TRAINING TEACHERS AND GENDER EQUALITY IN NIGERIA: REFLECTIONS ON MEASUREMENT AND POLICY

Elaine Unterhalter, UCL Institute of Education

Chidi Ezegwu, British Council Nigeria

Emma Shercliff, British Council Nigeria

Jo Heslop, UCL Institute of Education

Amy North, UCL Institute of Education

Paper presented at CIES annual conference, Washington DC, March 2015

Training teachers and gender equality in Nigeria: Reflections on measurement and policy [1]

Elaine Unterhalter, University College London, Institute of Education, Chidi Ezegwu, independent consultant Abuja, Nigeria, Emma Shercliff, British Council, Nigeria, Jo Heslop, University College London, Institute of Education, Amy North, University College London, Institute of Education

How to measure and track gender inequalities in education, identify interventions for equality, and evaluate and monitor these is central to much contemporary debate in policy and academic circles. It is widely acknowledged that we are into a second generation of discussions of measurement in which the limits and potential of the existing measures – gender ratios of enrolment, attendance, progression, and examination of attainment in different phases of schooling – are taken as an imperfect starting point (Motivans, 2013; Fukuda-Parr, Yamin & Greenstein, 2014; Unterhalter, 2014; DeJaeghere, 2012; UIS, 2014). The challenges noted by these commentators include the fore-shortened horizons of policy discussions, which need to work with the data that is routinely collected, the complexity of identifying what gender equality or inequality in education looks like, so that it can be measured, the importance of understanding how gender intersects with other forms of social division, and how the complexities of history, context and how lives are lived complicate the simplicities of metrics. A parallel set of issues concerns the history of the collection and analysis of statistical data in education and the epistemological negotiations this entails (Stigler, 1990; Goldstein & Moss, 2014) and where gender comes to be positioned in this process.

This paper addresses some of these challenges through a multi-layered analysis. In the first part we review some of the discussions concerning the measurement of aspects of equality, and through this we distil some pointers with regard to how to reflect on data regarding measurement, gender and education. In the second part we report on data collected from survey research with Nigerian students in their final year of study on courses in teacher education, reflecting on how they understand gender and education issues, as presented through the curriculum, and how their views of what they are being taught and may themselves teach, articulates with their current ideas. The conclusion considers the implications of this data regarding how gender is understood for the debate about measurement.

The debate about measuring gender in education

A number of difficulties about measuring education, equalities, justice and well-being collide in the problems of measuring gender equality and inequality in education. We can group these into three kinds of problems. Firstly are we measuring *what* certain groups do or do not have? In other words are we measuring resources (numbers of teachers, images in textbooks), amounts, or objective states of levels of enrolment, attendance or attainment in

[1] This paper reports on research funded by the MacArthur Foundation, co-ordinated by the British Council Nigeria, and we gratefully acknowledge the support they have provided. Many people have contributed to collect and analyse the data, and support the work of the project. Our thanks for research co-ordination to Prof. Philip Olu Jegede (Obafemi Awolowo University); for work on data collection to Martin Umaru, Adewole Olubunmi Adedokun, Linus Asema, Mulika Lamido Dodo, Grace Nweke, Samuel Olufemi Adeniyi, Okechukwu Okpalaeke, Ijeoma Chiebonam Ireh, Ubaida Bello, Wadata Dangaladima, Chioma Ezegwu; for work on data analysis to: Olusegun S. Ewemooje (Federal University of Technology, Akure), Katie Quy (UCL Institute of Education), Antonia Simon (UCL Institute of Education); for work on identifying relevant literature: Kathleen Fincham (Institute of Education, University of London), Amy Smail (UCL Institute of Education).

education? Secondly, *why* are we interested in measuring? Are these concerns driven by narrow notions of efficiency and good planning or are they driven by wider normative concerns, for example what people can do or be. Do we want these metrics to provide some indicator of what is right or good? Thirdly, if we acknowledge that education and gender equality in some way signal a relationship between subjective and objective conditions, given that the notion of gender knits together both descriptive and normative concerns, what kind of metric allows us to consider this?

As is now well documented and rigorously reviewed, the history of measuring amounts of education resources, for example numbers of classrooms, teachers, pupil/teacher ratios, or numbers of pupils progressing at each level, is useful in planning and managing distribution, but becomes very difficult when trying to measure what it is that people value about education, and how this connects with other dimensions of well-being. This is not to say studies of these mental states have not been made and some international assessments, for example for PISA, measure aspects of autonomy and civic mindedness, but, as discussed below, the implications of these studies are more diffuse than those that are more limited and focus only on the distribution of amounts of education particular groups have. However, the recently published OECD study of gender and education (OECD, 2015), with its stress on ABC (Aptitude, Behaviour, Confidence) attempts to address an aspect of the link between subjective and objective states and some aspects about what it is that we value about education beyond time in school, although in this study a vision of the good is linked with particular forms of attainment.

If we are concerned with measurements of 'what', such as resources for education, or amounts of education received, gender equality comes to be defined as groups of girls and boys, women and men, who have equivalent amounts of a particular resource. It is for this reason that gender parity remains such a key thread in international policy discussions. Measuring the distribution of resources, and taking gender parity as the extremely limited goal, has long been criticised as far too narrow by a range of commentators on gender justice, gender and education, and the complexities of femininities and masculinities in diverse contexts. Critiques range from the importance of attending to the texture of gendered experiences and the multiple registers of how people talk (Henderson, 2015) through the diversity of moments associated with gendered experiences of education (e.g. Chisamya, DeJaeghere, Kendall & Khan, 2012) – for example, pedagogic encounters, re-contextualisation - to the importance of understanding vulnerabilities, forms of violence, opportunities and constraints (e.g. Parkes, 2015 forthcoming). These debates about the limitations of gender parity, with its stress on amounts and problems limited to issues of planning, and failures to express the social justice concerns of those concerned with the multi-dimensionality of the ideas of gender equality in education has echoes in some of the wider literature on measurement. It echoes, particularly, debates about how we measure justice, equality, empowerment and well-being (Brighouse and Robeyns, 2010; Kabeer, 1999; Clark, 2014). Thus it is illuminating to draw on some of this wider literature to try to unravel some of the problems of measuring gender equality in education.

Clark (2014) identifies three major approaches to measuring well-being, distinguishing those that focus on utility, and actual or informed desires, those that focus on resources, and those that rest on list-based approaches. Implicit in the work of the critics of the gender parity measure is the notion that gender equality in education goes beyond equal amounts. Thus in some way, it is a part of well-being, happiness or some other aspect of quality, equality or justice. Thus its 'goodness' extends beyond parity of amounts between men and women, and its 'rightness' or sense of justice is not simply met by noting this basic pattern of distribution. However, it is one step for critics of gender parity or the simple measure of the distribution to say that is not an adequate measure of gender equality in education. It is an altogether more difficult proposition for this group of critics to say what this measure of gender equality in education should be.

There is not space in this paper to give a fully worked up engagement with all the dimensions of this problem. But some important considerations are that measuring gender equality in education should have something to do with taking seriously aspects of autonomy, particularly, given the history of women's exclusion, subordination and injustice, noted in every country in the world, the autonomy and voice of women. This includes the right to articulate, review and have perspectives on justifications for social arrangements. It should also include some assessment of the conditions, associated with political economy and socio-cultural practices that maintain the injustices against particular groups, or class particular forms of gendered dynamics. The metric should also in some way allow for some evaluation of the strength of processes for change in the direction of greater substantive gender equality and justice. Lastly, because of the significance of bodily and emotional vulnerability in many meanings of gender, measuring or evaluating gender equality in education should signal some protection of bodily integrity and concern with emotional support.

A number of what Clark (2014) has called list-based approaches to measurement of rights, capabilities or human development attempt to overcome the difficulties utility and resource-based approaches to measuring gender equality and education encounter. But the problem with list-based approaches, as Amartya Sen, generator of one of the most famous of such approaches, the Human Development Index (HDI), acknowledges (Sen, 2006), is that the areas on the list and the weights given are always arbitrary. Thus list-based approaches, in trying to correct for the stress on revealed desires, which dogs utilitarianism, come to suggest a particular formulation of what human development, or gender equality or education quality is. List-based approaches will always be open to the critique that the people who developed the list and gathered the information were not those who expressed views regarding what they could or could not do and be with regard to education or gender equality. This criticism is often levelled (e.g. Sen, 2004; Robeyns 2005; Walby, 2011) at Martha Nussbaum's (2000) list of central human capabilities which goes way beyond the HDI in including aspects of bodily integrity and emotions, more familiar to discussions of gender equality, than those that focus only on economics. Ingrid Robeyns (2003) has proposed a method for developing lists that is open to public scrutiny, and a piece of work that remains to be done concerns a process of adapting this in practice in relation to gender equality in education.

There have been a number of list-based approaches developed in education. Biggeri, Ballet and Comim (2010) look at what children say they value, and the process of developing lists of capabilities with children. Marion Young (2012) looked at how young teenagers in Bhutan and Sri Lanka valued learning outcomes and adopted features of the processes of developing lists advocated by Robeyns with this group. Caroline Hart (2013) looked at aspirations of school pupils at the end of the formal education cycle in the UK and how the capability to aspire might be analysed together with other valued doings and beings. Walker and McLean (2013) have looked at the process of compiling lists with university students studying for professional qualifications that entail engagements with poverty. Tao (2013) has developed lists of valued functionings with teachers. None of these list-based approaches, with the possible exception of the work by Biggeri and colleagues, has addressed the question of measurement for national or international policy. Neither do they explicitly take up the question of gender equality and lists.

In the wider gender equality literature there are a number of list-based approaches (UNDP Gender Inequality index, OHPI Women's Empowerment in Agriculture index, World Economic Forum Gender Gap, SIGI index), but these either do not address education, or take only aspects of the administrative data on gender parity in education as their education component. This approach is taken by the Gender Gap index, but if gender parity is the point of contention, repositioning this on the list does not get over the problem of the narrow range of resource-based issues it measures. List-based approaches regarding aspects of human well-being have tried to signal some connection between subjective and objective conditions, and the list-based approaches in education, even if they do not address gender explicitly,

have brought to the fore the question of the importance of subjective articulations. List-based approaches which do take gender seriously have gravitated either to the pole of revealed preferences, that is what learners or teachers say - see for example the work on the CARE index (Miske, Meagher & Dejaeghere, 2010) - or the pole of institutional claims, that is what laws or policy say, for example the OECD SIGI index (OECD, 2012; Branisa, Klasen and Ziegler, 2009). Some work on equalities in the UK has tried to navigate between the two (Burchardt & Vizard, 2007) but this work has dealt more with the provision of health and housing, rather than education, and engagements with gender are quite implicit. However, this appears a fruitful direction in which to go. Our work on this theme is currently exploratory. We have approached the problem of how to develop appropriate metrics partly by undertaking the work of collecting data for a survey regarding views on gender equality in education by student teachers in different kinds of institutions in five states in Nigeria. We are using this process of data collection to help build insights for the wider more conceptual question approaching what measuring gender equality in education looks like and whether we can develop useful list-based approaches that steer between the subjective and the objective and guide some normative evaluation.

Nigeria presents a particularly nuanced context in which to look at some of these challenges of measurement. The Federal Ministry of Education (FME, 2015) states that one of the key challenges in documenting the progress in education, particularly at the basic education level, is the severe scarcity, and in some cases, absence, of data needed for such an exercise. Thus the challenges in Nigeria entail documenting aspects of resources - that is, what amounts of gender equality or inequality in education comprise and what aspects of resource exist to support this. The challenge also entails the multiplicity of views across and within states regarding why gender equality in education might or might not be important. Lastly, given the potential of building new institutions in the largest economy in Africa, with a fast-growing population but multiple security and governance issues, this challenge of understanding the measurement of gender equality is one that speaks both to the national and international context.

In this paper, as a step on the road to theory building regarding what measurement of gender equality in education might look like, we report on data collected to examine the views of students in their last year of teacher training in five Nigerian states, regarding what they have been taught, and how they view gender equality in education. The data indicate the potential and limits of this survey type approach to measurement, and in the concluding section of the paper we raise some issues regarding how the attitudes the trainee teachers report on need to be linked with a more refined assessment of physical or institutional locations where they study, so that we draw up and reflect on a better kind of list-based approach.

The research study

The data for this paper comes from the first phase of research in a study funded by the MacArthur Foundation and undertaken by a team coordinated by the British Council Nigeria, which includes researchers from universities in Nigeria and the UK. The study is designed to look at elements of the training of teachers to develop dispositions with regard to support for gender equality, girls' education and inclusive strategies. The rationale for the study emerged only partially from some of the problems about measurements and lists. A second concern in developing the study was that a wide range of studies indicate how central teachers are to advancing agendas for gender equality and engaging with poverty (Lloyd, Mensch & Clark, 2000; Unterhalter, Heslop & Mamedu, 2013; Miske, 2013; Unterhalter et al, 2014), but to date there are only a few studies of work with teachers and teacher educators on these themes (e.g. Molloy, 2012; Murphy & Wolfenden, 2013; DeJaeghere & Wiger, 2013) which have considered what teachers views are, and virtually none that explore how teachers' views about gender, inclusion and aspects of social justice might change over the course of their careers, although a small amount of work on this theme has been done in the UK and the USA (Weiler, 1988; Zeichner, 2009; Hansen, 2011; Day & Gu, 2010). This

research project has been designed to evaluate and contextualise the views of student teachers at the beginning of their career. In a later part of the research project we will follow a cohort into their first teaching jobs. It thus seeks to look at teacher education as an important site for measuring and engaging with views about gender equality.

Setting the Scene

Many studies note how marked the levels of gender inequality in Nigeria are. A report by the British Council (2012) concluded that Nigeria's 80.2 million girls and women had significantly worse life chances than men, and women in comparable countries in Africa. Despite excellent policies on paper, budgets have not been forthcoming and intentions have not been translated into action. There is discrimination in access to land, in pay, and in support for education, with some very marked regional differences. Nearly three quarters of young adult women in the Northwest states cannot read, compared to only 8% in the Southeast. Girls from the poorest wealth quintile are most likely to be out of school, and parents say that cost is a major reason for withdrawing girls from education, although the failure of poor girls to do well at school may also contribute, and teachers' support or lack thereof may be a key factor.

The 1999 Constitution of the Federal Republic of Nigeria, adopted at the end of military rule, and the National Policy on Education (FME, 2004, 2013) acknowledged the importance of free, compulsory primary education for every Nigerian child. On the basis of the Nigerian Universal Basic Education Act (2004), a wide range of Universal Basic Education (UBE) programmes were designed to ensure free Basic Education for nine years to all Nigerian children, many with an explicit focus on girls and gender equality. In furtherance of the government and non-governmental organisations' commitments to gender equality in basic education in 2007, a *Gender in Basic Education Policy* was enacted (FME, 2007), which evolved from the Girls' Education Program in Northern Nigeria. However, translating this aspiration into practice has proved extremely challenging.

The annual UNESCO Global Monitoring Reports (e.g. UNESCO, 2014) indicate how slow the rise in primary net enrolment rate has been. The reports have also highlighted gendered barriers to access and progression at junior secondary level, particularly amongst the poorest quintile and for girls from rural backgrounds, especially those located in Northern states. Gender disparities exist at all levels of formal education in Nigeria, although this varies across geopolitical zones (NPC and ICF Macro, 2009; NPC and RTI International, 2011; British Council, 2012; Humphreys & Crawfurd, 2014). The 2010 NEDS shows primary school attendance ratios are very low in Northern zones. In the Northeast, primary attendant rates were 43% for males and 38% for females while in the Northwest these were 47% for males and 35% for females. The national rates were 63.5% for males and 58.4% for females. Gender disparities are also reflected in examination performance. Analysis of data held by the National Examination Council (NECO) shows the number of girls gaining school leaving qualifications of five credits reduced between 2003 and 2007 (British Council, 2012).

The enormous divisions between who does and does not get schooling in Nigeria evident over many decades have come to international attention through the reporting of shocking acts of violence against some Nigerian communities in recent years, with children at school a major target. A number of kidnapping incidents and murderous attacks involving many Nigerian school girls and boys highlighted how much some groups vigorously opposed the policy of expanding education provision and, concomitantly, how important remaining in school was to many. Available evidence shows that numerous attacks on schools and students between 2011 and 2014 worsened the already dire educational situation in the Northeast, which has the lowest record of primary and secondary school net attendance rates in the country (Human Rights Watch, 2014; IDMC, 2014; Jones and Naylor, 2014; Ezegwu and Ezegwu, 2015). The insurgency in the Northeast has led to very large numbers of people being displaced, although there are wide variations in estimations of totals ranging

between half a million and 3 million. For this group, what may have been very limited schooling has been further disrupted.

A number of studies describe some of the north-south divisions concerning gender and participation in schooling. They generally draw on data on enrolment and progression, and this frames the question of measurement in terms of the provision of resources, the facilities for schools, the distribution and quality of teachers. These are undoubtedly areas of substantial challenge, as we indicate below, but there is a range of wider questions about the socio-cultural conditions associated with these patterns that this approach to analysis and measurement do not consider. School related gender based violence, low performance by girls in examinations and high levels of early marriage in some states are all matters of acute concern. While some studies raise the importance of thinking about political economy, socio-economic relationships, religions, and the dynamics of ethnic affiliation and location (e.g. Erulkar & Bello, 2007; FME, 2007; Amzat, 2010; Unterhalter & Heslop, 2011; Smith et al, 2012), how this might form part of an analysis of measurement and the distribution of resources associated with gender equality in education is not yet discussed in the mainstream policy literature.

Teachers are a key resource for effecting gender equality in education and the knowledge and attitudes of teachers are also important for building and sustaining ideas and institutions oriented to gender equality. Much attention with regard to teachers has focused on the gender distribution of teachers in different types of school. Table 1 shows the proportion of women teachers nationally in primary and junior secondary schools in 2010 and 2013. It can be seen that there has been a small increase in the gender parity index (GPI) for primary school teachers over this period, and a small fall in the GPI for junior secondary teachers. However, these national distribution measures mask very different regional distribution.

	2010				2013			
	FEMALE	TOTAL	% F	GPI	FEMALE	TOTAL	% F	GPI
Primary only	266,609	564,569	47	0.89	274,102	571,720	48	0.92
JS Only	65,253	133,338	49	0.96	85,843	175,769	49	0.95

Source: UBEC (2014)

Training and supporting adequate numbers of teachers has been a major source of concern for education planning (Erinosho, 2010). There has been much focus on teachers' basic educational qualifications, and less attention given to softer skills such as ideas about gender, equality or inclusion. A number of studies of teachers' levels of knowledge of key areas of the curriculum reveal some gaps. A National Assessment of Universal Basic Education Programme (NAUBEB) and a National Assessment of Learning Achievements in Basic Education (NALABE) were conducted in 2006 and 2011 respectively. The 2006 report shows that more than 90% of primary school teachers received various forms of training under the mandatory continuing professional development programme, although only 51.1% did so in the 2011 study (UBEC, 2009, 2013). At JS level, whilst up to 70% of all subject teachers had the minimum requirement for teaching (the National Certificate of Education), more than half of all teachers surveyed in 2006 taught subjects they did not train for (UBEC, 2009). One study in Kwara State in 2007 tested all primary and junior secondary school teachers for subject knowledge in mathematics and reading. This revealed that out of 19,000 teachers, only 0.4% scored an average of 80%, while 29% of all teachers failed these tests (Johnson, 2008; Adefeso-Olateju, 2012).

There has been a sustained focus on the capacity building of teachers, both through pre-service and in-service programmes. Colleges of Education exist in all Nigerian states and

many universities have education faculties that train teachers. The Federal Government of Nigeria has established federal development training institutions, including the National Teachers Institute (NTI). International bodies such as UNDP, the World Bank, DFID, UNESCO and USAID have been assisting the federal government through capacity building partnerships, which include provision of equipment and technical assistance (Chukwu, 2010).

There have been a few programmes to mainstream gender into the teacher education curriculum, and to develop state level projects regarding girls' education and gender equality. Mulugeta (2012: 24) however comments that a gender dimension is missing in the background of the National Teacher Education Policy (NTEP), noting that the policy does not take into account various positions, experiences and needs of men and women and "doesn't say whether the women's as well as the men's concerns are raised and their voices represented in the policy process, which is an important dimension in the gender based analysis of policy". The NTEP implementation guideline emphasizes eight principles for effective teaching and learning processes. Unfortunately gender equality is not among them (FME, undated).

The Nigerian teacher education curriculum was revised in 2012 with some intention to include reference to addressing gender issues. The Nigerian Educational Research and Development Council (NERDC), National Commission for Colleges of Education (NCCE) and The Teachers Registration Council of Nigeria (TRCN) have developed minimum standards for teacher education and teacher professionals that support the implementation of a revised 9-year basic education curriculum, stressing the inclusion of all learners (NCCE, 2012a; TRCN, 2012a, 2012b; Nwokeocha, 2013). However, there has been very little work looking at how teachers engage with these revised Standards or how much teaching and learning have been transformed following these changes.

The new guidelines for management of teaching practice for NCE awarding institutions gives attention to gender concerns in relation to freedom from gender bias, equal distribution of questions to girls and boys in class, motivational cues to both and distribution of tasks during activities in a manner that is devoid of gender bias (NCCE, 2011). The NCCE minimum standards for education courses, which specify what should be taught to teachers in early childhood and primary education, general education, and adult and non-formal education, across courses in arts, social sciences, maths and natural sciences, list the following gender related topics:

- Gender-sensitive learning environments
- Gender roles and gender equality
- Gender roles in society and culture
- Gender participation
- Elections and gender roles in politics
- Gender issues and family life education
- Gender roles and gender gaps, meaning, causes, and ways of closing gaps
- Gender compliance
- Child-centred, gender-sensitive and inclusive approaches
- Gender affiliations and physical challenges (NCCE, 2012c; 2012d; 2012e; 2012f)

The Quality Indicators for Teacher Education (NCCE, 2012:9) includes "evidence of progress towards implementing policies and good practice relating to gender sensitivity". The NCCE (2012h: 39) advises teachers that "care should be taken for gender sensitivity and gender balance in the section of authors when books are chosen. For the purpose of illustration, a few texts should be randomly selected in areas of prose, drama and poetry for intensive critical practice."

In terms of the analysis we are developing, these minimum standards address aspects of the resources for gender equality in education, and some dimensions of revealed preferences –

attitudes, aspirations, and confidence. But there is not much stress on participation or connecting subjective and objective conditions.

While a number of studies have looked at the implementation of aspects of UBE and the competence of teachers (see ESSPIN reports - http://www.esspin.org/resources/reports), there has been very limited investigation into teachers' social attitudes, their views on inclusion, gender equality, addressing aspects of poverty, and the implications of these for the enactment of policy. A number of studies (e.g. Sherry, 2008) indicate the stresses that exist between teachers and pupils based on misunderstandings of conditions, although this work does not highlight the gender dynamics. A review of literature on basic education in Nigeria by Humphreys and Crawfurd (2014) observes that at both primary and secondary levels, there is a dearth of evidence on classroom-based research around various subjects in relation to the curriculum in practice of "the emotional, affective side of teaching and learning, either from teachers' or pupils' perspectives" (Humphreys & Crawfurd, 2014: 46-47).

Teacher training institutions are clearly key sites both for developing insight into the practice of teaching and for exploring views of gender equality. They present a productive setting in which to consider some of the problems of measurement, as the existing literature indicates that they may be key to either reproducing or challenging gender inequalities, although their potential to do this work is often overlooked. A study of 18 Teacher Education Institutions (TEIs) conducted in 2011 in all six geo-political zones, with 450 respondents, found respondents identified challenges associated with deepening discussions about professionalisation of teaching, the socio-economic and political environments in which teacher education was conducted and the levels of qualification of staff teaching in TEIs, instructional resources and infrastructures (Ajayi, Afolabi & Adamu, 2011). However, the authors of the study did not inquire into views on gender and inclusion. Bakari and Leach (2007) conducted a qualitative study in a College of Education in a Northern state, where women comprised a quarter of the staff employed. They report on a culture that was intolerant of women colleagues, limited their professional advancement, and where gender inequities amongst staff and students were taken for granted.

In 2010, Ifegbesan undertook a study of 250 secondary school teachers in Nigeria in order to explore how gender stereotypes were played out in their classroom practices. Results indicated that most of the teachers surveyed promoted gender stereotypes (either directly or indirectly) and it was recommended that "teacher education for both pre-service and in-service must be permeated with opportunities to acquire gender sensitive knowledge, skills and develop attitudes in classroom layout, use of resources, responsibilities for activities, discipline, classroom language and teacher-students interaction" (Ifegbesan, 2010: 29). These results echoed the findings of a 2009 study of 296 secondary school teachers undertaken in Enugu educational zone (Nnabueze & Nnadi, 2009) which concluded that the majority of teachers believed gender stereotypes to be true and that there was a clear need to revisit educational activities (textbooks, methods, materials, evaluation and assessment processes) through a gender-sensitive lens.

Gender aspects of teaching materials used in the classroom has been the subject of some research, although much of it is now rather dated (e.g. Etim, 1988; Erinosho, 1997). However, recent interviews conducted by a member of the research team with staff at major educational publishing companies within Nigeria revealed strong evidence of a high degree of awareness of the importance of gender sensitive-editing in textbooks, and the need for editorial staff to be trained in gender-sensitive editorial techniques such as those highlighted in Sifuniso (2000). The educational materials used as part of the teacher training process have been subject to less scrutiny, although the NCCE's Teaching Practice Supervisor's Toolkit, a handbook for teaching practice supervisors, does include a case study focusing specifically on how to deal with issues of gender in a classroom scenario (NCCE, 2012b: 70).

It is evident that steps have been taken to include aspects of gender in minimum standards for teacher education, in some textbooks, and in policy with regard to teacher education. How this is implemented in the particular institutional settings of Colleges of Education and universities is an important area of investigation, which is of particular relevance to how we understand measurement. There is a small but significant body of Nigerian scholarship focusing on the position of women within higher education institutions and Colleges of Education (e.g. Ikwuegbu, 2005; Onyije, Goergewill & Dede, 2013). A survey conducted in Ahmadu Bello University, Zaria (Obeieje, 2007) indicated that the number of female staff employed in principal, academic and administrative offices is extremely low. Whilst this needs further investigation, the likelihood is that this gender imbalance amongst staff affects the teacher education curricula delivered in courses at Colleges of Education and universities. Thus the issue of measurement is not only what is measured, and why, but also how the process of implementation needs to be incorporated into the dynamics of measurement.

This background overview of some of the policy and institutional context in Nigeria highlights some salient issues with regard to reflections of measurement. Thus it can be seen that building institutional capacity to measure the gender distribution of resources – schools, classrooms, teachers, textbooks - is one kind of challenge. A second challenge concerns building a dialogical space for sharing divergent views of what aspirations concerning gender issues might look like in different sites of teacher education. While this has begun in terms of constructing policy texts, much work is to be done regarding how these are interpreted, what issues they include and omit, and what means of evaluation can be generated and exchanged. Thirdly, work has not yet begun on linking visions of gender equality in education from the bottom up, with reflective teaching practice, and assessments of institutions in education, health, child protection, politics, the economy and the cultural sphere. This latter undertaking, often associated with list-based approaches to measuring well-being has not yet been adopted in policy discussions in the education sector in Nigeria.

We now turn to present some data from a survey undertaken to gain some insight into ideas about gender and the practice of teaching amongst students in their final year of studies to become teachers. An investigation into the perceptions of their teachers was also undertaken.

Methodology

Data was collected in 2014 from 4,500 student teachers in 16 teacher education institutions, in 5 Nigerian states (Sokoto, Jigawa, Kano, Lagos and Rivers). Students completed a survey on how they viewed their training, the extent to which they and the staff who teach them consider gender equality, and how ideas about inclusion are being taught (see Appendix 1 for survey instrument). It thus raises questions about how approaches to measurement can be used to evaluate teacher education and orient it to help support policies on inclusion.

The data was collected between June and September 2014 from trainee teachers in their last year of study in public and private universities and Colleges of Education. Two measures are in development; an inclusion score, which looks at what students and staff said about how much issues concerned with gender and equality are being taught in their institution, and a gender attitude score, which looks at student teachers' views about a number of aspects of gender and inclusion. The initial data analysis shows that there is not much difference between types of institution and how much student teachers report inclusion issues are being taught. Across universities and Colleges of Education the view is that institutions do not teach much on this theme. Student teachers also report that they are more interested in features of their course concerned with the practice of teaching, and a majority do not enjoy what they are taught about gender or inclusion, although there are some differences between men and women, and some interesting state level variance. Gender attitudes are analysed with regard to students' socio-economic background, family location, and their views about the teacher education they are receiving. Some challenges emerge in relation to developing a nuanced measure that can address the range of views articulated by students.

Nigerian student teacher views on how gender and inclusion are presented by teacher education institutions (TEIs)

The survey conducted with student teachers in 2014 took place as their course in education was drawing to a close. Students were interviewed at the institutions in which they studied. Research teams aimed to recruit participants from universities and Colleges of Education, and from federal, state and private institutions, as one of the issues that interested us was whether the curricula in different kinds of institutions might elicit different responses from the students enrolled. In Kano, Lagos, Rivers and Sokoto participants were recruited from universities and Colleges of Education. In Jigawa, the university education course does not yet have students in their final year, and thus the whole cohort for the study was recruited from the State College of Education. In Kano, the deteriorating security situation (which included a spate of suicide bombings at higher education campuses) meant that data collection had to be curtailed and thus university students could not be included. The data analysed below is drawn from the survey conducted with the following groups.

State	University	College of Education	Total
Lagos	228	765	993
Rivers	502	441	943
Sokoto	208	819	1027
Kano	-	629	659[2]
Jigawa	-	902	902
Total	938 (21%)	3556 (79%)	4494

Table 1. Number of Students surveyed in 2014 by state, and type of institution (university/College of Education)

In addition interviews were conducted with key informants, that is a senior member of staff with knowledge of the courses taught, at a majority of the institutions where data was collected from students, as follows:

State	University	College of Education	Total
Lagos	1	3	4
Rivers	2	1	3
Sokoto	-	1	1
Kano	-	2	2
Jigawa	-	1	1
Total	3	8	11

Table 2. Institutions where key informants were interviewed

[2] Our aim to survey 1000 students in Kano could not be realised because of the security situation.

The following tables give some information on the demographics of the students in the sample. There are more men than women, but the distribution varies across states, so that in Lagos and Rivers there are more women than men, while the situation is reversed in Sokoto, Jigawa and Kano. This reflects the teacher distribution in those states.

State	Gender	University	College of Education	Total
Lagos	Female	154	585	739
	Male	74	180	254
Rivers	Female	334	260	594
	Male	168	181	349
Sokoto	Female	74	234	308
	Male	134	585	719
Kano	Female	0	185	185
	Male	0	444	415
Jigawa	Female	0	116	116
	Male	0	786	786
Total	Female	562	1370	1942 (43%)
	Male	376	2176	2552 (57%)
				4494

Table 3. Number of Students surveyed by state, gender and type of institution (university/college of education)

More students surveyed were in state, as opposed to federal institutions, and a small proportion (71 students) was studying in private institutions.

State	State	Federal	Private	Total
Lagos	372	592	29	993
Rivers	477	466	0	943
Sokoto	819	208	0	1027
Kano	30	587	42	659
Jigawa	902	0	0	902
Total	2600 (57.5%)	1853 (41%)	71 (1.5%)	4524[3]

Table 4. Students surveyed by state, type of institution (state/federal/private)

In all states the male-female distribution amongst students surveyed was the same in state and federal institutions.

State	Gender	State	Federal	Private	Total
Lagos	Female	279	436	24	739
	Male	93	156	5	254
Rivers	Female	316	278	0	594
	Male	161	188	0	349
Sokoto	Female	234	74	0	308
	Male	585	134	0	719
Kano	Female	1	156	29	186
	Male	29	431	13	473
Jigawa	Female	116	0	0	116
	Male	786	0	0	786
Total	Female	946 (35%)	944 (50%)	53 (75%)	1943 (43%)
	Male	1654 (61%)	909 (50%)	18 (25%)	2581 (57%)

Table 5. Number of Students surveyed by state, gender and type of institution (state, federal, private)

[3] Tables 4 and 5 include 30 students included in study from Kano polytechnic, where courses accredited by the College of Education are accredited. Because participants in the study at a polytechnic were recruited only in one state, the earlier tables on the sample do not include these.

While participants were not purposefully selected among final year student teachers, in the Southern states of Lagos and Rivers there were more female respondents than males, while in the three Northern states this was reversed. This pattern reflects the distribution of teachers employed in these regions (FME, 2011b).

The socio-economic background of students' families showed some variation across states and type of institution.

	Mean family SES - Lagos	Mean family SES - Rivers	Mean family SES - Kano	Mean family SES - Jigawa	Mean family SES - Sokoto	Total
TEI type						
University	.47	.31			.16	.32
College of Education	.53	.36	.25	.26	.22	.32
TEI status						
State	.53	.30	.37	.26	.22	.29
Federal	.51	.35	.25		.16	.35
Private	.44		.22			.31

Table 5a. Mean socio-economic score of the household[4] of students surveyed by state and type of institution

It can be seen that students from Lagos state had a higher mean socio-economic score (SES) than students from other states, indicating the parents of the students in Lagos state were employed in occupations that ranked more highly. However because household mean socio-economic status has been calculated by adding together the occupation of students' fathers and mothers, this may not reflect higher status, as much as the fact that students studying in Lagos were more likely than those in other states to mention their mother was in formal employment. Surprisingly, in all states students studying at Colleges of Education had a somewhat higher mean family socio-economic score than those studying at universities. Students in state institutions were in a higher socio-economic band than students at federal institutions, and, in both Lagos and Kano, students at the private institutions came from a somewhat lower socio-economic group than those at state institutions.

Students were asked about their education histories and the extent to which they had moved around during their education, as one of the hypotheses we are interested in is that the labour market for teachers is very parochial and that this might constrain the development of wider views regarding gender of inclusion. The survey indicated some interesting differences regarding where students had lived during their pre-primary years and we surmise were born or have family associations:

[4] Calculated on the basis of occupational bands of mothers and fathers. Both parents' occupations were scored as follows: 0 - No wage, 1 – Unskilled/casual labour, 2 – Skilled, 3 – Professional. The scores for each parent were then added together and the total was divided by 6 to give a SES score ranging from 0 (low) to 1 (high).

	Community with no primary school	Community with one primary school	Town with primary and sec. schools	Town with primary, sec. schools and hospital	Town with many schools, colleges and multiple hospitals
State					
Sokoto	2.1%	11.9%	12.4%	16.0%	50.9%
Jigawa	5.2%	14.6%	15.3%	22.0%	29.8%
Kano	3.1%	10.2%	10.7%	18.4%	46.1%
Rivers	2.0%	12.4%	19.7%	21.3%	40.4%
Lagos	1.3%	7.0%	11.0%	26.0%	53.7%
TEI type					
University	1.7%	9.9%	13.5%	24.4%	47.1%
College of Education	3.0%	11.7%	14.1%	19.9%	43.3%
TEI status					
State	3.0%	12.0%	13.6%	19.5%	43.2%
Federal	2.3%	10.4%	14.8%	22.9%	44.5%
Private	4.2%	11.3%	4.2%	8.5%	67.6%

Table 6. Students by State, TEI type and status by location where they spent pre-primary years

It can be seen that three quarters of the students surveyed in Lagos and up to two thirds of those surveyed in Rivers, Kano and Sokoto spent their pre-primary years in medium or very large towns. In Jigawa only 40% had this background, and 20% came from locations that had only one primary school or no school at all. Lagos and Rivers states have large urban areas, while Jigawa and Sokoto are predominantly rural, generally with a medium sized state capital, and very dispersed populations.

This different background of the students from Jigawa, both with regard to rurality and lower SES of their families, might explain some of the other ways in which the students surveyed from this state have somewhat different views, inclinations and perspectives from those in the rest of the sample, as discussed below. It can also be seen that a larger proportion of students surveyed attending universities and the polytechnic came from medium to very large sized towns, in contrast to a somewhat smaller proportion with this background surveyed in Colleges of Education. This data, together with that on family SES suggests some interesting dimensions regarding the backgrounds of this cohort of beginning teachers.

Students surveyed were asked about their reasons for wanting to become teachers.

	% of students mentioning:				
	Someone recommended me to study this course at this institution	**I did not get admission into the course of my choice at this institution**	**I did not get admission into the course of my choice at another institution (university, college)**	**I want to become a teacher**	**I have been enrolled on this course, although I am not interested in a career as a teacher**
Sex					
Men	11.5	8.3	10.1	68.8	8.6
Women	9.1	13.3	16.3	60.5	9.1
State					
Sokoto	9.3	5.4	9.7	70.5	7.6
Jigawa	8.7	4.5	5.1	82.3	5.5
Kano	11.6	5.6	10.1	73.0	7.9
Rivers	10.9	17.8	15.3	58.9	10.1
Lagos	13.0	18.1	22.9	43.9	12.5
TEI type					
University	12.8	25.3	10.0	52.6	9.7
College of Education	10.1	6.7	13.4	68.5	8.6
TEI status					
State	9.9	8.9	11.7	68.3	7.8
Federal	11.8	13.1	14.3	60.8	10.1
Private	7.0	4.2	9.9	70.4	9.9

Table 7. Reasons for taking up teacher education course, by various characteristics

It can be seen that in Lagos and Rivers there is a substantial group who say they do not want to be teachers and were interested in studying something else, but were not successful in gaining admission to another course: these are both Southern states with large urban areas and commercial hubs. Lagos State has a variety of industries, while Rivers benefits from commerce associated with its vast reserves of crude oil and natural gas. As shown in Table 5a, the mean household SES score is also higher in these states.

Table 8 shows that students who have a very clear view that they want to become a teacher come from families with a lower mean SES score than those who do not want to work as a teacher. Students who say they are studying on a course that is not of their choice have higher mean SES scores than those who say they are on the 'correct' course for their ambitions.

Reasons offered for enrolling on education course	**Mean Family SES Score**
I want to become a teacher	.29
I have been enrolled on this course, although I am not interested in a career as a teacher	.36
I did not get admission into the course of my choice at this institution	.37
I did not get admission into the course of my choice at this institution	.40

Table 8: whether or not respondents mentioned different reasons for becoming a teacher by mean household SES score

Interestingly, in Jigawa, where we saw a larger proportion in the sample came from very small villages or rural areas, where the mean household SES was amongst the lowest in the sample, and where we did not interview any university students, there is less avowal that teaching is not the student's first choice course of study. A number of factors could have influenced the Jigawa respondents' view. Considering the predominantly rural nature of the state, teaching and a teacher's salary tend to be desirable. Jigawa is among very few states where the teaching profession has been relatively 'face-lifted', while "the same cannot be said of other states where teachers are still neglected" (UNESCO, 2006:42). Jigawa also has a record of paying teachers better than other states. UNESCO (2006:17) explains that:

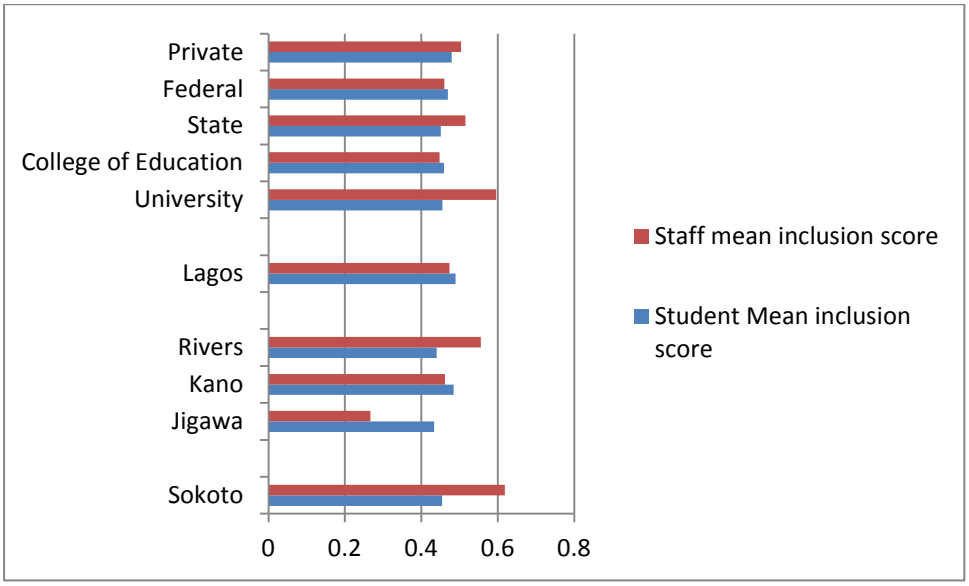
> *… in spite of harmonized and uniform scales of basic salaries for teachers of different cadres, some state governments have found it expedient to pay different allowances, either to motivate or perhaps to frustrate their teachers. In general, conditions of service differ across the states although the basic salaries remain the same for teachers of the same rank. For instance, teaching in Jigawa State has been elevated to an enviable height by the present State government, which has approved a 100% increase in teachers' salaries. The Executive Governor of Adamawa State was hailed for extending motor vehicle loans to primary school teachers in 2002, a practice that was uncommon.*

A larger proportion of university students, compared to College of Education students, had wished to study a different course, but at the same institution. One third of women students, and one quarter of men did not intend to study the course in which they are currently enrolled.

Teaching about gender

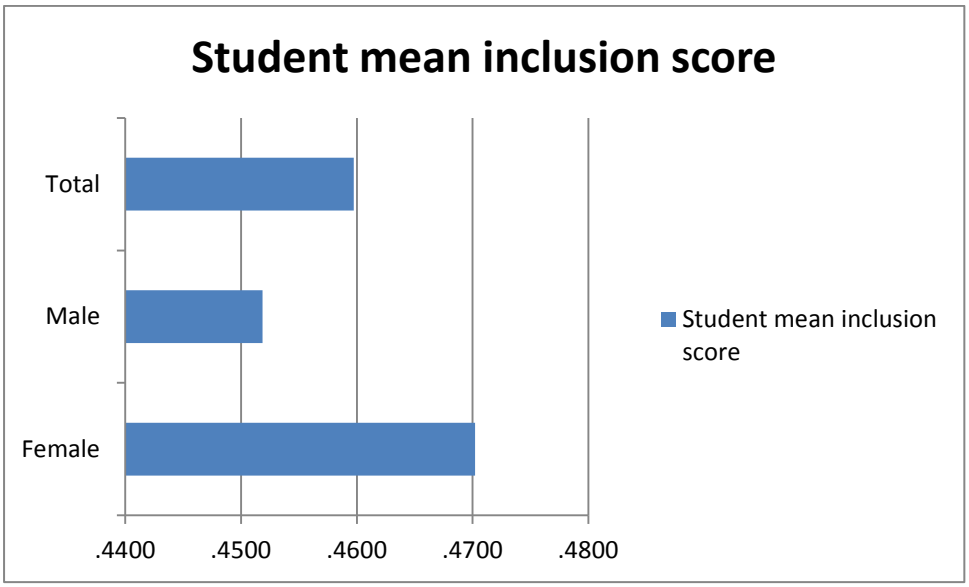
Students and key staff informants were asked about the amount of attention given in the education courses to different topics. This led to an inclusion score being constructed, which reflects what was said about the depth of coverage of topics associated with gender, girls' education and forms of exclusion. If an informant reports a lot of attention is given to aspects of gender, girls' education or other features of exclusion (e.g. poverty) the inclusion score increases. In assessing inclusion scores for students, means were constructed for different groups and types of institution.[5]

[5] Inclusion scores were calculated using the steps outlined in Appendix 3. High inclusion score is 1, while 0 is low inclusion.



Some difference in the inclusion score of staff and students are evident, although it is important to note that the data from staff still needs further analysis and contextualisation as thus far it is based only on the views of one key informant per institution. It can be seen however that neither students nor staff indicate very in-depth coverage of issues concerned with gender and inclusion, although university staff consider more is taught on these themes than their students.

It can also be seen that the mean inclusion score is higher for women students, compared to men, suggesting that they may be more receptive to these issues being raised, although for neither group is it very high. There were no large differences based on the type of institution (university or College of Education).



In the eleven institutions where key informants provided information on the courses offered, most said there was either a lot or at least some attention in the courses offered given to lesson planning, assessment methods, and making lessons interesting for children. While girls' access to school and school related gender based violence were only given a lot of attention in two institutions, five reported giving girls' access to school some emphasis, and six reported giving some attention to school related gender based violence. Four reported giving a lot of emphasis to gender equality in education and four giving this some emphasis. This may not be surprising, considering that various girls' education interventions and development projects that emphasise girls' education have been operating in these states

for some years now. For example, the DFID-funded Education Support Program in Nigeria (ESSPIN) has been operating in Lagos, Kano and Jigawa since 2008 while the Girls' Education Project (GEP), launched in 2005 and now in its third iteration, is implemented by UNICEF in four Northern states, including Sokoto. However, no key informants reported giving poverty a great deal of emphasis, although seven reported this was given some consideration. None reported strong emphasis on talking to parents, but four reported some emphasis.

Students were asked a number of questions about the elements of the course they were studying that they found most and least interesting. The general feature of responses was that larger proportions found the elements of the course that dealt with the concrete practice of teaching (e.g. planning lessons for teaching practice) or appreciating aspects of teaching as a profession the most enjoyable and interesting, while those aspects that dealt with gender and learning needs, puberty and issues around sexual and reproductive health, were mentioned only by a minority as being particularly interesting. This is apparent across a range of characteristics of the sample as shown in the tables in Appendix 2. It suggests that the content of courses in this area may be particularly difficult or distancing for a substantial majority of students. It can also be seen from the tables in the Appendix 2 that a much smaller proportion of education students in Jigawa report on finding aspects of the course they are studying very interesting and enjoyable. This needs to be read together with the higher proportions of students in this state who said they wanted a career as a teacher, and also the higher proportions studying in this state coming from smaller towns and villages. This raises questions about the contexts in which this group is studying and the learning experiences they are drawing on as they approach their careers as teachers.

Measuring views on gender

Participants in the study were asked a range of questions regarding their views on gender. These questions built from some of the questions used in the CARE studies for older school students[6] (CARE USA, 2014), some questions used in surveys with younger girls in the TEGINT and SVAGS studies (Unterhalter & Heslop, 2011; Parkes, Heslop et al, 2013). An intention in analysing the survey responses has been to try to develop an indicator of views on gender, education and empowerment, but our thinking on this remains preliminary. Nonetheless, some of the data analysis completed to date is illuminating.

Participants were asked a range of questions about how they saw women taking leadership at a range of levels from the community to national level, how they viewed gender equality as a feature of school participation, and their views on girls and boys playing sport.

	Men	Women	Total responses (% all surveyed)
Strongly agree women have the right to hold leadership positions in the community	21%	59%	1700 (36%)
Strongly agree a female president can be as effective as a male president	16%	57%	1543 (33%)
Strongly agree girls have the same right to go to school as boys	53%	85%	3070 (66%)
Strongly agree girls should be allowed to play sports	38%	68%	2336 (50%)
Strongly agree boys should be allowed to play sports	72%	89%	3966 (79%)

Table 9. Survey participants by sex and views on women in leadership

[6] We gratefully acknowledge permission from CARE to draw on their instruments in constructing our study.

It can be seen that significantly larger proportions of female, compared to male, students strongly agree that women have the right to hold leadership positions at community and national level, and that girls should be allowed to play sport. However larger proportions of men, just over half, strongly agree that girls have the same right to go to school as boys, compared to just about one fifth of male students who strongly agree that women can take political leadership positions, and only a third consider girls should be allowed to play sport.

Views on women's leadership are quite polarised, with more agreeing or disagreeing strongly about women having the right to leadership positions or women being effective presidents than those agreeing/disagreeing somewhat. Women's and men's responses differ starkly – men are much more likely to disagree with women in leadership. Gender equality in schooling is less controversial, with most agreeing, but again women teacher trainees are more likely to have gender equitable views than men. In the Southern states of Lagos and Rivers a larger proportion held views strongly in support of women's participation in the public sphere. In the Northern states, respondents in Jigawa had the least gender equitable views.

Most teacher trainees surveyed believed both men and women have rights with regard to choice of marriage partner, but a larger proportion of women compared to men agreed strongly on women's rights in this area. However, other areas with regard to family relationships, particularly in respect of family planning, and joint decision-making, showed smaller proportions of men in favour of women's participation and equality in these areas.

	Men	Women	Total responses (% all surveyed)
Strongly agree women have the right to choose who they marry	68%	88%	3534 (76%)
Strongly agree men should know about family planning before marriage	51%	74%	2795 (60%)
Strongly agree women should know about family planning before marriage	51%	77%	2837 (61%)
Strongly agree husband and wife should plan together about when they have children	59%	84%	3216 (69%)

Table 10: Survey participants by sex and views on women's rights with regard to marriage and family planning

It can be seen that more than two thirds of men and nearly 90% of women strongly agreed women should choose whom they marry. But only half of all men surveyed strongly believed men and women should know about family planning before marriage (possibly indicating concerns about sexual activity before marriage), while nearly two third of women strongly agreed that they should have this knowledge. 84% of women strongly agreed that decisions about having children should be taken jointly, but only 59% of men took this view.

Male teacher trainees are much more likely to blame female students for sexual harassment or pregnancy, and only two thirds of male students surveyed thought girls who had an early pregnancy should be allowed to return to school, while 81% of women surveyed thought this course should be open after an early or unintended pregnancy.

	Men	Women	Total responses (% all surveyed)
Agree if a teacher, older man or boy sexually harasses a girl then it is her own fault	39%	20%	1440 (31%)
Disagree if a teacher, older man or boy sexually harasses a girl then it is her own	41%	66%	2441 (52%)

fault			
Agree girls who become pregnant should be allowed to return to school	60%	81%	3197 (69%)

Table 11: Survey participants by sex and views on sexual harassment and early and unintended pregnancy

Overall we see a pattern where women tend to hold more gender equitable views than men; students studying in Lagos and then Rivers hold the most gender equitable views and those studying in Jigawa the least. Students with more gender equitable views are also more likely to be located in universities.

	Sokoto	Jigawa	Kano	Rivers	Lagos
Strongly agree women have the right to hold leadership positions in the community	26%	19%	26%	55%	54%
Strongly agree a female president can be as effective as a male president	19%	10%	20%	55%	56%
Strongly agree girls have the same right to go to school as boys	49%	42%	58%	90%	90%
Strongly agree girls should be allowed to play sports	32%	26%	36%	76%	79%
Strongly agree women have the right to choose who they marry	71%	57%	72%	89%	91%
Strongly agree women should know about family planning before marriage	49%	33%	47%	86%	87%
Strongly agree men should know about family planning before marriage	50%	34%	48%	83%	83%
Strongly agree husband and wife should plan together about when they have children	64%	42%	58%	86%	87%
Agree if a teacher, older man, or boy sexually harasses a girl, it is her own fault	42%	46%	37%	19%	12%

Table 12: Participants by state and views on women in leadership, and women's rights with regard to marriage and family planning

It can be seen that, among the three Northern states, participants in Jigawa are the least likely to be in strong agreement when asked about issues relating to different aspects of gender equality when compared to Kano and Sokoto. Meanwhile, with regard to the statement on when a girl suffers sexual harassment, in Jigawa and Sokoto nearly half of respondents agreed it was her fault, while only a third had this view in Kano, just below 20% in Rivers and only 12% in Lagos.

Only two thirds of participants at Colleges of Education, compared to 84% at university strongly agree girls have an equal right to go to school compared to boys. However less than half at both kinds of institutions strongly agree on women taking leadership, and there are also striking differences in views on engagement with family planning.

	University	College of Education
Strongly agree women have the right to hold leadership positions in the community	47%	34%
Strongly agree a female president can be as effective as a male president	46%	30%
Strongly agree girls have the same right to go to school as boys	84%	62%
Strongly agree girls should be allowed to play sports	64%	47%
Strongly agree women have the right to choose who they marry	86%	73%
Strongly agree men should know about family planning before marriage	75%	57%

Strongly agree women should know about family planning before marriage	78%	57%
Strongly agree husband and wife should plan together about when they have children	80%	67%

Table 13: Participants by type of institution and views on women in leadership, and women's rights with regard to marriage and family planning

Below these broad-brush patterns we see far from uniform views on different aspects of gender. To look further at this we have tried to group questions conceptually into different areas - for example women in the public sphere, views on marriage, sexuality and teachers' work. Views on gender equality in the public sphere seem to be quite polarised, whilst views on gender equality in the private sphere tend more towards an equitable view. We plan to undertake some further analysis (using Factor Analysis) to understand better what dimensions of gender attitudes we may be capturing and how they may or may not be related to each other, with a view to developing an index which captures much of this data into one score.

Conclusion

The survey data confirm the intuition of the many critics of the use of gender parity as a proxy measure for gender equality in education and the limits of counting policy mentions of concern with gender, rather than engaging in some measure of how policy is understood and enacted. In some of the states in this study there is gender parity in the numbers of tertiary level students or in teachers employed; in some states there are more women than men in these spaces. In the teacher education policy documents there has been a concerted effort in the last five years to focus on gender. Yet the results of the survey indicate that student teachers do not think these topics are being covered in much depth. In addition, the views of students show that highly gender inequitable views are widespread, particularly with regard to women's political leadership, knowledge about contraception, joint decision-making in families, and vulnerability to sexual harassment. Discriminatory views are evident amongst a large proportion of male students, but are also articulated by a sizeable minority of female students. Only on the right to education do a majority of students' views appear to be in line with government policy, but for male students the proportion who think this is just over half.

The data suggest the importance of thinking about attitudes and revealed preferences (subjective views relating to gender and aspects of equality) together with objective measures (institutional arrangements, location, socio-economic background, political economy of the state). One direction of work leads towards constructing a gender equality and education index looking at the difference between the views of women and men students at the same institution. A second direction looks at using the survey data to help construct activities to generate a kind of list regarding gender equality in education and other dimensions of social justice that could be workshopped with selected student teachers and teacher educators as they continue their career in teaching.

We acknowledge the importance of measuring distribution of resources, but the findings from this survey show that large amounts of work need to be done in building insight into why gender equality in education is important, and how it is connected with other sites of work to transform inequality and injustice. This work, from the bottom up, is crucial in changing the metric of measurement from an instrument of planning to one of evaluation, aspiration and democratic deliberation.

Appendix 1: Survey instrument used with student teachers

For official use only:

INSTITUTION Ref.	
FORM Ref.	

STUDENT TEACHER SURVEY

A. INTRODUCTION

The purpose of this survey is to contribute to a two-year study by Nigerian and British researchers tracking the experiences of newly qualified teachers who are currently training in five states (Sokoto, Kano, Jigawa, Lagos and Rivers). Through this study we aim to collect information about student teachers' views about their education and how they see their future work. We hope to be able to follow a proportion of students, who are currently in their final year, to discuss with them their early experiences of work in schools.

All information gathered from this survey will be completely confidential and kept private. Data will not be shared with staff at the college/university or any future employers. Before completing this survey, please read and sign the form printed on blue paper where we give you our assurances on this.

There are no correct or incorrect answers to these questions. We appreciate the time you take to answer honestly and as best you can to help us with our study.

B. YOUR BACKGROUND

QB1 What year were you born?

QB2 Are you female or male? Female / Male (please circle one)

QB3 In which state were you born?

QB4a Father's current occupation (please write what it is):

QB4b OR, tick box (if appropriate):

My father is not working	
My father is retired	
My father is late	

QB5a Mother's current occupation (please write what it is):

QB5b OR, tick box (if appropriate):

My mother is not working	
My mother is retired	
My mother is late	

QB6 Have you ever worked for pay?

Yes / No (please circle one)

QB7 **If you have worked for pay before**, tick the type of work done. Please write the year and months worked next to your tick (e.g. June 2012 - May 2013). Tick and complete as many as apply.

	Tick	Enter dates (e.g. June 2012 - May 2013)
Teaching assistant in a school		
Community health worker		
Child minder in a nursery or crèche		
Clerical officer (for government, private business)		
Agricultural worker		
Mining or industrial worker		
Taxi driver		
Hairdresser		
Sales		
Porter		
Cook		
Cleaner		
Other		

QB8 Which best describes the area where you and your family lived during your schooling?

Pre- Primary school years (please TICK one)

Small community with no primary school	
Small community with a primary school	
Small town (with primary and secondary school)	
Medium sized town (with schools and hospital)	
Very large town (with many schools and several hospitals)	

Primary & Junior Secondary school years (please TICK one)

Small community with no primary school	
Small community with a primary school	
Small town (with primary and secondary school)	
Medium sized town (with schools and hospital)	
Very large town (with many schools and several hospitals)	

Senior Secondary years (please TICK one)

Small community with no primary school	
Small community with a primary school	
Small town (with primary and secondary school)	
Medium sized town (with schools and hospital)	
Very large town (with many schools and several hospitals)	

QB9 Please write the years that you attended each level of school (e.g. JSS 1999 – 2002)

Primary school ……..
Junior secondary school …….
Senior secondary school …….

QB10 In which STATE did you go to:

Primary school ……..
Junior secondary school ……..
Senior secondary school ……..

C. TEACHER EDUCATION

QC1 - What year did you begin your teacher education course?

QC2 - Are you in the final year of your course? Yes / No (please circle one)

QC3 - Is this the only institution of higher learning you have attended?

Yes / No (please circle one)

QC4 If no, please tick the other type of institution you have attended:

	TICK
University (give degree/diploma for which registered)	
Polytechnic (give degree/diploma for which registered)	
Technical College (give diploma for which registered)	
College of Education	
Other	

QC5 Why did you choose to study to be a teacher at the institution at which you are currently enrolled? (Please TICK as many as apply)

	TICK
Someone recommended me to study this course at this institution	
I did not get admission into the course of my choice at this institution	
I did not get admission into the course of my choice at another institution (university, college)	
I want to become a teacher	
I have been enrolled on this course, although I am not interested in a career as a teacher	

QC6 Which of the following best describes the schools where you have done your teaching practice? **Please TICK only one option**.

Small community with no primary school	
Small community with a primary school	
Small town (with primary and secondary school)	
Medium sized town (with schools and hospital)	
Very large town (with many schools and several hospitals)	

I have not done teaching practice	

QC7 Why did you wish to study education? Tick all that apply.

	TICK
I like working with children	
Teaching is a secure job	
I like studying the subject I plan to teach	
Members of my family work in education	
Working in teaching combines well with looking after a family	
I am interested in issues about learning and teaching	

I could not get admission into other courses	
I want to study education in order to continue to get BA or BSc degree	
I just needed post-secondary qualification	
I am tired of staying at home and writing JAMB	
Teachers are respected in my community	

QC8 Which of the following topics are covered in your course and how much time is given to them?

	AMOUNT OF DISCUSSION ON THIS TOPIC DURING TEACHER TRAINING (please TICK one box for each topic listed)			
LIST OF TOPICS	This topic never mentioned	Few mention this topic	Some discussion of this topic	A lot of discussion on this topic
Subject knowledge				
Lesson planning				
Making lessons interesting for children				
Giving feedback to students in class				
Assessment methods				
Organising lessons so that children with different learning needs can all participate				
Talking to pupils' parents				
Nigerian National Education policy				
Career development				
Girls' access to school				
School related gender based violence				
Poverty				
Gender equality and education				
Education for sustainable development				
International frameworks (e.g. Convention on the Rights of the Child; Education for All; MDGs)				

QC9 What parts of the course have you enjoyed? Write the score that suits your opinion (e.g. 3), as follows:

3 = parts of the course you have found very interesting and enjoyable indeed
2 = parts of the course you have found quite interesting and/or enjoyable
1 = parts of the course that have been not very interesting or enjoyable
0 = parts of the course you have not liked at all

Subject knowledge content	
Teaching as a profession	
Managing classroom behaviour	
Understanding how children learn	
Identifying and understanding special learning needs (e.g. linked with disability, poverty or gender)	
Teaching practice in a school	
Understanding how children change as they grow older	
How to assess students' work	
How to work as a team	
Professional codes of conduct	

QC10a As your course is coming to an end, are there issues you would like to know more about?
Yes / No (please circle one)

QC10b If yes, please state which issues.

QC11 Do you have carryovers? Yes / No (please circle one)

QC12 If you have carryovers, how many?

QC13 Will you take up teaching job at the end of your study? **Please TICK only one answer.**

Yes. I like teaching as a profession.	
Yes. However this is not my first choice, but I have no alternative job.	
No. I do not want to teach.	
No. I do not think I will find a job as a teacher.	
I will teach while waiting for a better job.	

QC14 Which type of school do you hope to teach in? (tick as many as apply)

	TICK
Primary	
Junior Secondary	
Secondary	
Post-secondary	

D. YOUR VIEWS

QD1 We would like to ask you about your views on girls' and boys' schooling.

Based on your experiences as a student teacher, what reasons explain why some children are not able to go to school? What do you think are the reasons girls or boys do not attend school? (**Please TICK as many as you think apply, whether for a girl, a boy or both**).

	Girls	**Boys**
a) Household chores		
b) Looking after younger children (brothers and sisters)		
c) Looking after family member who is unwell		
d) Working in the fields/farm/looking after animals		
e) Restrictions linked to religion		
f) Parents can't pay school fees/uniform/books		
g) Lack of desks or books in school		
h) Unsafe journey to/from school		
i) Selling wares in the market		
j) Families migrate for work or with livestock		
k) Punished at school		
l) Other children are unkind		
m) School work too difficult		
n) Teachers are absent from school		
o) Puberty/initiation rites		
p) Illness		
q) No toilets at school, or toilets not clean, private or safe enough		
r) Menstruation		
s) Sexual harassment/abuse at school		
t) Pregnancy (for boys 'getting a girl pregnant')		
u) Married		
v) Other (please state)		

QD2 In the following statements, choose the answer that shows how strongly you agree or disagree with the statement. **Please TICK only one answer for each statement.**

QD2a In the community where I grew up and did my primary schooling, neighbours help each other.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2b Women have the right to hold leadership positions in the community

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2c A female president can be as effective as a male president.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2d At home, both boys and girls should ask permission to go play with their friends.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2e Girls have the same right to go to school as boys.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2f It is good for women to talk about their problems with their friends.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2g It is good for men to talk about their problems with their friends.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2h Men and women both have the right to enrol in advanced schooling.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2i I respect a man who walks away from a fight.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2j A husband and wife should decide together if they want to have children.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2k Men should know about family planning before marriage.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2l Women should know about family planning before marriage.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2m Men have the right to choose whom they marry.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2n Women have the right to choose whom they marry.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2o If I saw a man hurting a woman, I would tell the man to stop.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2p If I saw a woman hurting a man, I would tell the woman to stop.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2q) Girls should be allowed to play sports.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD2r Boys should be allowed to play sports.

Disagree Strongly	
Disagree Somewhat	
Agree Somewhat	
Agree Strongly	

QD3 Here is a list of statements about teachers and their work. For each question tick whether you agree, disagree, or do not know. **Please TICK only one answer for each statement.**

	AGREE	DISAGREE	DON'T KNOW
It is okay for teachers to give private lessons to children after school, providing they perform their duties adequately in school hours.			
It is okay for teachers to ask girls to do personal errands e.g. cleaning teachers' houses or fetching water.			
It is okay for teachers to ask boys to do personal errands e.g. cleaning teachers' houses or fetching water.			
It is okay for teachers to give the most attention in class to children who are doing well, in order to ensure they get good marks in public examinations.			
It is okay for teachers to flog boys to maintain discipline in school or class.			
It is okay for teachers to flog girls to maintain discipline in school or class.			
Teachers who upgrade their qualifications while working need additional support from other teachers and senior staff (e.g. head teacher)			
Teachers who have a sexual relationship with a pupil should be dismissed and not allowed to teach again.			
Poverty in the community is the main reason children cannot do well at school.			
If a teacher, older man or boy sexually harasses a girl then it is her own fault.			
Girls should be allowed to return to school after giving birth.			
If a male pupil impregnates a female pupil, he should have to leave school.			

Thank you for your time in completing the survey.

Appendix 2: Additional tables showing aspects of training student teachers found interesting

	Male	Female
Subject knowledge content	43.5	50.1
Teaching as a profession	42.7	59.2
Managing classroom behaviour	39.3	52.3
Understanding how children learn	39.6	50.7
Identifying and understanding special learning needs (e.g. linked with disability, poverty or gender)	33.4	40.3
Teaching practice in a school	44.6	60.9
Understanding how children change as they grow older	33.1	46.7
How to assess students' work	34.2	42.2
How to work as a team	32.8	40.1
Professional codes of conduct	37.6	44.0

Table 14. Percentage of student teachers finding different aspects of the course very interesting and enjoyable, by gender

	% finding very interesting and enjoyable				
	Sokoto	Jigawa	Kano	Rivers	Lagos
Subject knowledge content	48.8	32.0	44.4	44.0	60.4
Teaching as a profession	49.6	23.3	49.3	62.3	61.6
Managing classroom behaviour	43.2	24.2	42.8	57.8	53.8
Understanding how children learn	46.8	27.5	43.3	49.3	53.2
Identifying and understanding special learning needs (e.g. linked with disability, poverty or gender)	39.8	24.5	40.0	35.2	41.7
Teaching practice in a school	51.4	23.8	49.8	62.0	67.0
Understanding how children change as they grow older	37.4	22.6	40.6	43.8	49.3
How to assess students' work	35.9	24.4	39.3	40.9	46.9
How to work as a team	34.9	21.7	34.1	39.3	47.9
Professional codes of conduct	41.6	27.7	33.9	47	48

Table 15. Percentage of student teachers finding different aspects of the course very interesting and enjoyable, by state

	% finding very interesting and enjoyable		
	University	Polytechnic	College of Education
Subject knowledge content	51.1	60.0	44.7
Teaching as a profession	59.1	56.7	46.5
Managing classroom behaviour	49.4	56.7	43.0
Understanding how children learn	46.1	70.0	43.3
Identifying and understanding special learning needs (e.g. linked with disability, poverty or gender)	35.0	53.3	36.2
Teaching practice in a school	59.8	66.7	48.3
Understanding how children change as they grow older	44.4	60.0	36.9
How to assess students' work	39.1	60.0	36.7
How to work as a team	41.9	50.0	34.0
Professional codes of conduct	43.0	56.7	39.1

Table 16 Percentage of student teachers finding different aspects of the course very interesting and enjoyable, by institution type

	% finding very interesting and enjoyable		
	State	Federal	Private
Subject knowledge content	45.1	46.9	56.3
Teaching as a profession	44.2	45.6	62.0
Managing classroom behaviour	42	46.9	52.1
Understanding how children learn	42.3	45.9	53.5
Identifying and understanding special learning needs (e.g. linked with disability, poverty or gender)	35	37.5	29.6
Teaching practice in a school	46.6	55.6	57.7
Understanding how children change as they grow older	35.7	41.6	52.1
How to assess students' work	34.6	40.6	38.0
How to work as a team	34.0	37.5	40.8
Professional codes of conduct	39.9	40.0	46.5

Table 17. Percentage of student teachers finding different aspects of the course very interesting and enjoyable, by institution status

Appendix 3

Institution Inclusion Score

From Teacher trainer instrument Q3.

Subject knowledge	1
Lesson planning	1
Making lessons interesting for children	1
Giving feedback to students in class	1
Assessment methods	1
Organising lessons so that children with different learning needs can all participate	2
Talking to pupils' parents	1
Nigerian National Education policy	1
Career development	1
Girls' access to school	2
School related gender based violence	2
Poverty	2
Gender equality and education	2
Education for sustainable development	2
International frameworks (e.g. Convention on the Rights of the Child; Education for All; MDGs)	2

Multiply each of above scores by code -1. i.e. Never 0, Few 1, Some 2, A Lot 3

Calculate mean of scores. (Max score 6, lowest 0). So divide by 6 to recalculate into an index 0-1. 1 means high inclusion, 0 low inclusion.

References

Ajayi, I. A., Afolabi, F. O., & Adamu, B. J. (2011). Challenges Of Teacher Education In Nigeria. *International Journal of Research in Education*, 3(6), 79-84.

Adefeso-Olateju, M. (2012). *A Critical Inquiry into the Effectiveness of Public and Private Schools in Nigeria and Implications for Public-Private Partnership.* Unpublished PhD Thesis, Institute of Education, University of London.

Amzat, I. H. (2010). The Effect of Poverty on Education in Nigeria: Obstacles and Solutions. OIDA *International Journal of Sustainable Development*, 1(4), 55-72.

Bakari, S. & Leach, F. (2007, April). Hijacking equal opportunity policies in a Nigerian college of education: The micropolitics of gender. In *Women's Studies International Forum,* 30(2), 85-96. Pergamon.

Biggeri, M., Ballet, J. & Comim, F. (eds.) (2010). *Children And The Capability Approach*. Basingstoke: Palgrave Macmillan.

Branisa, B., Klasen, S. & Ziegler, M. (2009). *The Construction Of The Social Institutions And Gender Index (SIGI)* (No. 184). Discussion papers, Ibero America Institute for Economic Research.

Brighouse, H. & Robeyns, I. (eds.). 2010. *Measuring Justice: Primary Goods And Capabilities.* Cambridge: Cambridge University Press.

British Council (2012). *Gender in Nigeria Report 2012. Improving the Lives of Girls and Women in Nigeria.* Available at http://www.britishcouncil.org.ng/programmes/society/2012-gender-nigeria-report.

Burchardt, T., & Vizard, P. (2007). *Definition Of Equality And Framework For Measurement: Final Recommendations Of The Equalities Review Steering Group On Measurement*. LSE STICERD Research Paper No. CASE 120.

CARE USA (2014). *Gender Equitable Index (GEI) Toolkit.* Atlanta: CARE USA.

Chisamya, G., DeJaeghere, J., Kendall, N. & Khan, M. A. (2012). Gender and Education for All: Progress and Problems in Achieving Gender Equity. *International Journal of Educational Development,* 32(6), 743-755.

Chukwu, C.L. (2010). Capacity Building of Teachers: Challenges and Opportunities in Atinmo, M.I., Babalola, J.B., Moronkola, O.A. & Atanda, A.I. (eds.) (2010) *Education for Sustainable Development*, Faculty of Education, University of Ibadan, 135-148.

Clark, D. (2014). Defining and Measuring Human Well-Being in Freedman, B. (ed.) *Global Environmental Change: Handbook of Global Environmental Pollution*. Springer, 833-851.

Day, C. & Gu, Q. (2010). *The New Lives of Teachers.* London: Routledge.

DeJaeghere, J. (2012). Public Debate And Dialogue From A Capabilities Approach: Can It Foster Gender Justice In Education? *Journal of Human Development and Capabilities*, 13(3), 353-371.

DeJaeghere, J., & Wiger, N. P. (2013). Gender Discourses In An NGO Education Project: Openings For Transformation Toward Gender Equality In Bangladesh. *International Journal of Education al Development*, 33(6), 557-565.

Erinosho S.Y. (1997) *Female Participation in Science: An analysis of Secondary School Science Curriculum Materials in Nigeria.* A bridged research report, No. 29, Nairobi Academy of Science Publisher.

Erinosho, S.Y. (2010) Quality in (Teacher) Education in Nigeria, *West African Journal of Education*, 30, 102-111.

Erulkar, A. & Bello, M. (2007). *The Experience Of Married Adolescent Girls In Northern Nigeria*. New York: Population Council.

Etim, J. S. (1988). Sex Role Portrayal in 15 YA Books Used in Nigerian Secondary Schools. *Journal of Reading*, 31(5), 452-457.

Ezegwu, C. & Ezegwu, C. (2015). *Conflict, Conflict-induced Migration and Realisation of Education for All in Nigeria.* Paper submitted for 8th International Conference on Migration and Development, World Bank, Washington D.C. to be held in June 8-9.

FME (2004). Federal Ministry of Education. *National Education Policy*. Abuja.

FME (2007). Federal Ministry of Education. *National Policy on Gender in Basic Education*. Abuja.

FME (2013). Federal Republic of Nigeria: *National Policy on Education, 6th Edition*. Abuja.

FME (2015). *Nigeria EFA Review Report 2000-2014: Strides and Milestones.* UNESCO.

FME (undated). *Federal Ministry of Education: Implementation Guidelines for the National Teacher Education Policy*. Abuja: FME

Fukuda-Parr, S., Yamin, A. E. & Greenstein, J. (2014). The Power Of Numbers: A Critical Review Of Millennium Development Goal Targets For Human Development And Human Rights. *Journal of Human Development and Capabilities*, 15(2-3), 105-117.

Goldstein, H. & Moss, G. (2014). Knowledge and numbers in education, *Comparative Education,* 50(3), 259-265.

Hansen, D. (2011). *The Teacher and the World: A Study of Cosmopolitanism as Education.* London and New York: Routledge.

Hart, C.S. (2013). *Aspirations, Education and Social Justice: Applying Sen and Bourdieu*. London: Bloomsbury.

Henderson, E.F. (2015). *Gender Pedagogy: Teaching, Learning and Tracing Gender in Higher Education.* London: Palgrave Macmillan.

Human Rights Watch (2014). *Those Terrible Weeks In Their Camp – Boko Haram Violence Against Women And Girls In Northeast Nigeria.* New York: Human Rights Watch.

Humphreys S. & Crawfurd, L. (2014) *Review Of The Literature On Basic Education In Nigeria: Issues Of Access, Quality, Equity And Impact.* Abuja: EDOREN. Available at https://www.sussex.ac.uk/webteam/gateway/file.php?name=review-of-the-literature-on-basic-education-in-nigeria.pdf&site=320.

IDMC (2014). *Nigeria: Multiple Displacement Crises Overshadowed By Boko Haram.* Available at http://www.internal-displacement.org/sub-saharan-africa/nigeria/2014/nigeria-multipledisplacementcrises-overshadowed-by-boko-haram (accessed 27 December 2014).

Ifegbesan, A. (2010). Gender-Stereotypes Belief And Practices In The Classroom: The Nigerian Post Primary School Teachers. *Global Journal of Human-Social Science Research*, 10(4).

Ikwuegbu, P.N. (2005) Influence of Gender on Higher Education Administration in Imo State: A Study of Alvan Ikoku College of Education, Owerri, Nigeria. *International Journal of Gender and Health Studies*, 3(1&2), 156-160. Development Universal Consortia.

Johnson, D. (2008). *An Assessment Of The Development Needs Of Teachers In Nigeria: Kwara State Case Study.* Abuja: ESSPIN.

Jones, A. & Naylor, R. (2014). *The Quantitative Impact Of Armed Conflict On Education: Counting The Human And Financial Costs.* Doha: PEIC.

Kabeer, N. (1999). Resources, Agency, Achievements: Reflections On The Measurement Of Women's Empowerment. *Development and Change,* 30(3), 435-464.

Lloyd, C.B., Mensch, B.S. & Clark, W.H. (2000). The Effects Of Primary School Quality On School Dropout Among Kenyan Girls And Boys. *Comparative Education Review* 44(2), 113-147.

Miske, S. J. (2013). *Exploring The Gendered Dimensions Of Teaching And Learning. Background Paper Commissioned By UNGEI For The EFA Global Monitoring Report.* New York: UNGEI

Miske, S., Meagher, M. & DeJaeghere, J. (2010). Gender Mainstreaming In Education At The Level Of Field Operations: The Case Of CARE USA's Indicator Framework. *Compare,* 40(4), 441-458.

Molloy, E. (2012), *Public Mantras, Private Murmurs: Gender And Teacher Education In The Gambia.* Unpublished MA dissertation, Institute of Education, University of London.

Motivans, A. (2013). A Measurement Agenda For The Post-2015 Education Goals: What Is Most Important? In Sayed, Y., Sprague, T., UNESCO, UNICEF, Turner, D., Smith, A., Paulson, J., Shields, R., Shrestha, P.K., Unterhalter, E., Peppin Vaughan, R., Smail, A., Tungaraza, F., Sutherland, M., Stack, N., Barrett, A.M., Bunwaree, V.K., Alhawsawi, S., Hanna, H., Soudien, C. & Motivans, A. (2013). COMPARE Forum: The Post-2015 Education And Development Agenda, *Compare: A Journal of Comparative and International Education*, 43(6), 783-846.

Mulugeta, E. (2012). *Teacher Education Policies from Gender Perspective: The Case of Ghana, Nigeria and Senegal.* Addis-Ababa: UNESCO-IICBA. Available at http://unesdoc.unesco.org/images/0022/002217/221709e.pdf

Murphy, P. & Wolfenden, F. (2013). Developing a Pedagogy of Mutuality in a Capability Approach: Teachers' Experiences of Using the Open Educational Resources (OER) of the Teacher Education in Sub-Saharan Africa (TESSA) Programme*, International Journal of Educational Development* 33(3): 263-271.

NCCE. (2011). *New Guidelines For Management Of Teaching Practice For NCE Awarding Institution.* Abuja: NCCE.

NCCE (2012a). *Nigeria Certificate in Education Minimum Standards for General Education Courses.* Abuja: NCCE.

NCCE. (2012b). *Teaching Practice Supervisor's Toolkit: A Hand Book for Teaching Practice Supervisors in Nigeria.* Abuja: NCCE.

NCCE. (2012c). *Nigeria Certificate In Education Minimum Standards For General Education Courses.* Abuja: NCCE.

NCCE. (2012d). *Nigeria Certificate In Education Minimum Standards For Sciences.* Abuja: NCCE.

NCCE. (2012e). *Nigeria Certificate In Education Minimum Standards For Arts And Social Sciences Education.* Abuja: NCCE

NCCE. (2012f). *Nigeria Certificate In Education Minimum Standards For Adult And Non-Formal Education.* Abuja: NCCE.

NCCE. (2012g). *Nigeria Certificate In Education Minimum Standards For Early Childhood Care And Primary Education.* Abuja. NCCE.

NCCE. (2012i). *Quality Indicators For Teacher Education.* Abuja: NCCE.

Nnabueze, U.C. & Nnadi, C.E. (2009). Gender Studies for the Realization of the Philosophy and Goals of the National Policy on Education in Nigeria in Nnagwu, H.O., Moronkola, O.A. & Akintunde, D.O. (2009) *Women Issues in Nigeria.* Ibadan: Royal People (Nigeria) Ltd., 25-40.

NPC (National Population Commission) and ICF Macro (2009). *Nigeria Demographic and Health Survey 2008*. Abuja: NPC and ICF Macro.

NPC (National Population Commission) and RTI International (2011). *Nigeria Demographic and Health Survey (DHS) Ed Data Survey 2010: education data for decision-making.* Washington, D.C.: NPC and RTI International.

Nussbaum, M. (2000). *Women and Human Development.* Cambridge: Cambridge University Press

Nwokeocha, S. (2013). *Nigeria: Managing Teacher Education and Practice in the Era of Transformation.* Centurion: AFTRA

Obeieje, D.L (2007) Engendering the University Set-up: Contexts and Essence of Women Empowerment. *JOLAE, Journal of Arts and Education*, 1(2), 99-106

Onyije, L., Goergewill, I.D. and Dede, D.O. (2013) Gender Policies and Practices in Higher Education in Nigeria, *African Journal of Higher Education*, Conference edition, (2), December 2013, 56-64

OECD (2012). *The Social Institutions and Gender Index*. Available at http://genderindex.org.

OECD (2015). *The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence.* PISA: OECD Publishing. Available at http://dx.doi.org/10.1787/9789264229945-en.

Parkes, J. (2015, forthcoming). *Gender Violence in Poverty Contexts: The Educational Challenge.* London and New York: Routledge

Parkes, J., Heslop, J., Oando, S., Sabaa, S., Januario, F. & Figue, A. (2013). Conceptualising gender and violence in research: insights from studies in schools and communities in Kenya, Ghana and Mozambique. *International Journal of Educational Development*, *33*(6), 546-556.

Robeyns, I. (2003). Sen's Capability Approach And Gender Inequality: Selecting Relevant Capabilities. *Feminist Economics*, 9(2-3), 61-92.

Robeyns, I. (2005). Selecting Capabilities For Quality Of Life Measurement. *Social Indicators Research,* 74(1), 191-215.

Sen, A. (2004). Capabilities, Lists, And Public Reason: Continuing The Conversation. *Feminist Economics,* 10(3), 77-80.

Sen, A.K., (2006). Human Development Index in Clark, D. (ed.) *The Elgar Companion to Development Studies.* Cheltenham: Edward Elgar Publishing.

Sherry, H. (2008). *Teachers' Voice: A Policy Research Report On Teachers' Motivation And Perceptions of Their Profession In Nigeria.* London: VSO.

Sifuniso, M. (ed.) (2000). *Gender-Sensitive Editing (Vol. 11).* ADEA. London: Department for International Development.

Smith, C., Stone, R. & Kahando, S. (2012). A Model Of Women's Educational Factors Related To Delaying Girls' Marriage, *International Education Review*, 58(4), 533-555.

Stigler, S.M., (1990). *The History of Statistics: The Measurement of Uncertainty before 1900.* Harvard: Harvard University Press

Tao, S. (2013). Why Are Teachers Absent? Utilising The Capability Approach And Critical Realism To Explain Teacher Performance In Tanzania, *International Journal of Educational Development,* 33(1), 2-14.

TRCN (Teachers Registration Council of Nigeria) (2012a). *Professional Standards for Nigerian Teachers.* Abuja: TRCN

TRCN (2012b). *National Benchmark for Postgraduate Diploma in Education in Nigeria.* Abuja: TRCN

UBEC (2009). *Final Report of 2006 National Assessment of Universal Basic Education Programme (NAUPEB).* Abuja: UBEC

UBEC (2013). *Final Report of 2011 National Assessment of Learning Achievements in Basic Education Programme (NALABE).* Abuja: UBEC

UIS (UNESCO Institute of Statistics) (2014) *Towards Indicators For A Post-2015 Education Framework Post 2015 Education*. Montreal: UNESCO-UIS

UNESCO (2014). *EFA Global Monitoring Report.* Paris: UNESCO

UNESCO. (2006). *Nigeria: World Data on Education, 6th edition*. Available at http://www.ibe.unesco.org/fileadmin/user_upload/archive/Countries/WDE/2006/SUB-SAHARAN_AFRICA/Nigeria/Nigeria.pdf (accessed 21/11/2014).

Unterhalter, E. & Heslop, J. (2011). *Transforming Education For Girls In Nigeria And Tanzania (TEGINT): A Cross Country Analysis Of Baseline Research.* Report available at http://eprints.ioe.ac.uk/18917.

Unterhalter, E., Heslop J. & Mamedu, A. (2013). Girls Claiming Education Rights: Reflections On Distribution, Empowerment And Gender Justice In Northern Tanzania And Northern Nigeria, *International Journal of Educational Development,* 33(6), 566-575.

Unterhalter, E., North, A., Arnot, M., Lloyd, C., Moletsane, R., Murphy-Graham, E., Parkes, J. & Saito, M. (2014), *Interventions To Enhance Girls' Education And Gender Equality: A Rigorous Review Of Literature.* London: DFID.

Unterhalter, E. (2014). Measuring Education For The Millennium Development Goals: Reflections On Targets, Indicators, and a Post-2015 Framework, *Journal of Human Development and Capabilities*, 15(2-3), 176-187.

Walby, S. (2011). *The Future Of Feminism*. Cambridge: Polity.

Walker, M. & Maclean, M. (2013). *Professional Education, Capabilities And The Public Good: The Role Of Universities In Promoting Human Development.* London: Routledge.

Weiler, K. (1988). *Women Teaching for Change: Gender, Class & Power.* Westport, CT: Greenwood Publishing Group.

Young, M. (2009). Basic Capabilities, Basic Learning Outcomes And Thresholds Of Learning, *Journal Of Human Development And Capabilities*, 10(2), 259-277.

Zeichner, K. (2009). *Teacher Education And The Struggle For Social Justice*. New York: Routledge.