0,59	20	0,61	21	0,71	16	0,68
Alagoas	0,64	27	0,55	26	0,56	27	0,72	12	0,68

Notes: EA - Educational Agency; AC - Access to Educational Structures; ED - Education for Democracy; PR - Education for Practical Reason; SE - Social Conditions to Access Education; SE - Security; VE - Vocational Education; RD - Respect for Diversity; WB - Education for Well-being and Scientific Knowledge

and Respect for Diversity (0,836). Other correlations were close to zero, meaning the absence of any linear relation at all. It follows that the dimensions as measured here are indeed multidimensional, as none can be properly represented by a smaller set of indicators. Furthermore, some pairs of dimensions showed negative correlations, indicating that those scores moved in different directions. Some of them are quite high, such as that between agency and education for well-being and scientific knowledge (-0,739).

Table 3: Correlations among dimension's scores

	GI	WB	VE	PR	ED	EA	RD	Se	AS	SC
GI	1,000									
WB	0,287	1,000								
VE	0,450	0,429	1,000							
PR	0,080	-0,571	-0,057	1,000						
ED	0,452	0,581	0,153	-0,536	1,000					
EA	0,047	-0,739	-0,514	0,688	-0,430	1,000				
RD	0,597	0,375	0,836	0,005	0,314	-0,419	1,000			
Se	0,361	-0,299	-0,376	-0,054	0,101	0,424	-0,328	1,000		
AS	0,643	0,224	0,208	-0,262	0,298	-0,218	0,324	0,320	1,000	
SC	0,377	-0,497	-0,277	0,338	-0,158	0,686	-0,248	0,691	0,071	1,000

Notes: EA - Educational Agency; AC - Access to Educational Structures; ED - Education for Democracy; PR - Education for Practical Reason; SC - Social Conditions to Access Education; Se - Security; VE - Vocational Education; RD - Respect for Diversity; WB - Education for Well-being and Scientific Knowledge

It is also important to consider Vocational Education, a dimension related to the human capital model for education. This dimension incorporates not only the score on Portuguese exam, but also the percentage of students that teachers believe will enter university and the percentage of students that have failed or abandoned school, advancing traditional approaches to education quality. Nonetheless, it can be seen that even this broader account on education does not necessarily relates to good education thought from the capabilities perspective. Despite a relatively high positive correlation with some dimensions, it was also related negatively with four of them (education for practical reason, educational agency, security and social conditions to access education), meaning that it cannot adequately serve as a general indicator of quality as it does not represent well the many educational aspects valued in the CA. Therefore, this calls for the inclusion of other dimensions if one aims at assessing education quality from a broader perspective.

This simple exercise has presented some evidence for the need of multidimensional assessments of education, not only because it has many facets but also because traditional tools employed for such assessments may overlook important aspects that should be considered when one thinks about education from a comprehensive perspective. This is specially so for the case of an exclusive focus on a human capital approach to education, that may not only bias the formation of students, as Nussbaum (2006) have warned, but

may also give a false impression on the quality of schooling that is offered to children.

Concluding Remarks

This paper proposed a list of dimensions for education quality assessment based on the Capabilities Approach. Different from other lists of dimensions in the literature, here the list followed Vaughan's (2007) suggestion and was divided into two parts: one dealing with capabilities to participate in education and another dealing with capabilities through education. The list has a total of nine items. The first five relate to capabilities to participate in education: i) access to educational structures; ii) social conditions to access education; iii) security; iv) respect for diversity; and v) educational agency. The last four dimensions refer to capabilities gained through education: i) education for democratic existence; ii) education for practical reason; iii) vocational education; and iv) education for well-being and scientific knowledge. This is an abstract and comprehensive list that can guide the selection of concrete indicators for education from the capabilities perspective. Given this characteristic, it can be applied to many particular contexts and is suitable for any educational phase.

An empirical application aiming at illustrating its use employed data from Brazil's biannual assessment of education quality, covering a wide range of variables. Results showed that education is indeed multidimensional, as the ranking of States varied greatly accordingly to the dimensions considered, including the one associated with a human capital approach to education. This is evidence for the need of advancing multidimensional studies on education that goes further than traditional ones, which focus mainly on standardised test results or attendance rates.

Finally, the current discussion leads to the necessity to develop more adequate measures for the many dimensions related to education from a capabilities perspective. Although studies on schools infrastructure and quality of education based on a human capital model are widely available, the remaining dimensions do not have any recognised and accepted set of indicators that can be readily applied. Therefore, it is paramount to develop questionnaires that can reliably measure dimensions such as democratic disposition, practical reasoning, agency, and the conversion of factors into valuable educational capabilities. With this set of measures at hand, capabilities practitioners will not only be much more prepared to evaluate the quality of educational systems or the extent of inequality within them, but will also be much closer to advance an education that can truly contribute towards a more democratic, tolerant, and just society.

References

- S. Alkire. Choosing dimensions: The capability approach and multidimensional poverty. chronic poverty research centre working paper no. 88, 2007.
- S. Anand and A. Sen. Concepts of human development and poverty: a multidimensional perspective. *United Nations Development Programme, Poverty and Human Development: Human Development Papers*, pages 1–20, 1997.
- J. Ballet, M. Biggeri, and F. Comim. Children’s agency and the capability approach: A conceptual framework. In M. Biggeri, J. Ballet, and F. Comim, editors, *Children and the capability approach*, pages 22–45. Palgrave Macmillan, New York, 2011.
- M. Biggeri and M. Santi. The missing dimensions of children’s well-being and well-becoming in education systems: Capabilities and philosophy for children. *Journal of Human Development and Capabilities*, 13(3):373–395, 2012.
- M. Biggeri, J. Ballet, and F. Comim. *Children and the Capability Approach*. Palgrave Macmillan, New York, 2011.
- T. DeCesare. Theorizing democratic education from a senian perspective. *Studies in Philosophy and Education*, 33(2):149–170, 2014.
- P. Flores-Crespo. Situating education in the human capabilities approach. In *Amartya Sen’s capability approach and social justice in education*, pages 45–66. Palgrave Macmillan Basingstoke, UK, New York, 2007.
- M. C. Nussbaum. *Love’s knowledge: Essays on philosophy and literature*. Oxford University Press, Oxford, 1990.
- M. C. Nussbaum. Women’s education: A global challenge. *Signs: Journal of Women in Culture and Society*, 29(2), 2003.
- M. C. Nussbaum. Education and democratic citizenship: Capabilities and quality education. *Journal of human development*, 7(3):385–395, 2006.
- M. C. Nussbaum. *Creating capabilities*. Harvard University Press, Cambridge, 2011.
- K. Polanyi. *The great transformation: The political and economic origins of our time*. Beacon Press, Massachusetts, 1944.
- I. Robeyns. Selecting capabilities for quality of life measurement. *Social indicators research*, 74(1):191–215, 2005a.
- I. Robeyns. The capability approach: a theoretical survey. *Journal of human development*, 6(1):93–117, 2005b.

- I. Robeyns. Three models of education rights, capabilities and human capital. *Theory and research in education*, 4(1):69–84, 2006.
- M. Saito. Amartya sen’s capability approach to education: A critical exploration. *Journal of philosophy of education*, 37(1):17–33, 2003.
- A. Sen. Equality of what? In S. McMurring, editor, *Tanner Lectures on Human Values 1*. Cambridge University Press, Cambridge, 1980.
- A. Sen. Well-being, agency and freedom: the dewey lectures 1984. *The journal of philosophy*, pages 169–221, 1985.
- A. Sen. *Inequality reexamined*. Oxford University Press, 1992.
- A. Sen. Reason before identity. *Romanes Lecture*, 2000.
- A. Sen. *Development as freedom*. Oxford Paperbacks, 2001.
- A. Sen. *Identity and violence: The illusion of destiny*. Penguin Books India, 2007.
- A. Sen. *The Idea of Justice*. Harvard University Press, Cambridge, 2011.
- A. K. Sen. Democracy as a universal value. *Journal of democracy*, 10(3):3–17, 1999.
- L. Terzi. The capability to be educated. In E. Walker, Melanie; Unterhalter, editor, *Amartya Sen’s capability approach and social justice in education*, pages 25–44. Palgrave Macmillan, New York, 2007.
- L. Tikly and A. M. Barrett. Social justice, capabilities and the quality of education in low income countries. *International Journal of Educational Development*, 31(1):3–14, 2011.
- E. Unterhalter. The capabilities approach and gendered education an examination of south african complexities. *Theory and Research in Education*, 1(1):7–22, 2003.
- E. Unterhalter. Gender equality, education, and the capability approach. In *Amartya Sen’s capability approach and social justice in education*, pages 87–108. Palgrave Macmillan, New York, 2007.
- E. Unterhalter. The capability approach and gendered education: Some issues of operationalism in the context of the hiv/aids epidemic in south africa. In F. Comim, M. Qizilbash, and S. Alkire, editors, *The Capability Approach: Concepts, Measures, Applications*. Cambridge University Press, Cambridge, 2008.
- E. Unterhalter and H. Brighouse. Distribution of what for social justice in education? the case of education for all by 2015. In *Amartya Sen’s capability approach and social justice in education*, pages 67–86. Palgrave Macmillan, New York, 2007.

- R. Vaughan. Measuring capabilities: An example from girls' schooling. In E. Walker, Melanie; Unterhalter, editor, *Amartya Sen's capability approach and social justice in education*, pages 109–130. Palgrave Macmillan Basingstoke, UK, New York, 2007.
- R. P. Vaughan and M. Walker. Capabilities, values and education policy. *Journal of Human Development and Capabilities*, 13(3):495–512, 2012.
- M. Walker. Selecting capabilities for gender equality in education. In *Amartya Sen's capability approach and social justice in education*, pages 177–196. Palgrave Macmillan, New York, 2007.
- M. Walker. A capital or capabilities education narrative in a world of staggering inequalities? *International Journal of Educational Development*, 32(3):384–393, 2012.
- M. Walker and E. Unterhalter. *Amartya Sen's capability approach and social justice in education*. Palgrave Macmillan, New York, 2007.
- S. Wigley and A. Akkoyunlu-Wigley. Human capabilities versus human capital: gauging the value of education in developing countries. *Social Indicators Research*, 78(2):287–304, 2006.
- J. Wolff and A. De-Shalit. *Disadvantage*. Oxford University Press, New York, 2007.
- D. Wood and L. S. Deprez. Teaching for human well-being: Curricular implications for the capability approach. *Journal of Human Development and Capabilities*, 13(3): 471–493, 2012.