"MY BROTHER SAYS GIRLS DON'T DO MATHEMATICS": GIRLS' EDUCATIONAL EXPERIENCES AND SECONDARY SCHOOL PROGRAMME CHOICES IN GHANA

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Abstract

Education has a central role in improving the life-chances of an individual and in the benefit that accrues to society from an educated populace. Formal education is viewed as an opportunity for working class children to advance socially while the widening of access to secondary and tertiary education is as a step towards a meritocratic society. The 2013 Ghana Report of the Millennium Development Goals (MDGs) shows that steady progress has been made towards attainment of equal access of girls and boys to education. Meanwhile gender disparity within programme choices continues to exist at the secondary school level. The paper asks the fundamental question why girls continue to dominate in Home Economics departments while boys are inclined to offer mathematics and technical/scientific subjects in secondary schools. The focus is on factors beyond the school. The paper draws on primary fieldwork conducted through a comparative study of 15-23 year olds in Obuasi, Ghana and secondary data from three post-basic institutions. The research used qualitative data collection tools and analysed the data using Atlas-ti. Findings show that girl's programmes of study are not influenced by school factors alone, but also by significant male relations towards programmes that are perceived to be less maths inclined. In order to overcome such patriarchal tendencies three capability spaces are identified as significant in capturing girls' agency when selecting secondary school programme of study.

Keywords: Agency, Capability, Gendered Experience, Programme of Study, Target-Driven Discourse

Introduction

Education has a central role in improving the life-chances of an individual and in the benefit that accrues to society from an educated populace. Formal education is viewed as an opportunity for working class children to advance socially while the widening of access to secondary and tertiary education can be seen as a step towards developing a meritocratic society. Secondary education, in particular, is identified as an important transition point as it determines who goes on to tertiary education and also facilitates entry into formal sector employment. Goal 2 of the Millennium Development Goals (MDGs) is to achieve universal primary education. The indicators for goal 2 of the MDG are: parity in net enrolment ratio in primary education; proportion of pupils starting Grade One who reach the last grade of primary school and literacy rate of 15-year-old to 24-year-old women and men. Goal 3 is to promote gender equality and empower women. The foremost target in Goal 3 is to eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015 (Global MDG Report, 2015). The 2013 Ghana Report of the MDGs shows that steady progress has been made towards this target in equal numbers of girls and boys to education.

The MDG goals 2 and 3 have been noted for their consciousness raising effects on policy as well as the availability of robust data to support the measurement of progress made towards their

attainment (Unterhalter, 2014). The World Development Report 2012 states that two-thirds of all countries in the world have reached gender parity in primary education enrolments, while in over one-third of countries girls significantly outnumber boys in secondary education. It goes further to report that for many countries the gender gap in higher education is actually reversing and boys and men are now at a disadvantage (World Bank, 2011). These achievements are not opportune for celebrating yet since cross-country and aggregated data mask the many levels and manifestations of gender inequality. It is the hypothesis of this paper that despite progress towards equality of numbers in the education sector, boys and girls continue to pursue different subject and programme choices. Boys continue to dominate in 'masculine' subjects which are a euphemism for Mathematics and technical/scientific disciplines while girls continue to dominate in programmes of study in 'feminine' programmes that relate to the languages, cooking, fashion and home management. This paper engages with the factors that lead to such outcomes in Ghanaian second cycle institutions, that is post-basic education. Over the last 15 years of practice and implementation of the MDGs many successes were achieved such as increased in net enrolment and near gender parity as a result of galvanised effort from the international community and national governments, yet questions remained on the experience of schooling. 'The indicators simply ensured that the number of children enrolled increased, but what and how they learned was not assessed.' (Unterhalter 2014, p.182). Enrolment data which is gleaned from the school register does not measure attendance, completion and not least comprehension (2014).

This paper problematizes goals 2 and 3 of the Millennium Development Goals (MDGs). Criticism of the MDGs stems from two levels, firstly a general lack of focus on learning outcomes (Unterhalter, 2014) and secondly because it focuses on achievement-oriented or target driven discourses and not processes by which these targets are to be achieved (Lauder, Brown & Halsey, 2009). The MDGs on gender and education (Goals 2 and 3) relate to numbers or ratios of females to males in the classroom and disregards how girls are treated in the classroom for instance or the kinds of

experiences they have in schooling which can be debilitating to their psychosocial being. "The international debate about how to 'measure' gender equality across nations tends to be associated with indicators which relate more to the presence of female students and teachers in schools rather than to their gendered experiences within national educational institutions" (Arnot and Fennell, 2008, p. 515). Such discourses as achieving universal education and gender equality as stated in goals 2 and 3 of the MDGs do not draw attention to girl's specific experiences and how they negotiate their way through the educational system, particularly in patriarchal and paternalistic societies such as found in Africa. The MDGs and studies on the subject matter have fallen short of one critical area where gender inequities have been entrenched. This relates to the persistence of the gender differences in the kinds of the programme of study in secondary schools.

Secondary school education plays a critical role in fostering gender equality at many levels. It is the point at which most young people transit to adulthood and the world of work and it largely affects their livelihood outcomes. It is the point of entry into higher education as well. Foster (1980) captures the essence of secondary school in a study of social mobility in Africa, that they are the terminal institutions for the bulk of the relatively small number of students who enter them in the first place. Secondary schools also control access to the colleges and universities and are therefore key points of articulation between primary and tertiary levels, and generally represent the most selective point in the educational structures of the majority of African nations. From the post-colonial administration to nationalist governments, gender parity in enrolment continues to be a mirage in secondary education. This gender disparity is exacerbated at the level of choices in the programme of study. The onset of Western type education and even traditional education in Ghana enforced gender dichotomy in subjects/programme studied. Although officially this has been remedied, girls continue to opt for so-called feminine subjects while boys perform better in traditional male-dominated subjects. This difference in subjects studied affects occupational choices and the attending prestige of the professions (Greer, 2009).

The differences in women and men's occupations results in gender gaps in earnings and productivity persist across all forms of economic activity (World Bank, 2011). Secondary school programmes of study gives indications of career aspirations. The clustering of women in 'female' occupations, which are low paying, extends from the kinds of skills training they receive and what they study in secondary school.

Reasons for the dichotomy and disparity in programme of study in secondary schools have been attributed to school based factors which orientate females to programmes of study that mimics their future domestic roles as mothers as well as stereotypical behaviour even among teachers and school administrators. However emergent data from this paper point to home-based factors as well, particularly the roles of significant males who are influential in determining the kinds of programmes girls study at school. The important questions are why this gender disparity continues to exist and what factors can influence a change in such persistence. In order for girls to overcome such gender differences, the World Development Report 2012 recommends policy towards increasing women's household and societal voices which are reflections of their agency and capabilities. The paper juxtaposes a capability-based analytical framework of agency against arguments by Assimeng (2007) about the Ghanaian. Assimeng argues that the Ghanaian has been socialised to be conforming and acquiescing to people in influential positions as well as accept things without questioning. The challenge is how to capture agency in a society where young people have been socialised to be conforming.

The paper concludes by further identifying three capabilities that are necessary to capture agency and are important capabilities in themselves that should enable girls overcome discriminations in programme of study. These are capability to *participate in decision-making; to make choices and to initiate activities and processes*. Participation in decision-making has been noted to help in the development of the sense of self-worth among children and enable them to make responsible decisions as well as respect other people's views. Respecting other's views form part of the capability of respect and recognition that are identified as necessary for gender equity in education (Walker, 2006). Participation is a construct that emanates from agency (Alkire, 2002). Young people must be able to participate in decision-making processes that impinge upon their lives. Biggeri (2007) believe that children may not merely be recipients of freedom but can also participate in decision-making and core capabilities that affect their lives.

Participation in the school or institutional context has been studied extensively by Dunne and associates (2005) within the Ghanaian and Botswana contexts. This relates to the capability of voice within the school context. The capability of voice refers to "participation in learning, speaking out, not being silenced through pedagogy or power relations or harassment, or excluded from curriculum, being active in the acquisition of knowledge" (Walker, 2006, p.180). Participation in decision-making in this research intuitively engages more with the voice of young people within the family and community setting and less with the school or within the classroom. Parents, siblings and extended family members play varying roles in the decision-making processes that impact on school subject choices.

The second capability, of choice refers to circumstances where individuals have choices and alternatives in the kinds of educational and occupational provisions within their reach. Sen has pointed out: 'Human capabilities focus on the substantive freedom of people to lead the lives they have reason to value and to enhance the real choices they have' (Sen 1999, p.293). Kabeer clarifies empowerment or power as the 'ability to make choices' (Kabeer, 2005, p.13). Empowerment has common features with autonomy. Walker, having identified autonomy as a capability for gender equity in education, describes it as 'being able to have choices, having information on which to make choices, planning a life after school, reflection, independence, empowerment' (Walker 2006, p.179). Autonomy is the capacity to choose and to achieve and it is different from independence as 'autonomy' implies people can rely on others for guidance and support which is by the individual's choosing.

To have the freedom or environment to initiate activities or processes that inure to your benefit, a sense of empowerment is required. Empowerment refers to the process of increasing personal, interpersonal or political power so that individuals can take action to improve their life situations (Kabeer, 2007). At the macro level, empowerment is seen in terms of the process of increasing collective political power and at the micro, individual level, it is described as the development of a personal feeling of increased power or control without an actual change in structural arrangements (Kabeer, 2007).

Methodology

This paper draws on data from both primary fieldwork and secondary data sources. The primary data collected was conducted through a comparative study of 15-23 year olds, in-school and out-of-school respondents in Obuasi, Ghana. The total number of respondents was sixty: thirty-two for in-school and twenty-eight for out-of-school respondents. This paper draws on the primary data related to in-school respondents based at Obuasi Secondary Technical School (OSTS) and Obuasi Complex Schools (JHS) and secondary data sources from three post-basic institutions in Obuasi in Ashanti Region and Wa, Upper West Region. In selecting respondents, both the simple random and purposive sampling techniques were used at OSTS and Obuasi Complex Schools. Twenty-four (26) respondents were selected at OSTS and six (6) at the junior high school, with equal number of boys and girls interviewed. Although Obuasi is found in Ashanti Region, it can be described as a microcosm of Ghana due largely to the gold mining industry which attracts migrants from all over Ghana and even the West African sub-Region. The status of Obuasi as a migrant town is confirmed by the fact that it does not have a chieftaincy institution as is found in all other towns in Ghana. However, the chief of Fomena extend his jurisdiction over the gold mining concessions but does not preside over Obuasi as chiefs in other towns do. Secondary data sources were school records from OSTS, Wa Senior High School (WSHS) and Wa Technical Institute (WTI). The research was conducted through the use of qualitative data collection tools and data management through the use of Atlas-ti.

Entrenched Gender Disparity in Programme of Study

Data from three post-basic schools (secondary/high schools), one in Ashanti and two from Upper West Regions show the continued and persistent concentrations of girls in programmes that would be classified as 'female' or 'feminine' while boys are the majority in so-called 'masculine' programmes of study (figures 1 to 3 below). According to the head of one of the schools interviewed, this general phenomenon is repeated across the country. The data presented in bar charts below represents final year students who either graduated in the immediate past year or are in final year. Each school represents the three main categories of post-basic institutions in Ghana. They are the grammar type secondary schools (Wa Senior High School), the purely vocational or technical schools (Wa Technical Institute) and the third category is a mix of the two and runs both grammar type and vocational programmes (Obuasi Secondary Technical School) (Ansu-Kyeremeh et al., 2003). These however, bring about differences in names given to similar programmes of study, but are of same content. Such names include 'Home Economics' used in the grammar type and mix type schools whereas the purely vocational/technical schools have 'Fashion and Dressmaking' and 'Hospitality and Catering' programmes. These programmes have a high concentration of females because they are related to the future domestic roles of women as mothers and homemakers (Prah, 2002). The perception among students is that the other technical subjects are not meant for girls because they involve Mathematics:

> Researcher: Why do you think you are the only girl in your class?
> Sarah[1]: When our batch was admitted they were saying the applied electricity course was difficult and it's all about calculations and girls are not good at mathematics.....


[1] This is not her real name

The good news is Sarah continued to pursue Applied Electricity despite discouraging efforts from others. Boys are concentrated in the Sciences and technical fields across all three schools. The only outlier case in the graphs below is the General Arts programme. But that is because in OSTS the programme includes languages and explains why females outnumber boys whereas in Wa Senior High, the General Arts programme includes Elective Maths and attracts fewer females to the programme. In all categories of schools, programmes with a fundamental Maths component have fewer than 10 per cent girls. This gender dichotomy in programmes of study repeats itself in all lower classes.

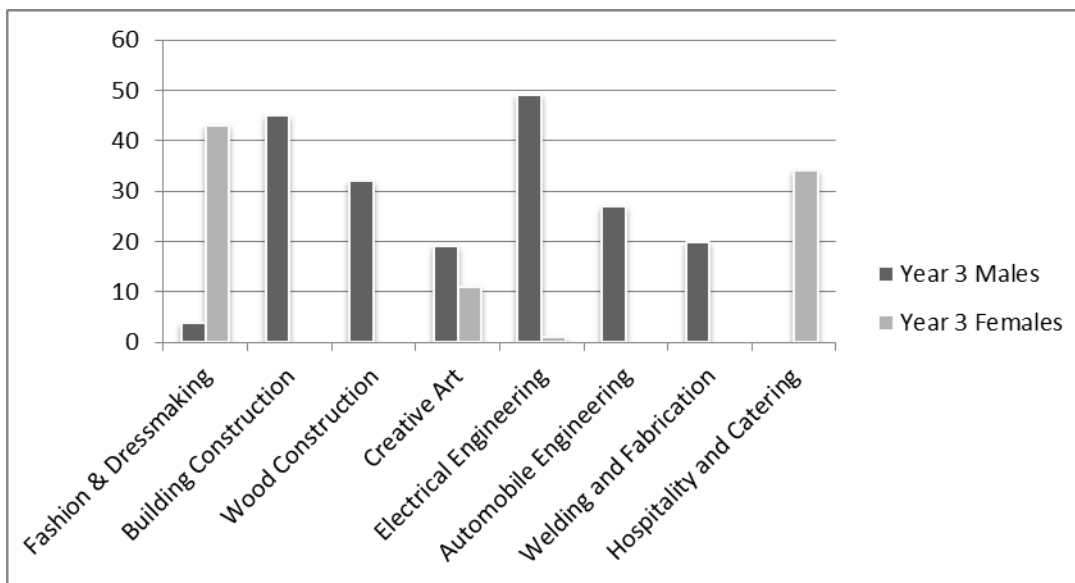Fig.1. Distribution of Programme of Study in Obuasi Secondary Technical School
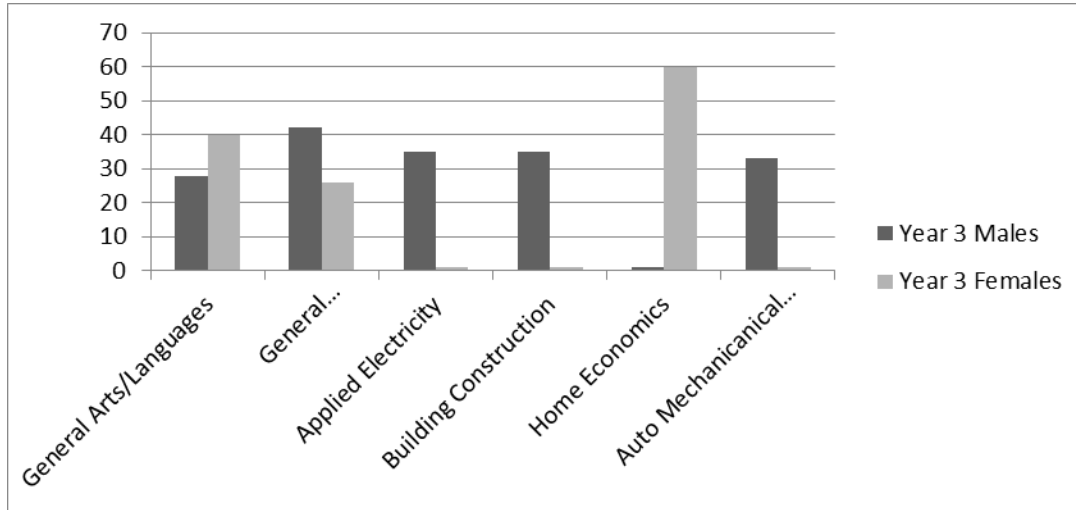
Source: Compiled from field data

Fig.2. Distribution of Programme of Study in Wa Senior High School
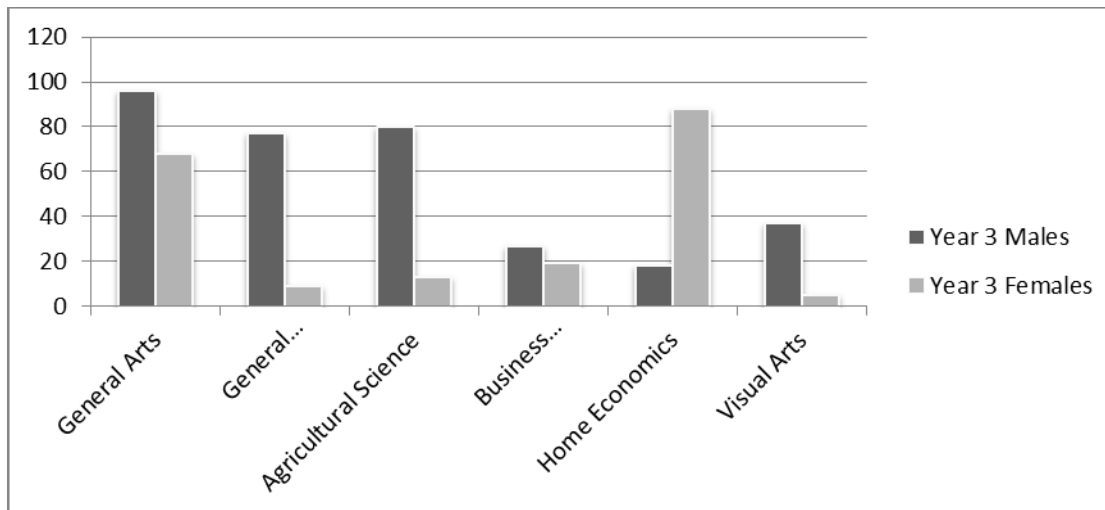
Source: Compiled from field data

Fig. 3. Distribution of Programme of Study in Wa Technical Institute

Source: Compiled from field data

The factors responsible for this gendered dichotomy in programme of study continue to engage scholars who postulate from a supply-side perspective. These studies have pointed to school-based factors as responsible for the gender differentiation. School based factors tend to shape girls educational choices at many levels. Gender inequalities within the school system orientates female education towards future domestic roles as homemakers and mothers (Prah, 2002). Both the 'hidden curriculum' and direct school practices extend women's household activities to the school premises (Adomako-Ampofo, 1993). Girls are intimidated and discouraged by teachers due to their failure to cultivate a sense of independence and trust in their abilities, sexual harassment and abuse and exploitation at school level such as sending them on errands during school hours (Sutherland-Addy, 1995). Others have pointed out the insufficient attention drawn to conditions in schools and a lack of concern for the forms in which gender discrimination persists within the education sector as a whole (Unterhalter,2008; Walker, 2006). Studies by Dunne and Leach (2005) have shown that it is difficult for women to enrol in school and that gender segregation and stereotyping does occur in the school environment. Dunne, Leach and associates (2005) explores both formal and informal school environments in a number of junior high schools in Botswana and Ghana. The formal and informal school environments have consequences and explain in part their role in perpetuating gender differences in school retention and achievement. Dunne, Leach and associates (2005) found a highly gendered school environment regardless of location. This served to constrain the learning opportunities of girls and to encourage gender segregation and stereotypical gender behaviour. They also found that institutional practices were rarely questioned by either staff or students. This is explained by the fact that participation in the decision making process in the school is non-existent and choices are taken as given. Other emerging issues are violence in schools (Parkes and Heslop, 2013) and the tendency of the institutional environment to shape the choices of pupils in terms of future professions (Dunne, Leach et. al., 2005). These experiences have had debilitating consequences such as fostering low academic achievement even in traditional 'feminine' disciplines and low sense of self-worth among girls. Dunne and Leach (2005) found that girls' achievement in academic subjects were at a lower level than boys across all case study schools in Ghana. The national picture was one of boys outperforming girls in almost all areas however evidence in the case study schools indicates that girls were beginning to make in-roads in the 'feminine' subjects such as Languages, Home Economics and Religious Education, while boys tended to continue to do significantly better in

Science, Pre-technical Skills and to a lesser extent in Mathematics (Dunne and Leach, 2005).

Although these studies focus on girls' educational experiences, they have tended to look at supply-side factors, emanating from the school environment while ignoring the socio-cultural contexts outside the school that shape such gendered behaviour. The patriarchal constraints that girls experience from significant others at home and their community have not been fully appreciated. This is relevant in broadening the answer to why girls continue to dominate in Home Economics classes and boys are inclined to offer Mathematics and technical/scientific subjects in secondary schools. The socio-cultural environment plays an important role in educational attainment, aspirations and destinations. It must be emphasized the extent to which both sexes' subject choices are influenced by their own agency and the extent to which this is intersected by patriarchal constraints or challenges. By examining individual agency, this paper refocuses attention to the patriarchal tendencies and discriminatory practices that girls face in their choice of subjects or programmes of study that emanates from outside the school environment including the home.

Why Girls Don't Do Mathematics

Girls' programme choices are influenced by the extent to which Mathematics is a key component of that programme. Therefore programmes perceived to have a high Mathematics content have fewer girls (less than 10% in all study schools). In order to find out why girls dominate in some subjects and boys in others, the following voices from students in OSTS and Obuasi Complex Schools reveal the extent of social conditioning and gender based barriers that were imperceptible even to the respondents. Of the 16 in-school female respondents interviewed, the nine who did not offer Science alluded to the fact that significant male relations have steered them away from so called masculine subjects.

> Jennifer[2]: *At that time, I had older brothers and they use to lecture me about going to secondary school, the courses you are going to do and they were saying science is a very difficult course; if you don't have more knowledge (are not intelligent?) you may not be able to do it, especially in the electives we have, which are Chemistry, Biology, Elective Maths and Physics. Those made me fear it.*

> Portia: *I thought Business was too hard for me…they have been saying it. My brother at Winneba Secondary School took Business and he says Business is too difficult, so as a girl I cannot do it. Yeah, so I offered to do General Arts in order to read literature.* When the researcher asked her why her brother said that, Portia says of his brother **'He says Girls don't do mathematics.'**

The influences of males in the choices of these young women were not isolated cases although the capability approach as a methodological framework enables us to emphasise and respond to individual and outlier cases. The 'invisible hand' of male patriarchy tended to push girls towards subject choices that are based on women's socially embedded expectations and the perceived weaknesses of women. Such influences may even come from general community and not necessarily from significant male relations such as brothers, fathers and uncles nor the school environment alone.

> IF2 Abena[3]: *I wanted to be a medical doctor when I was growing up. Someone said you can't take science, it's very hard and you'll see blood. So I said, oh, then I will never become a medical doctor. I was scared. My father wanted me to become an agricultural scientist but I said the fact is it is still science so I would not do it. So when I came here, doing general arts, I realized it wasn't difficult, I could have done something there but I have already started so...*

The influence of significant male relations, in this case the father, to determine the kind of subjects students pursue is not limited to non-mathematically inclined programmes of study. The choices of the significant male

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[2] All names are have been changed for confidential reasons

[3] Respondents were first assigned codes, which is in itself a brief description of the respondent. For instance IF2 means the interviewee is **I**n-school, **F**emale and the Second (**2**nd) of such category to be interviewed.

holds sway for the girls because patriarchal relations matter in the decision-making processes in the Ghanaian home.

> Sena: *I can say that I am confident when it comes to writing English and also I can speak it to some extent, moderately. My mum says she wants me to speak English.*
> Researcher: *so now that it's been changed to Business, what are you going to do?*
> Sena: *if I continue to pursue Business, I will be an accountant. It's not my choice…it is because my father insists that I pursue it.*

The effect of the school environment on girls' experiences is well known, but the quotes here are pointers that the home environment plays a significant role in girls' choice of programme of study. Sena's comments reflect her desire to pursue Journalism through the study of a language subject, English. Even in that case, her mother's urging was overridden by her father's desire for her to study Business. She hardly exercises any right of choice at all. It is worthwhile to note that the case of Sena in comparison with other respondents shows the contradiction in the gendered dichotomy of programme of study. Whereas other females were discouraged by their family members from pursuing Business, because it is Maths inclined and therefore less friendly to girls, Sena's father thinks otherwise and encourages her daughter towards the mathematically inclined accountancy profession by pursuing Business Studies. This tells us that the gender notions relating to the subject superiority of the sexes can be blurred and that individual talent rather than gender should determine what subject individuals pursue. Similarly, Colclough (2008) has argued that gender inequalities are found in places where women's roles are constrained by patrilineal principles, affecting the participation of women in societal activities, and even extending it to individual decision-making.

The boys interviewed did not find themselves constrained or bound by decisions made for them and are able to disregard or contest such decisions as opposed to girls who have to contend with decisions being made for them. Significantly though for our gendered frame of analysis boys also admitted to having problems with Maths, thus challenging the notion that Maths and Science are the preserve of boys:

> Osei: *During form three in the JSS, I realized that Math was a problem for me so I converted to being a General Arts student rather than a Science student.*

> Ababio: *But I had to repeat Form One because I took Science and had to change to General Arts because my ability is based on reading subjects and I am not inclined mathematically, so Chemistry, Physics, Biology, E-Maths (elective maths)… charley, too much!*

The boys seem not to have given thought to the processes involved in switching programme of study to feminine courses and appeared unhindered in their decisions and choices, unlike girls who often mentioned others as influential in their choices and decisions. However in capability terms, we are interested also in choices being for others that negates their agency. The continual decisions and choices being made for girls erode their confidence in themselves as identified by Vaughan (2007) and affect their performance even in analogous subjects (Dunne and Leach, 2005). For instance, Awo is a senior high school graduate and justifies her reason for not pursuing Science but General Arts while she lumps her criticism of all Science subjects together:

> Awo: *Yes, I did because I felt I could do it better. I thought I couldn't do Science, for instance…Science is a difficult subject…I see Biology, Physics and the rest as…the way they approach it, I don't think I could cope, you see them struggling to study. I can't cope with strenuous learning.*

An interview with Sarah, a final year Applied Electricity student illustrates some of the challenges girls face in their pursuit of mathematically inclined programmes of study.

Researcher: Have you had any encouragements or discouragement
Sara: So far I have been encouraged since I was in form 1 from teachers, students in my class
Researcher: Do the boys disturb you somehow?
*Sarah: Oh even they have been encouraging even some other students from the other programmes **were saying you are a girl you cannot offer Applied Electricity so you have to put a stop to it, but the boys in my class encouraged me and that I should keep my mind off those people[4].***

But science is for girls too
The above quotes from the field do not mean that girls only offer non-science and Mathematics. There were proud female Science students like Serwaa, a final year Science student who plans to study Medicine at the Kwame Nkrumah University of Science and Technology:

> *"My favourite subjects are Core Maths and Biology. I usually like calculating subjects a lot; I am the type that whenever I take a reading subject…I was told to do General Arts but I see that I don't like the reading; I can't read and keep things in my mind like that; when I have calculations, I can solve questions, get the answers…"*

So was Jemila who moved to sec tech from another school and the only place available was the science class, although she had to repeat the year:

> *Researcher: Did you choose Science?*
> *Jemila: No, actually I was doing…I first went to Akyem Swedru Secondary school and I was offering General Arts there but due to some things. They have water problems so I stopped and when I came here I asked for General-Arts but they said it was full and gave me Science and I accepted it. With General Arts, I was aspiring to be a journalist but I realized that everything God gives you…you must accept it. At first, I thought that Science was a difficult subject, a difficult programme, but when I came here and took Science, I realized that it was not all that difficult and I can do it. Now, I am aspiring to be a nurse or medical doctor.*

In the case of Jemila, there were no other alternatives for choices to be made; in this case her ability to choose was constrained by institutional capacity. Nevertheless, it is illuminating to find out that Science and Mathematics subjects were possible subjects where girls could flourish, this being noted by the girls themselves is empowering.

> Mansa: *Actually, I want to be a newscaster. No! I won't change it but they want me to do Business…I mean my uncle, my family…but I will change it; I will discuss it with them when I go home. We are all doing the core subjects now, so in form two we get to choose our electives.*

Mansa above contemplates: either to follow her interest or to challenge the choices made for her by her family (actually her uncle). She offers a glimmer of hope that space exists to discuss the issue with her family members when she goes home for the school holidays. That is, she will initiate the process, which would lead to the achievement of her goals and what she values. This raises issues of voice which is mediated through Mansa's participation in decision-making at home and making the choice to initiate discussions on her future programme of study.

Following the voices of young people in this study and the theoretical framework reflecting the works of Nussbaum (2000), Robeyns (2003) and Walker (2006) three capability spaces are identified as the lens through which girls' choice of subjects or programme of study can be influenced. The three capabilities spaces of interest are the enablement of participation in decision-making processes, ability to exercise choice and freedom to initiate or take steps to pursue what is of value and reason to pursue such without fear or harm. They are also capabilities that are desirable for girls to possess in order to transcend the system of patriarchy that holds them back from fulfilling their potential.

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[4] Emphasis are mine.

Capability Approach and Processes, Not Equality in Numbers

This section looks at how young people especially girls can overcome home-based factors that impinge upon their choices such as programmes of study. The World Development Report 2012 recognises that gender gaps still exist in differences in voice in households and in society and poor women in particular have less say over decisions and less control over resources in their households (World Bank, 2011). The report recommends the increase in women's voice through developing their agency and capability. In order to tease out the gendered experiences of girls in secondary school programme choices, the paper draws on Sen and Nussbaum's capability approach. The notion of capability is essentially one of *freedom*[5] - the range of options a person has in deciding what kind of life to lead (Dreze and Sen, 1995). Freedom is concerned with the process of decision making as well as opportunities to achieve valued outcomes or functionings (Sen, 1999, p.291). The concept of agency is important in differentiating this approach from other approaches to well-being. An agent is "someone who acts and brings about change" (Sen, 1999, p.19). Agency freedom: having the conditions or environment to exercise agency such as the freedom to make up one's mind without fear, or violence or shame. "A person's 'agency freedom' refers to what the person as a responsible agent is free to do and achieve in pursuit of whatever goals or values he or she regards as important" (Sen, 1985a, p.203-204). It also refers to one's ability to promote goals one has reason to promote (Sen, 1992, p.60).

The study of agency within the confines of the Ghanaian family raises many contextual issues as to whether the Ghanaian child possesses the confidence and fortitude to pursue the kinds of goals and values she deems important. At this stage it is important to draw on the works of Assimeng (2007) to appreciate the extent to which his description of the Ghanaian character fits in an agency analytical framework and whether any new insights could emerge. Assimeng situates the

characterisation of the Ghanaian child in the relevance of the socialisation role of the family in the Ghanaian society. The family plays necessary roles such as the reproduction of the young, maintenance of the young during period of dependency, and socialisation of the young as well as secondary roles such as economic production, care of the aged, political control, physical protection and education in later age (Assimeng, 2007). It must be noted that in modern times however, the state plays an increasing role in sharing the responsibility of the secondary functions of the family (Lauder et. al., 2009).

Assimeng goes further to postulate that the significance of such traditional values in the socialisation of the young in Ghanaian society is often couched in proverbs and folktales. Proverbs particular to children and their relationship to their parents are key examples in defining children's interrelationships with significant adults. For instance: *abofra hu ne nsa hohoro a, one mpaninfo didi*[6]: 'a child who knows how to wash his or her fingers qualifies to dine with elders.' This emphasises the value of proper comportment. Another proverb: *Akoko a oben oni na odi abebe sre*: 'a chick which is constantly by its mother, benefits from the best parts of a grasshopper meal,' emphasises the need for children to stay close to the family and the advantages of not wandering off from close kin. Children although are shown affection during infancy, are held to be children foremost and not be heard nor seen. Intergenerational knowledge transfer in a traditional Ghanaian home takes the form of children observing, paying attention, keeping mute or being less questioning (Assimeng, 2007). Based on this typography and characterisation, Assimeng (2007) concludes that the main personality traits of the Ghanaian as conforming, unquestioning acquiescence to people in influential positions and rules and regulations. He also says that Ghanaians are assumed to be 'unprotesting' and accept everything without question and share a lack of self-reliance, owing to the pervading influence of the extended family system. Therefore, it is challenging

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[5] Emphasis is mine.

[6] All proverbs and interpretations cited from Assimeng Max, (1999, 2007) *Social Structure of Ghana: A Study in Persistence and Change*, page 12.

for many to pursue an individual course. There is the probability therefore that persons in the traditional Ghanaian society would be described as conservative and prefer the status quo to remain and rather imbibe a tendency to adjust oneself to the social order, instead of attempting to upset it. The expectation is that the Ghanaian child should have difficulty in exercising autonomy when it comes to challenging decisions made for them by significant others. However, the gendered nature of this characterisation has not been dealt with by Assimeng (2007) and the idea of spelling out a common Ghanaian trait is to gloss over the heterogeneity and diversities of the Ghanaian society. Nonetheless Assimeng's characterisation is used as a starting point in understanding the challenges of the Ghanaian child which is exacerbated by being female.

In emphasising capability draws out how young people have been able to surmount the characterisation by Assimeng as accommodating and unprotesting. This paper goes further to view this in terms of gendered. In examining girls' secondary school experiences and programme choices, three important capabilities are crucial, not only in enabling the observation of girls gendered experiences, but also as desirable traits to enable them overcome the constraints of patriarchy and paternalism. The presence of these capabilities can lead to the measuring of girls' voice and their agency freedom which are necessary to overcome gender disparities. These capabilities are participation in decision-making, to make choices and to initiate activities or processes that girls have reason to value.

Capability to Participate in Decision-making

The forgone analytical frame of thinking should not imply or suggest that the youth should be solely responsible for decisions affecting their lives. Parental role is important in dealing with young people in relation to their schooling, for instance. This is because young people from an early age are vulnerable and dependent on parents for such activities as going to school, the payment of fees and the decision on which type of school to attend. Decision-making is a flexible long-term process for arriving at certain conclusions. In the instance of young people, it may not be a one-off event. As they reach certain crucial stages of life such as the end of compulsory schooling, the activity of decision-making is intensified as the realisation of meeting adult social developmental roles increases. A series of interactions between friends, teachers and the family may begin or have already shaped thoughts and preferences as well as assimilating and or rejecting certain types of information that can affect choices to be made.

Parents make suggestions or decisions for young people based on what they know and the circumstances of family resources. In a society like Ghana that transits between modernity and tradition, adult opinion can be valued without questioning (Assimeng, 2007). At the same time rapid social and economic changes as well as changes in education policy and the school milieu means that often parents are caught unawares. In addition, adolescent subculture tends to be different from those of adults (Coleman, 1988). The resultant effect is that the preferences of young people are totally different from those of adults. The capability to participate in decision-making therefore overlaps with the capability of voice (Walker, 2006) within the family context. The capability to participate in decision-making basically refers to the agency freedom of the young to engage with significant others who they consider important without fear or harassment. The family is the site where most important decisions of life are made. The ability of young people to influence such sites or make inputs into issues that affect them shows their agency freedom. The quotes from Serwa and Abena above shows clear agency on the part of girls to participate in the decision making processes, in their very examples, where they rejected programmes of study suggested for them but which they feel do not meet their innate abilities. While Serwa embraces the sciences (and Mathematics), Abena rejects them completely. These examples also show the capability to choose or make choices that suits their individual abilities and the programme of study they both value.

Capability to choose

Choice is inherent in the capability approach. However, in recognising the pervasive role of paternalism and the Victorian values inherited in Ghana's educational processes and practice, it demands further examination. Choices reveal the real preference of young people as opposed to determinations by their parents. The capability to exercise choice implies the availability of alternatives and resources. For instance, to choose to go to a boarding school will be determined by the availability of vacancies at such facility, similarly to pursue certain courses would be determined by the availability of classroom space. The limitations of institutional, socioeconomic and cultural environments are evident in the choices people make. Although young people's agency can be deduced from their choices, institutional constraints that affect aspirations exist, such as respondent Jemila's offer of Science rather than General Arts because she changed school and her new school (OSTS) did not have a place for a General Arts student (reference quote above). She had to repeat the year and studied Science since it was the only space available. Although Jemila's choice and therefore capability was constrained by institutional limitations, the pursuit of the Science Programme has enabled her to appreciate her own abilities and confirms that Science and Mathematics are doable courses after all. Institutional mechanisms can therefore play significant roles in fostering capabilities or reversing significant discriminations in situations where it is observed that such imbalances do not augur well for society. Sen (1999) is mindful of the fact that social structures and institutions play a major role in the achievement of individuals.

Capability to initiate activities and/or process

The capability to initiate activities and/or process is therefore underpinned by empowerment and autonomy. Autonomy and empowerment are in themselves identified as capabilities (Walker, 2006). Therefore, at the personal level, empowered young people must be able to initiate activities or processes in the light of their current circumstances to improve their life situation. They do not have to wait for choices to be made for them, but they can begin the process of searching for information, enquiring about their options and taking steps towards achieving their aspirations. Example is Mansa who shows the determination to initiate discussions on her choice of programme of study. This shows her capability to begin the process of discussion, because it has bearing on her aspiration of becoming a newscaster.

Conclusion

In conclusion, it is imperative to include dimensions of equality between girls and boys that go beyond equality in numbers in school. Although gender parity is achieved in Ghanaian primary schools and the gap is closing in secondary schools, programme choices continue to show marked differences between boys and girls. Girls continue to pursue feminine subjects such as Home Economics while boys dominate the Scientific and Engineering Programmes. The main reason for this is that the Sciences are mathematically inclined and the perception that girls are not capable of such programmes of study. The factors responsible for this did not emanate from the school environment alone, but the home especially from significant male relations. Although these differences exist girls have shown strong indications of voice and needs to be nurtured. During interviews, the girls were able to reflect and decided to act in ways that do not show that they are necessarily conforming or acquiescing to people in influential positions such as parents as Assimeng (2007). Young people's educational and occupational choices are firstly, mediated through their agency freedom and the extent to which they demonstrate the three capabilities identified to affect their secondary school programme choices. Girls' capability to participate in decision-making processes within the family, make choices without fear or harm as well as initiate or take steps towards the realisation of goals they deem valuable were emergent but cautious. Enabling the environment where such capabilities can be nurtured would lead to young people making choices they value and have reason to pursue, increasing their voice and agency.

In capability discourse, the issue at stake is not whether to pursue the female-inclined General Arts or the male-inclined Sciences/Mathematics courses,

but the freedom of the student to decide which of the two she values and has a thought out reason to pursue which reflects her capability to choose and participate in decision-making. And when she takes upon herself the responsibility for ensuring that her valued choices are carried through, she exercises the capability to initiate. From the forgone analysis therefore experiences matter and the processes of attaining education enhances our appreciation of the challenges within schooling, challenges that are not captured by the target-driven discourses that the MDGs engenders. The perspective that a capability framework brings to bear on schooling contributes to framing new development thinking based on processes or experiences and not only on target-driven discourses such as equality in numbers. It is imperative that discourses on target-driven educational goals should go further to explore girls' experiences in schooling.

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