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Implementing Education Quality in Low Income Countries

**APPLYING THE CAPABILITY APPROACH TO SCHOOL
IMPROVEMENT INTERVENTIONS IN TANZANIA**

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Abstract

The Capability Approach has become an important paradigm that has shifted the focus of development from economic growth to human well-being as its goal or 'end.' As a result of its theoretical and philosophical attractiveness, many scholars have begun to investigate its application and operationalisation within the realm of education. This paper intends to contribute to such a task by investigating how the Capability Approach can be applied to the modality of formal schooling, particularly in regards to school improvement interventions in Tanzania. It will draw upon data gleaned from this researcher's past experience of teaching in a Tanzanian government primary school in order to elucidate inequalities that affect teachers' and students' ability to convert resources into functionings, and the social structures that set the conditions for their agency and freedoms. It will also examine how the restriction and promotion of capabilities is linked to teacher and student well-being, and how this may have an affect on the overall provision of education quality. Moreover, this paper will propose several theoretical and practical applications of the Capability Approach that form the foundation for an actual school improvement intervention in Sub-Saharan Africa. The aim of such an intervention would be to identify the capabilities that teachers and students have reason to value, so that improvement efforts can be designed for their expansion. The achieved functionings of such actions would not only lead to the improved well-being and morale of teachers and students, but would also lead to improvements in education quality via its positive reactions.

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Applying the Capability Approach to School Improvement Interventions in Tanzania

Introduction

One dilemma that confronts education planners in Tanzania and other developing countries is the difficult task of improving schools in an effort to ensure that they are of a quality standard. Part of this dilemma is rooted in the very terminology itself as 'school quality' has proven to be a term with a very understandable connotation, yet a much more amorphous definition. Quite often school quality is defined and conceptualised within the epistemological and methodological shadow of its predecessor, 'school effectiveness' (Jansen 1995). This 'effectiveness' paradigm has become very attractive to education planners and underpins much of the research that has impacted policy, as it straightforwardly frames education as consisting of inputs or variables, that when combined correctly, result in greater effectiveness (cf Fuller 1987, Lockheed and Verspoor 1991, Heneveld 1994). The limitations to this approach however, include insensitivities to culture, context, belief systems and social structures within schools—all of which affect how and whether inputs are actually used. To counter such problems, some researchers have put forth conceptualisations of school quality that eschew the effectiveness paradigm and are instead predicated on qualitative investigations of school processes (such as teaching, learning and management), and insider perspectives of what happens within classrooms (cf Hawes and Stephens 1990, Jansen 1995). Here, the 'quality' of a school is not judged on inputs or outcomes represented by examination scores, but rather on the *processes* that affect students and their ability to learn. Such a perspective also gives credence to stakeholders, which entails notions of inclusion and participation that have at times, been absent until now.

These tenets are very much in line with the Capability Approach (CA), and this paper intends to build on the concept of 'quality as process' by drawing from this researcher's Masters thesis (cf Tao 2007) to present theoretical and practical applications of CA that reframe current conceptions of school quality and procedures of how to improve it. I will discuss the benefits of predicating school improvement measures on capability expansion for teachers and students, and will use empirical data gleaned from my experiences of teaching in a Tanzanian state primary school to demonstrate how CA can be used towards an actual intervention. These demonstrations will include showing how CA can

be used as: 1) a tool for in-depth situational analyses; 2) a framework to determine measures for school improvement; and 3) a monitoring device for evaluations of overall school development. However, before providing such demonstrations, a brief discussion of the methods that contributed to the evidence base is in order.

1. Using auto-ethnography to demonstrate CA

Although this paper is a theoretical investigation into CA's potential as school improvement model, empirical data will be used to provide robust demonstrations of the different analysis and planning applications that it offers. This data was gleaned from reflective journals kept during a year of volunteer teaching at Engosengiu primary school in Arusha, Tanzania from 2004-2005. The methodological approach of retrospectively drawing on ethnographic data is referred to as auto-ethnography, which is a general term used for studies where a researcher is both an insider and outsider to the context under study. A specific method within auto-ethnography is *reflexive ethnography*, in which authors use their experiences in a culture to look more deeply at self-other interactions (Ellis and Bochner 2000). A primary method within this approach is 'participant observation', in which:

...the researcher stays with the participants for a substantial period of time to reduce reactivity effects (the effects of the researcher on the researched, changing the behaviour of the latter), recording what is happening, while taking a role in that situation...by staying in a situation over a long period the researcher is also able to see how events evolve over time, catching the dynamics of situations, the people, personalities, contexts, resources, roles, etc. (Cohen, Manion and Morrison 2007: 404-405).

I would identify myself as a 'participant observer' in that I was very much immersed in my village and school culture, lived in a *boma* (family compound) that allowed for identification with the wider community, and was able to create trusting relationships with teachers and students through my proficiency in Kiswahili and presence for an extended period of time. Cohen et al (2007) also argue that such a naturalistic approach lends itself to thick descriptions of social processes and provides a holistic view of the interrelationship of factors.

The insights and data that I gleaned from this participant observation will be utilised in an *ex post facto* manner in order to demonstrate the theoretical models put forth by CA, and to serve as examples to ground concepts that would otherwise remain in hypothetical form. That said, I will now

discuss the tenets of CA and how they relate to education, in order to proceed with such demonstrations.

2. The Capability Approach and Education

The Capability Approach (CA) is a broad normative framework that can be used to evaluate a variety of aspects of well-being, and guide policies that remove obstacles which prevent people from achieving a quality of life that they have reason to value (Sen 1993). It emerged as an intellectual response to various inequality measurements, as it critiqued the choice of variables in which comparisons were being made. Such variables constituted the 'evaluation space' that enabled different approaches to make judgements about individual or social welfare. For example, the variable of income was traditionally used for welfare economics analyses of poverty; however, Sen argued that although income was an important resource for well-being, there were many components of well-being that were not directly acquirable with income, such as security, health and education, amongst others. As well, income analyses did not acknowledge the different physical and social conditions that affected people's ability to convert the same resources into different levels of well-being. Thus, Sen put forth a new space for analysing equality that took account of human diversity and the multiplicity of variables in which equality could be judged. This new space is that of *functionings*, which are the 'beings and doings' that people have reason to value (such as being healthy, being free from violence, and being sheltered, amongst others). Sen also emphasises the need to focus on people's freedom and opportunities for realising these functionings, which he deems *capabilities*.

Central to this idea of having a life one wishes to lead are the concepts of *well-being* and *agency*. In regards to CA, well-being is often discussed in terms of people's "effective opportunities to undertake the actions and activities that they want to engage in, and be whom they want to be" (Robeyns 2003a: 7). Agency encompasses the goals and change a person pursues in regards to her own personal values and objectives (Sen 1999). Thus, one can make evaluations of human development based on relevant dimensions of *well-being freedom* (the opportunity to achieve well-being), *well-being achievement* (the extent that well-being has been achieved), *agency freedom* (the opportunity to pursue and bring about the goals one values), and *agency achievement* (the extent to

which these goals have been achieved). The currency of measurement depends on which concept one is evaluating. For example, well-being achievement should be measured in realised functionings (what a person is actually able to do), whilst well-being freedom is reflected by a person's capability set (her real opportunities). These varying evaluations offer different types of information, yet are not mutually exclusive and can often be combined (Sen 1999).

I believe the concepts that underpin CA are particularly relevant to school improvement because many issues—especially those related to teachers and students—go far beyond inputs and test scores, and are more closely linked to well-being and agency. I shall expand on this connection in the following section, but it should first be noted that this is not the manner in which Sen has previously linked education to CA. Sen's (1999) view on education is that it is an overarching capability that should expand other capabilities; whether it be gaining skills, gaining opportunities that these skills afford, or gaining other intrinsically important capabilities (such as critical thought, respect and empathy). These are all very valid connections, however it has been argued that the links between education and CA are somewhat 'undertheorised' and make assumptions that the quality of education is of a standard level for all people (Unterhalter 2003a). Sen also does not make a distinction between 'education' and 'schooling,' which is problematic because doing so ignores the teaching, learning and management processes that can all be sources of capability deprivation (as well as enhancement) for members within a school. These generalised views of education need to be reconciled, as it is clear that the quality of education amongst schools is not homogenous and "...some forms of education do not enhance freedom, or may do so only partially and in contradictory ways" (Unterhalter 2003a: 12). There has been research that explores CA within the modality of formal schooling (cf Saito 2003, Unterhalter 2003ab, Walker 2006); however, this research focuses on the expansion of student capabilities only. There is a gap presented here, as the well-being of teachers is also paramount—not only to improve the transaction of teaching and learning (which affects student capabilities), but also in terms of equity. Thus, this paper hopes to expand the thinking surrounding CA and formal schooling by exploring how it can be used to investigate teacher capabilities, as well as broaden the discourse surrounding school improvement.

3. How can CA be applied to school improvement interventions?

Hitherto, CA has been used to analyse the situations of 'deprived people' and create policies that give them access to necessary resources and the ability to make choices (Alkire 2002). Sen (1999) has referred to poverty reduction as the removal of *unfreedoms*, such as deprived access to health care, clean water, political participation or gainful employment. I believe it is possible to take CA's view of poverty reduction from a country context and apply it to that of a school context. The parallel being that schools can be contexts for inequality—much like a poverty-stricken village—but instead teachers and students are its deprived residents. Unterhalter (2003a: 8) acquiesces by stating that "...formal schooling in particular contexts, may as much be a case of capability deprivation, as of human capability in development." She has also found it surprising that Sen has not examined education with the same rigour that he has used towards poverty and famine. I would, therefore, like to put forth such an effort vis-à-vis school improvement interventions. I am suggesting a shift in the 'ends' of school improvement efforts to the improved well-being of the teachers and students (via the expansion of their valued capabilities); just as Sen shifted the 'ends' of human development from economic growth to human well being. This is certainly not to say that student achievement and test scores are not important. However, CA was able to expand evaluations of poverty by going beyond the previous indicator of per capita GDP, to broader dimensions of health, knowledge and standard of living (as evidenced by the United Nation's Development Programme (UNDP)'s Human Development Index) (UNDP 2008). This demonstrates CA's influence on the shift in the development discourse—one that could prove fruitful for school improvement measures as well.

In sum, I believe the assessment of a school's development should not be predicated solely on student outputs, because like GDP, they do not give a holistic view or understanding of people's needs or deprivation. However, a broader view of a poverty stricken context (such as a school) and the goal to expand the capabilities and well-being of the people within it, might help to ameliorate the process of teaching and learning. That said, I shall now discuss CA's different applications and how they can be directed towards an actual intervention.

4. How can CA be used?

The Capability Approach is very helpful in analysing and evaluating the development of schools because of its broad scope and highly interdisciplinary nature. "Scholars use the Capability

Approach for different types of analysis, with different epistemological goals, relying on different methodologies, with different corresponding roles for functionings and capabilities” (Robeyns 2005b:193). The following table demonstrates CA’s variety of uses.

Table 5.1 Modes of capability analysis

Epistemological goal	Methodology	Role of functionings + capabilities
Welfare / quality of life measurement	Quantitative empirical	Social indicators
Normative theories	Philosophical	Part of the philosophical foundations
Thick description / Descriptive analysis	Qualitative empirical	Elements of a narrative

Source: Robeyns 2005: 193

A quantitative measurement provided by CA is the Human Development Index (HDI). As mentioned in the previous section, it signalled an important paradigm shift in assessing countries’ development by focusing on a broad set of social indicators, rather than the sole measurement of GDP (Sen 1999).

Other applications of CA however, are more commonly qualitative and theoretical in nature. Political and moral philosophers have used CA as a tool for normative theorising about what is fundamental for well-being and human flourishing (cf Nussbaum 2000, 2003). As a result, scholars have devised lists that “isolate those human capabilities that can be convincingly argued to be of central importance in any human life, whatever else the person pursues or chooses” (Nussbaum 2000: 74). Thus, careful selection of capabilities is done in order to create criteria for social justice that governments can be held accountable to.

CA can also be used as a descriptive tool “to explain behaviour that might appear irrational according to traditional economic analysis, or revealing layers of complexities that a quantitative analysis can rarely capture” (Robeyns 2005a: 194). This is particularly important when analysing specific situations as it allows for deeper levels of understanding. CA achieves this by taking into consideration *conversion factors* (such as personal skills, social norms and logistics), which help to elucidate extenuating circumstances that can affect a person’s ability to achieve certain functionings (Robeyns 2005a). By acknowledging conversion factors, CA takes into account the broader social and

institutional context that affects a person's capability set. This in turn provides a robust situational analysis that can more clearly guide subsequent policy and action.

Given these different applications of CA, I would like to augment Robeyns' list in Table 5.1, by making explicit Sen's implication of using CA as a framework for action. Hitherto, Sen has been adamant in his lack of endorsement of a specific 'list' of capabilities because he views CA as a framework in which participatory methods of capability selection and prioritisation should be applied (Sen 1999, Gasper and Van Staveren 2003). "When the Capability Approach is used for policy work, it is the people who will be affected by the policies who should decide on what will count as valuable capabilities in this policy question" (Robeyns 2005b: 196). This implies a proactive and democratic use of CA amongst stakeholders to select capabilities that will determine actions based on their expansion. Although there are elements of capability selection in Nussbaum's (2000) framework, this fourth application is not guided by a pre-determined normative list, but is instead determined by those involved. Thus, this application would be qualitative and participatory in nature, and the role of functionings and capabilities would not act as social indicators or elements of a narrative, but instead as goals to be achieved.

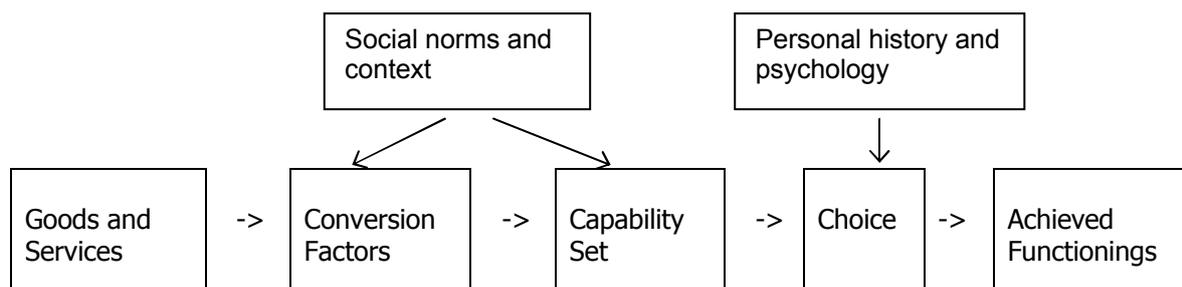
Given the different applications of CA, I believe its relevance to school improvement interventions are three-fold: first, it can act as a tool for descriptive situational analysis in order to examine and evaluate current processes in government primary schools; second, CA can be operationalised as a framework for improvement by utilising participatory measures to identify capabilities to be subsequently expanded; and finally, CA can be used as a measurement device to later monitor and compare how well different schools are faring in their overall expansion of capabilities. I will demonstrate these various applications using data gleaned from teaching in Tanzania, and I shall start by using CA to provide a situational analysis of Engosengiu primary school.

5. Using CA for situational analysis

Utilising CA to provide an in-depth understanding of a situation is particularly relevant to school improvement efforts, because quite often the social process of teaching and learning and those who mediate change (management, teachers and students), are not fully understood before intervention planning commences. This can lead to slippages and oversights that can weaken

improvement efforts. CA is useful here, as it accounts for a variety of factors that affect behaviour. Robeyns (2005a) has put forth a framework that acknowledges the contexts in which capabilities are situated, by identifying *conversion factors* and *choices* that can block capabilities or functionings. The following diagram outlines how these elements are interrelated and can be used to analyse data.

Figure 5.1 A modified rendering of CA factors



Source: Robeyns 2005a

Robeyns (2005a) acknowledges that 'goods and services' are instrumental in the achievement of functionings, but states that it is not the market value of a resource that is important; instead it is the *characteristic* of the goods that enables a functioning to be achieved. For example, a teacher is not interested in a textbook because it is an object made out of paper, but instead she is interested in it because it can make her job easier and more effective. However, a teacher's ability to convert such goods into a functioning is influenced by three conversion factors. These include, *personal conversion factors* (such as intelligence, training, and skills, amongst others); *environmental conversion factors* (such as geographical location and logistics); and *social conversion factors* (such as social norms and power relations). This is where a CA framework goes beyond input/output models, because it acknowledges the broader environmental, personal and social factors that affect the conversion of goods into action. The simple presence of an input will not guarantee its use, thus, the conversion factors affecting it need to be arranged so that capability sets are expanded. However, this also does not guarantee an achieved functioning, as Robeyns (2005a) also posits that a person then has a *choice* to turn an expanded capability set into a functioning. These choices acknowledge people's different ideas of well-being, which means that two people with identical capability sets could end up with different levels of achieved functionings based on the choices they make.

The elements in Figure 6.1 link together to provide an in-depth understanding of the antecedents to a problem or behaviour. In the next section, I will use empirical data gleaned from teaching at a government primary school in Arusha, Tanzania, in order to bring Robeyns' (2005a) framework to life with actual examples of conversion factors and choices that affected teachers and students.

6. A situational analysis of teacher and student behaviour

A great deal of classroom research in developing countries suggests a deficiency in education quality due to teacher behaviour, such as chronic absenteeism, rote teaching methods, and withholding content to support the demand for private tuition, amongst others (Nussbaum 2006, Davidson 2007). Given my experiences at Engosengiu, I too witnessed such occurrences; however instead of vilifying teachers for these behaviours, I would like to use CA to offer reasons why these examples (and others) exist. The following chart draws on empirical data and personal interpretation that was gleaned using auto-ethnographic methods (discussed in section two) to elucidate reasons or conversion factors that may be contributing to observed teacher behaviour.

It should be noted that an analysis of these types of behaviours can be problematic as it is predicated on a deficit model, which can be tied to the value judgements of outside researchers. I believe that a more neutral and inclusive position for school improvement interventions would be to analyse the conversion factors surrounding the valued capabilities that teachers and students initially select (which will be discussed in the next section). However, it is still useful to examine the conversion factors and choices involved in the following teacher behaviour in order to illuminate constraints on capabilities and functionings that may not otherwise be recognised.

Table 6.1 Thick description of teacher behaviour at Engosengiu

Perceived problem	Goods and services	Conversion Factors (Reasons why 'the problem' exists)	Capability	Choice	Functioning (or lack thereof)
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Absenteeism (or being extremely late for class)	n/a	Personal Conversion Factor (PCF): Hungry, tired (not enough breaks so teachers feel entitled to miss their last class of the day) Environmental Conversion Factor (ECF): Too many classes, too many students, too many papers to mark Social Conversion Factor (SCF): Other teachers skip class and it is 'overlooked' by the head teacher	Freedom or opportunity to come to class	Many teachers are over-worked and thus resentful. This low motivation affects their choice in coming to class.	Teaching for the maximum allotted time
Withholding content or teaching very little during class	Content from syllabus and textbooks	PCF: They have the content and time to teach extra tuition classes ECF: Low salaries warrant secondary income generation and there are students willing to pay SCF: It is a common practice among other teachers and not condemned by management	Freedom or opportunity to maximise the teaching of content in class	Many teachers withhold content because they've chosen to put their needs first (by generating income through tuition).	Teaching all subject matter during class
Rote Teaching methods	Teacher training	PCF: Not trained in or does not agree with child-centred pedagogy ECF: 70 students in a class and no supplementary teaching materials SCF: Teachers view foreign innovations with scepticism; and rote teaching is considered the best method for preparing students for national exams	Freedom or opportunity to teach with a child-centred pedagogy	Most teachers believe rote teaching is very effective for large classes, and taking on new methods would add to their workload.	Teaching with child centred-methodology
Corporal punishment	n/a	PCF: Tired, daunted by large classes, have not been trained in any other form of classroom management ECF: 70+ students per class SCF: Corporal punishment conveys teachers' authority, teachers experienced it themselves, it is 'overlooked' by management	Freedom or opportunity to manage a class in a non violent manner	Corporal punishment makes a teacher's life easier as it is seen as the easiest and fastest way to discipline.	Managing a classroom without using violence
Gender bias in treatment of students	Teacher training	PCF: Not trained with gender sensitive pedagogy ECF: Textbooks and materials are highly gendered SCF: Social reproduction of gender bias in teacher training and society at large	Freedom or opportunity to teach students with equity and enhance girls' learning	Most likely an unconscious choice (to cater to boys and assign gendered tasks) due to social norms	Equitable treatment of students and enhancement of girls' learning

Framework: Robeyns 2005a, Data: Tao 2005

In a similar vein, I have used the same framework to examine student behaviour at Engosengiu primary school in the following chart. The behaviours here are drawn from my empirical observations and are similar to those highlighted by Verspoor (2005: 75) in his discussion of students' inability to engage in school. Many of these behaviours are closely associated with levels of well-being and agency (or lack thereof), and I shall again use auto-ethnographic data to illuminate related conversion factors and choices.

Table 6.2 Thick description of student behaviour at Engosengiu

Perceived problem	Goods and services	Conversion Factors (Reasons why 'the problem' exists)	Capability	Choice	Functioning (or lack thereof)
Irregular attendance	n/a	PCF: Recurrent illness, dislike or fear of teachers ECF: Far distance to walk to school, family's need for labour, or caring for sick members SCF: Other students miss class and parents condone it	Freedom or opportunity to come to class	After missing too many classes, many feel like they've fallen so behind that there's no reason to continue	Attending class on a regular basis and not falling behind
Lack of engagement during class	Teachers	PCF: Illness or hunger during class, boredom due to rote methods, fear of teachers, possible learning disability ECF: Lack of textbooks, teaching materials, teacher absenteeism SCF: Authoritarian atmosphere and gender bias can cause girls to be very inhibited and docile	Freedom or opportunity to engage or participate in class	Would rather not participate or ask a question for fear of embarrassment or discipline	Proper learning of subject matter during class
Poor performance on tests	Content from lesson and textbooks	PCF: Absenteeism, lack of time to study due to chores, dislike and fear of school, possible learning disability ECF: Lack of textbooks, teacher absenteeism and withholding content SCF: Marks lower than 50% are considered normal. Only a handful of students are classified as 'smart' and expected	Freedom or opportunity to strive to do well on exams	Most do not choose to study due to chores and lack of encouragement from parents	Good performance on exams

		to do better.			
Low completion rates (dropping out)	Financial resources	PCF: Opportunity cost of child staying home to work ECF: Lack of resources for uniforms and other charges SCF: Value of education is not high in rural areas	Freedom or opportunity to stay in school	Most students do not have a choice if the family can't afford ancillary fees	Finishing primary school

Framework: Robeyns 2005a Data: Tao 2005

From a preliminary analysis of the data from 7.1 and 7.2, it would seem that immediate actions could be taken to improve conversion factors. Possible measures such as health services, scheduled lunch breaks or feeding programmes could address certain PCFs. ECFs such as a lack of materials could be reconciled through efforts to acquire subsidised prices for materials, dispensing of uniforms in poorer areas, and incentives to families to offset opportunity costs of lost labour. SCFs would require staff and community engagement in order to restructure social practices at school (such as corporal punishment or redressing gender bias).

However, it must be noted that these suggestions can be problematic as they are the quick solutions that come to mind when analysing a situation. These solutions are situated in *my* frame of reference as a researcher, and constitute *my* personal views of agency and well-being. For CA to be properly applied as a framework to expand the capabilities of teachers and students, these groups must be included in the process of capability selection, as it is *their* valued beings and doings that are paramount. That said, the thick description provided by CA, along with my subsequent prescriptive solutions (which is indicative of problematic researcher reaction), shows us where many school improvement models fall short: 1) most lack in-depth situational analysis and understanding of conversion factors and choices (which affect the teaching and learning process); and 2) most do not include the participation and consultation of teachers and students to determine improvement measures that are valued and feasible.

The following sections provide the initial thinking needed to operationalise CA. I will first discuss the theoretical processes involved in capability selection put forth in the literature. I will then examine actual methods of capability generation in regards to education, provided by Unterhalter (2003b) and Walker (2006). In following these examples, I will logically apply their methods to the

scenario of a school improvement intervention by generating provisional lists of capabilities for both teachers and students.

7. Determining capabilities within schools

CA was deliberately left underspecified because Sen believes that it is the role of those being affected by capability expansion to in fact have the freedom and agency to select the capabilities that are worth expanding (Sen 1999, Robeyns 2005b). Although Sen does not endorse any specific 'list' of capabilities needed for agency or well-being (as he believes these are contextual and should be determined by people themselves), Sen has alluded to the necessity of *basic capabilities*, which allow people the opportunity to do things that are necessary for survival. The relevance of basic capabilities is "not so much in ranking living standards, but in deciding on a cut-off point for the purpose of assessing poverty and deprivation" (Sen 1987: 109). Some examples of basic capabilities are to be nourished, to have shelter, and to be in good health. In regards to school improvement, the notion of basic capabilities could potentially be scaled along the same dimensions. If a school had no facilities for clean water, sanitation or nourishment (or rather, appropriate lunch breaks for nourishment), action would need to be taken to expand those basic survival capabilities. Such conditions obviously do not contribute to teacher or student well-being on very basic levels, so it could be argued that a set of basic capabilities for schools is necessary.

Determining such basic capabilities is fairly straightforward, even in a school context. However as soon as we move beyond these examples, the task of selecting capabilities that are less central to survival (and are tied the type of life that people value) is much more complex. Moreover, once selection has been made, prioritising or weighting these capabilities depends on another set of value judgements by its constituents. Sen is adamant towards a democratic and public process of selecting and weighting capabilities, however does not go into detail about the methodology behind it. Fortunately, much theorising regarding such a process has ensued. Robeyns (2005b: 204) posits that CA "...needs to be supplemented with methodological tools that would enable us to correct for biases in the selection of functionings that result from the social positioning of the researchers." Thus she has put forth several criteria for selecting capabilities that mitigate bias, which may stem from a researcher's values, views or personal constructions of well-being. These include: 1) explicit

formulation of a list that can be discussed and defended; 2) justification and scrutiny of the method that has been used to generate the list; 3) differentiation of 'ideal' versus 'pragmatic' capabilities; and 4) capabilities that cover *all* relevant dimensions that are not reducible to each other (Robeyns 2005b: 205-206). I shall now discuss two authors who have acknowledged this methodology for generating lists of capabilities, particularly in the realm of education.

8. Examples of capability selection in education

Although those being affected by capability expansion should have the agency to select capabilities themselves, it would be due diligence to create a provisional list of capabilities in order to be cognisant of areas that may arise. Thus, I will look at examples of educational capability generation in the literature, in order to guide preliminary lists that may be used for school improvement interventions.

Unterhalter (2003b) provides an interesting example of educational capability formation through a method of cross-referencing aspects of education with the evaluative aspects of capabilities (cf discussion of well-being achievement, well-being freedom, agency achievement and agency freedom in section 3). This created a starting point for identifying relevant conditions needed to secure certain functionings within the realm of female adult education.

Table 8.1 Capabilities related to women's literacy classes

Aspects of capabilities	Aspects of education
Well-being achievement	Passing year one in an adult literacy class (this may secure the chance of better health, inclusion in local decision making and esteem of one's peers)
Well-being freedom	<p>The conditions needed to pass year one, for example:</p> <ol style="list-style-type: none"> 1. Lack of discrimination or harassment from the teacher or other learners 2. Freedom to walk safely to and from class 3. Freedom from discrimination or violence because one has attended class (and may not be able to do normally assigned family or work tasks) 4. Being able to concentrate in class (to not be hungry, tired, or anxious) 5. Being able to access the content of the lesson through appropriate pedagogies and materials that take account of gendered styles of learning 6. Being able to study in a well managed programme with sufficient resources (skill of teacher, time for class, money for teacher, materials and building)

Agency achievement	Exercising individual agency (choosing to go to adult education classes as part of an informed decision that passing year one is an outcome to be valued)
Agency freedom	Having the conditions to exercise agency (access to information, the chance for discussion and evaluation, the freedom to make up one's mind without shame)

Source: Unterhalter (2003b)

Unterhalter posits that many evaluations of gender equality in education look at very narrow indicators of well-being achievement (such as test results). However, by using CA, we instead examine "how conditions in education relate to wider social processes and the issue of the exercise of agency" (Unterhalter 2003b: 7). Thus, the conditions necessary for well-being and agency form the beginning of a capability list that can be later discussed and debated by relevant participants.

Walker (2006) built upon Unterhalter's research by following the approach suggested by Robeyns (2005b) to finalise a list of capabilities. In her efforts to determine a list of gender equitable capabilities for South African secondary schools, Walker started with a set of preliminary capabilities that were attached to agency, choice, and constitutive of South African educational policy. She then used interviews to ground her list in context and help extrapolate further capabilities. Her final step involved discussing the list with other academics by using a publication as a forum for debate. Examples of the selected capabilities include autonomy, knowledge, social relations, respect and recognition, aspiration, voice, bodily integrity, and emotional integrity (Walker 2006).

This list was formed specifically to create social justice criteria for gender equity in secondary schools, however many of the capabilities can prove helpful as a starting point for school improvement interventions. One important point to note is that the age cohorts that both Walker (2006) and Unterhalter (2003b) contend with are significantly older than that of primary school students. Considering this is the modality I am examining, this begs the questions: can children be engaged in participatory measures? Are they mature enough to choose or value capabilities?

9. Selecting capabilities for primary school students

In an interview with Sen himself, Saito (2003) posed the question of how to apply the Capability Approach to children if they are not mature enough to make decisions by themselves. Sen emphasised that promoting certain functionings on behalf of children in the present could be justified

if they ensure children’s freedoms in the future. For example, a child may not want or value an inoculation, but it can be argued that making a decision on the child’s behalf to have the shot will provide her with freedom from disease in the future (Saito 2003). This, of course, is not meant to deny children’s agency in the present; however, it does make us consider educational capabilities that are central to promoting children’s subsequent freedoms.

Sen’s (1999) view on education is that it should expand other capabilities; whether it be gaining skills, gaining opportunities that these skills afford, or gaining other intrinsically important capabilities (such as critical thought, respect and empathy). Gasper and Van Staveren (2003) delineated these as *S-capabilities*, which point to enabling skills; and *O-capabilities*, which entail the opportunities or options available to a person. Some scholars believe that education should concentrate on the latter by promoting a child’s agency and autonomy, as it gives them the ability to later identify the life they would like to live in the future (Brighouse 2000). Others have delineated lists of S-capabilities or ‘serving competencies’ that are necessary for subsequent educational aims and beyond (such as literacy, numeracy, learning dispositions, and physical activity, amongst others) (Terzi 2007).

Therefore, it seems that a combination of ‘S’ and ‘O’ capabilities can be expanded in order to promote current and future outcomes of student agency and well-being. I shall attempt to generate a provisional list using Unterhalter’s (2003b) technique of cross-referencing evaluative aspects of capabilities with aspects of education, whilst including Sen’s (1999) notion of basic capabilities and relevant findings from Walker’s (2006) South African research. I will examine a seven-year schooling period in order to take into account the conditions that would prevent children from completing all years required. It should be noted that this exercise is only meant to provide a starting point for discussion with participants. That is, it is the beginning of postulating capabilities regarding aspects of schooling, which then requires further adjustment and critique within context.

Table 9.1 Capabilities related to primary school students

Aspects of capabilities	Aspects of education
Well-being achievement	Completing 7 years of primary schooling to acquire ‘serving competencies’ such as literacy and numeracy (this will enable future opportunities such as continuation to secondary school, employment and self esteem)

Well-being freedom	The conditions needed to enhance learning and complete seven years: 1. Basic survival capabilities (such as clean water, sanitation and shelter) 2. Parental support: to limit time being kept from school because of chores 3. Emotional/mental well-being: to not be in fear of violence, discrimination, or harassment from the teacher or other learners 4. Bodily integrity: being able to concentrate in class and not be hungry, tired, ill or physically abused 5. Being able to enjoy social networks and feel a sense of belonging 6. Being able to feel respect and recognition (self-confidence and self-esteem) 7. Being able to study in a well-managed programme with sufficient resources (skill of teacher, time for class, money for teacher, materials and building) 8. Being able to access the content of the lesson through appropriate pedagogies and materials that take account of gendered styles of learning
Agency achievement	Having individual agency in class will enable the ability to identify the type of life they value in the future.
Agency freedom	The conditions needed to exercise agency in the classroom: 1. Being able to have a voice and participate freely 2. The freedom to act without repercussion of violence or shame 3. The ability to aspire and strive to do well (to be encouraged and expected) 4. Being able to feel respect and recognition (self-confidence and self-esteem)

Framework: Unterhalter (2003b)

Akin to Walker's (2006) research, this initial list must be grounded in the relevant context through interviews and discussions with students. Some participatory measures may have to include parents speaking on behalf of very young children; however, recent studies with children aged 10-15 showed that open-ended surveys conducive to reflective reasoning (which helped to mitigate adaptive preference and external pressures) were successful in allowing children to establish capabilities that they considered relevant to their lives (cf Biggeri 2007).

Prior to these participatory measures however, we can still surmise that the expansion of several student capabilities is dependent on teacher behaviour. For example, if a teacher reproduces gender bias in her classroom, that condition will affect both the well-being and agency of female students in her class. In the same respect, if a capability list for teachers were amassed, we would expect to see that much of their capability expansion would rely on the behaviours of management and school administrators. That said, I shall now attempt to generate such a list in order to see how teacher well-being and agency could also be improved.

10. Selecting capabilities for teachers

Let us again look to Unterhalter's (2003b) matrix to generate a starting point for teacher capability expansion. The difference here is that agency and well-being for teachers should not only

be predicated on capabilities that are expanded within schools, but also within the teaching profession itself.

Table 10.1 Capabilities related to teacher development

Aspects of capabilities	Aspects of teacher development
Well-being achievement	Acquiring employment as a teacher with consistent job security (this would promote consistent income, a sense of belonging and respect)
Well-being freedom	The conditions needed to keep and enjoy the job: <ol style="list-style-type: none"> 1. Basic survival capabilities (such as clean water, sanitation and shelter) 2. Emotional/mental well-being: to not be in fear of violence, discrimination, or harassment from the head teacher or other teachers 3. Bodily integrity: being able to concentrate in class and not be hungry, tired or ill 4. Being able to manage a class (not to feel overwhelmed or overworked) 5. Being able to feel respect and recognition (self-confidence and self-esteem) 6. Being able to enjoy social networks and feel a sense of belonging 7. Being able to teach in a well-managed school with sufficient resources (time for class, salaries paid on time, materials and building) 8. Being able to access in-service training to upgrade qualifications (without gender bias, or extra cost to one's self) 9. Being adequately remunerated (be it through salary, housing, or incentives)
Agency achievement	Exercising individual agency within the school and being able to live the type of life they value
Agency freedom	The conditions needed to exercise agency in the school: <ol style="list-style-type: none"> 1. Being able to have a voice and participate in decision making with confidence 2. The freedom to act without repercussion or shame 3. The ability to aspire and strive to do well (to be encouraged and expected) 4. Being able to feel respect and recognition (self-confidence and self-esteem)

Framework: Unterhalter (2003b)

Through this exercise we can see that many teacher capabilities are similar to those of students. However, the locus of control to expand these capabilities instead stems from upper management and educational administration. In some instances, expanding certain teacher capabilities would have a knock-on effect towards expanding student capabilities (such as being able to concentrate in class without hunger or tiredness would certainly benefit the teaching process). However, some capabilities could also conflict with those of students. For example, 'being able to manage a classroom' to some teachers may mean using corporal punishment as a management tool, which would obviously violate a student's capability to be free of fear or violence. Thus, discussion, interpretation and scrutiny of these capabilities amongst teachers are necessary. Another concern I

have with this list is that some capabilities suffer the same problem that many school improvement models suffer: the assumption that the presence of certain conditions (such as in-service training and sufficient resources), are enough alone to ensure improved teaching. This, of course, is not true. The nature of the in-service training and conversion factors that surround it need to be addressed. That is why another analysis of social, environmental and personal conversion factors relating to the final selection of capabilities is needed. Once constraining conversion factors are identified, improvement measures can be taken to reconcile them and expand capability sets. Addressing *all* conversion factors would obviously provide for a holistic and ideal intervention, however, in acknowledging the constrained financial contexts of school improvement initiatives, selected capabilities would most likely need to be specified as 'ideal' or 'pragmatic', in order to determine what is feasible for reconciliation. Thus more discussion with participants is paramount.

11. Monitoring school improvement

Thus far, I have attempted to generate provisional lists of capabilities for both teachers and students situated around their well-being and agency at the school level. As discussed in Robeyns' criteria for selecting capabilities, the explicit formulation of these lists, along with the justification and scrutiny of my methods, are just the first two steps in operationalising CA. What is still needed is the previously mentioned delineation of 'ideal' versus 'pragmatic' capabilities, and rigorous coverage of *all* relevant dimensions. I believe these last two steps should be grounded in the conditions, contexts and people in which the interventions will be applied. Thus, these steps will be omitted here, as their outcomes will be determined during an actual intervention. However, this does not preclude a discussion of a final application of CA that is central to any educational planning process: monitoring and evaluation.

As discussed earlier, one of CA's applications is quantifying evaluations of well-being (Robeyns 2005a). An example of this is the HDI and the many subsequent indices that have been created in its wake (most notably the Gender Development Index, the Gender Empowerment Measure, and the Human Poverty Index). The annual publication of these indices in the UNDP's *Human Development Report* is widely publicised, which encourages countries to be cognisant of and improve their ranking (Unterhalter and Walker 2007).

Initial critiques of the HDI as a measurement tool pointed to the difficulties of capturing the complexity of human development in a single index; but even with its simplifications, the HDI has had the intended effect of focusing policy makers' attention onto basic human capabilities rather than GDP (Fukuda-Parr 2003). Also,

The ranking of countries has provoked policy-makers to examine how each country fared and to ask why some countries managed to achieve much higher levels of 'human development' in comparison to countries with similar income levels (Fukuda-Parr 2003: 305).

This comparison has been criticised for breeding a competitive culture that impedes mutual support and contribution (Unterhalter, Challender and Rajagopalan 2005). There have also been general criticisms of indices in that they are based on poor quality data, inappropriate levels of aggregation and crude instruments (Unterhalter and Brighouse 2007). However, such problems should not preclude attempts to improve indicators, especially if the net result is a refocusing on human well-being and an increased awareness of topics that have not otherwise been addressed. Robeyns (2003a: 27) adds: "Although using just a few functionings and perhaps in a somewhat crude way, [the HDI] is probably the application which has had the largest impact on policy making. Perhaps this is one of the best illustrations of the usefulness of the Capability Approach."

As a result, I cannot help but extrapolate by analogy towards a School Development Index (SDI), which could serve a similar purpose: to bring issues of teacher and student well-being to the fore as an indicator of school improvement and development. Like the HDI, distilling such complexities of teacher and student well-being into a single index would prove difficult; nevertheless, an SDI would have the positive effect of focusing policy makers' attention onto teacher and student capabilities as a means of improving school quality and the transaction of teaching and learning. Thus, it could serve as a standardised measure for the monitoring and evaluation of school development within a particular region. On a larger scale, it could also indicate how different countries fare in their treatment and development of students and teachers.

Currently, the main index being used to measure educational effects is the Education For All Development Index (EDI). The EDI was introduced to measure countries' overall progress towards Education for All (EFA); hence, it is a composite of four of the six EFA goals: net enrolment ratios (to assess access), student completion rates to grade five (as a proxy for quality), adult literacy rates,

and gender parity (UNESCO 2003). Ideally, the index should reflect all six EFA goals, however, the goals of 'Early Childhood Care and Education' and 'Learning and Life Skills Programmes' have insufficient data and are not readily conducive to quantitative measurement (UNESCO 2003).

The SDI, in essence, would serve as a more specific and illuminating indicator of what is going on in classrooms (versus the educational quality indicator of completion rates). However, the problems suffered by the EDI bring us to a similar challenge for the SDI: how does one quantify student and teacher well-being within the modality of formal schooling? How does one evaluate seemingly non-quantifiable functionings, such as self-esteem, the ability to have a voice, and being free from fear? Alkire (2002) attempted methods of quantifying qualitative capabilities in relation to three different Oxfam projects in Pakistan. This entailed focus groups in which participants discussed the qualitative effects of the projects. In the case of a women's literacy class, these intangible effects included such things as women learning that they could make their own decisions, that they were able to discuss their problems with others, and that they could save money and time (Alkire 2002). During these discussions, focus group facilitators had the responsibility of ranking these qualitative impacts on the women's lives (5 = intense impact, and 0 = no impact). These rankings were later used to indicate the most significant effects of the project as identified by participants. One could challenge such a methodology by arguing that the evaluators' taxonomy of valued capabilities was subjective and was in essence 'imposed' on the participants. Alkire (2002: 292) acknowledges this problem, yet also counters by stating that, "...the case studies began by asking open-ended questions, and only introduced the strategic questions about unmentioned dimensions of impact if the respondents had systematically excluded them." Nevertheless, it was concluded that further research was necessary in order to determine how to minimise ranking bias.

How does this bode for evaluating the capability expansion of teachers and students within a school? In looking at the provisional list of capabilities generated in sections 10 and 11 using Sen's (1999) notion of basic capabilities, and the relevant findings from Unterhalter's (2003b) and Walker's (2006) research applied to teachers and students in Tanzania, here are some preliminary suggestions for creating quantifiable indicators that could be later aggregated into an index:

Table 11.1 Preliminary indicators for an SDI

Capabilities	Suggestions for creating a quantifiable indicator
1) Basic survival capabilities	Water, sanitation and shelter can be observed and ranked on a normative scale
2) Mental well-being, bodily integrity, social networks, respect and recognition, voice, freedom to act and freedom to aspire	These capabilities can be gauged using Alkire's (2002) focus group methodology to rank impactful qualitative functionings
3) Having a well-managed school with adequate resources	Resource availability can be observed and ranked on a normative scale, or reflected in spending per pupil
4) Teacher capability to manage a class	Teacher workload can be extrapolated from pupil/teacher ratios and number of classes per day
5) Teacher capability of accessing in-service training	Enrolment ratios of teachers for in-service training sessions
6) Teacher capability of being adequately remunerated	Teacher salary relative to cost of living
7) Student capability of parental support	Attendance and completion rates up to grade five
8) Student capability of accessing appropriate pedagogies	Alkire's (2002) focus group methodology to rank gender bias and other qualitative data

As you can see, the first three categories in this list are those capabilities that overlap amongst teachers and students. The last five categories address each group separately. Nevertheless, these are very preliminary suggestions for indicators and much work has yet to be done in finalising an overarching list of indicators that can apply to all schools, creating data collection methods that are reliable and cost-effective, and applying appropriate statistical and aggregation methods. Alas, these tasks are beyond the scope of this paper, however, the overall goal of creating an SDI is clear: to recognise the constraints on the capabilities of teachers and students so that school improvement measures can reconcile such problems. The achieved functionings of such actions would not only lead to the improved well-being and morale of teachers and students, but as argued thus far, would also lead to improvements in overall school quality via its positive reactions.

12. Conclusion

This paper has been an exploration of the Capability Approach and how it can be used as an alternative model for school improvement interventions in government primary schools. My interest in pursuing a new framework was born from the dissatisfaction that I had developed whilst teaching,

and from my hypotheses that solutions firmly entrenched in context, teacher and student empathy, and participatory measures would ameliorate school improvement interventions. These tenets were closely linked to those of CA, so it seemed appropriate to utilise retrospective data in order to demonstrate the many ways in which CA can be used to improve schools.

My interest in CA is also bound by a common view of development. One that shifts the 'ends' of development from narrow, economically-based indicators to people's overall well-being and agency. This is the shift in discourse that I have suggested for school improvement interventions—one that looks beyond student output and the raising of test scores as the ends of improvement, and instead sees teaching and learning improve through capability expansion (which leads to the increased well-being) of teachers and students.

Overall, this paper has done the following: it has used the theoretical framework developed by Sen as a basis for shifting the school improvement discourse; it has discussed how certain authors have applied it to generating preliminary lists of capabilities related to education; and it has used this application to generate lists that form the beginnings of a school improvement intervention. However, two caveats have been cited in regards to the scope of this study: 1) final capability lists must be relevant to context and thus grounded in discussions made during actual interventions; and 2) further research is needed to establish and test a School Development Index that would function on a larger scale.

I believe this proposed framework for school improvement is no doubt an experiment that will prove to be problematic, difficult and in need of further exploration. However, this study has created a new nexus—one that rethinks the paradigm of school improvement, and challenges top-down views of development in education.

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