# A Gendered Analysis of Promotional Issues in Higher Education: A Case Study of University of Ghana, Legon 

Hannah Benedicta Taylor-Abdulai ${ }^{1,2}$ Grace Sintim-Adasi ${ }^{1}$ Joshua Baafa ${ }^{1}$<br>1.Accra Polytechnic, P. O. Box 561, Accra - Ghana<br>2.Department of Social and Behavioural Sciences, University of Ghana, Legon<br>* Corresponding author: hbta30@gmail.com


#### Abstract

The aim of the study was to delve into promotional issues of faculty in tertiary institutions using the University of Ghana, Legon as a case study with a focus on rank at recruitment and current position of faculty. Data were collected using a combination of structured questionnaires and in-depth interviews among 142 faculty made up of 33 women and 109 men. The findings of this study indicate that the male faculty were recruited with higher qualification than their female counterparts and they tend to rise up the academic ladder faster than their female counterpart. What accounted for these differences are the role mentors have played in their academic careers and the fact that they have stronger support networks than their female faculty and have had mentors in the beginning of their professional career through informal mentors who mentored them. The female faculty described experiences indicating that they were more vulnerable to subtle discrimination practices than male faculty.


Keyswords: Gender, glass ceiling, rank, recruitment, promotion, institutional barriers, leadership

## 1. Introduction

Ghanaian women over the last few decades have attained educational levels comparable to those of men in many countries. Prah's (2002) study in University of Cape Coast (UCC) reveals an increase in the enrolment of females in most faculties in the University of Cape Coast and population of women faculty in the university of Ghana shows an increase in the number of female faculty. The introduction of affirmation action in the University of Ghana, Legon has equally seen an increase in female enrolment in majority of the faculties (Congregation Brochure; March 2006).

In spite of the strides achieved, women in the teaching profession in higher education face similar obstacles to those in other sectors in terms of academic preparation, training, recruitment, opportunity for publication, leadership and promotion described in Cann et al, 1991; O'Leary and Mitchell, 1990; Bagilhole, (1993); Prah (2002), Wirth (2002) and Taylor's (2003) work.

Prah (2002) study shows that women occupy the bottom of the pyramid, disproportionately occupying the more junior and less prestigious positions and this is no different from that of University of Ghana and other institutions of higher education in Ghana. In Ghana, until recently no female (apart from former Vice Chancellor of UCC) had risen to the Vice Chancellorship position. The average percentage of female academic staff in the three oldest Ghanaian universities in the $1960 \mathrm{~s},{ }^{\prime} 70 \mathrm{~s}$, ' 80 s , and ' 90 s was $11,9,9$, and 13 percent respectively (Prah, 2002).

Studies concerning women in education have focused on teachers at the basic level and tend to look at their conflicting roles as mothers and workers, without looking at institutional barriers that stifle their progress. For instance, Prah's (2002) study was on the visibility of female faculty and administrative staff and the problems they face in UCC. The study was limited to a sample size of 11 and did not include male faculty even though it was titled gender issues in higher education. This study therefore augmented Prah's work by delving into promotional issues and adopting a gendered analysis to identify what might be described as a "glass ceiling" by comparing the progress of both women and men in their academic careers.

## 2. Aim of the study

The aim of this paper is to use a gendered lens to compare the progression of faculty and identify the challenges both gender go through in pursuit of a career in higher education.

## 3. Methods

The various Faculties, Schools and Institutes in the University of Ghana were put into clusters, respondents were chosen from all the clusters, through simple random sampling after stratifying for gender; 20 percent of the population of faculty was selected based on the proportion of both female and male faculties. The study was descriptive cross sectional using a mixed method to collect data. Quantitative methods took the form of administration of questionnaires to 142 faculties; made up of 33 female and 109 male faculties. Analyses of these were purely descriptive using frequencies. The qualitative method took the form of in-depth interviews with 10 faculties; five females and five male were purposively selected for the interview. Using content analysis, themes were developed based on the research questions.

## 4. Theoretical Framework

This study focuses on data that illustrates women's involvement in university life. It adapted Joycelin Massiah's (1993) gender analysis framework developed as the foundation for establishing indicators for planning for women in the Caribbean. The framework looks at the visibility of women, since the premise or underpinning is that women are not visible.Massiah's analytical framework is based on three assumptions:

1. Women and the roles they play have traditionally been accorded lower status than men. Related to the assumption is the proposition that women bear an unequal share of social reproduction work in relation to men; and that productive work in exchange for cash, in which men are involved to a greater extent than women, is accorded higher status than the social reproductive work of women.
2. Women's work includes economic and non-economic activities, both of which tend to be downplayed or ignored. Thus women, their activities, their problems, and their concerns remain largely invisible to policy-makers, planners, and often, to women themselves.
3. The invisibility of women emanate directly from a gender ideology which adheres to a hierarchical and asymmetrical division of labour in favour of males which is manifested in various ways and in different spheres of activity (Massiah 1993 cited in Prah 2002).
These assumptions together produce five interrelated types of visibility, operative at three different levels, each of which is a precondition for achieving a higher level. Movement from lower to higher levels in not necessarily unilinear, but the direction of the movement represents a move from recognition of the existence of gender disadvantage to action designed to reduce or eliminate that disadvantage. The levels of visibility and the relationships between them are presented in Figure 1:
Figure 1: Relationships between Levels of Visibility.


Notes:

## Indirect contribution

Direct flows

Source: Massiah (1993) cited in Prah (2002).

## Level 1: Conceptual and Subjective Visibility

Massiah designated this phase as the first and basic level of visibility and consists of two types of visibility. According to Massiah, and cited in Prah (2002) conceptual visibility represents the perception of external observers that a particular sex is subject to gender disadvantage. This is evident in what has come to be accepted as gender ideology of society, the extent to which that ideology is enunciated and the way in which it operates. In our Ghanaian society there is a perception out there that women are less superior than man at the work place. Subjective visibility reflects the recognition by individuals themselves of the effects of gender domination on their own attitudes, behaviour, material and emotional circumstances. The difference between the two types of visibility is essentially one of perceptions.

## Level 2: Theoretical and Statistical Visibility

The second level Massiah postulates as consisting of theoretical and statistical visibility made possible by the generation and analysis of quantitative and qualitative data. This level of visibility stems directly from the
conceptual visibility of the first level. It makes possible the identification of trends, patterns of gender domination and explains the mechanisms which perpetuate that domination. The process of understanding how the gender system operates and what kinds of action may be needed in order to minimize elements of disadvantage begins here. Findings from study have been brought to bear on this level of visibility.

## Level 3: Socio-Economic/Political and Domestic Visibility

The third and final level which consists of two types of visibility has been described by Massiah as the socioeconomic/political and the domestic. According to Massiah and cited in Prah (2002), socio-economic visibility derives from increasing the power resources of the disadvantaged, from the removal of legal and political barriers to advancement and from the introduction of social policies designed to create an environment free of gender domination. This type of visibility flows directly from action at the individual and the household level. It is reflected in a changing system of gender relations in which male and female roles are structured in a more egalitarian manner than previously. This is what in academia is described as meritorious environment. This level of visibility flows directly from the conceptual and subjective and indirectly from the theoretical and statistical. After the different types and levels of visibility have been identified, the question of distinguishing problems arises. As Prah (2002) indicates, some groups of women may be readily identified by conventional statistics. But in the absence of micro-level research, their problems, needs and concerns remain invisible. In effect, a group may have achieved a limited amount of statistical visibility (Level 2) but without the identification and articulation of their problems, and the introduction of mechanisms to solve them, the chances of moving up to Level 3 visibility is slim (Massiah 1993: 29 cited in Prah 2002).

To situate the conceptual framework within the perspective of the study, it has been argue that there are institutions in Ghana that have tried through some policy direction to bridge the gender differential in education and that could be classified to some extent as conceptual visibility. The choice of the research topic and the fact that some of the researched recognize the effects of gender domination in their lives correspond to subjective visibility. This study identifies the relationship between the statistical visibility and trends of gender domination at University of Ghana, Legon through an examination and interpretation of relevant statistics (Level 2 ) in presenting the problems and concerns of women and men academics.

## 5. Presentations of Findings

This paper looks at institutional barriers in the context of promotion and leadership roles of faculty of the University of Ghana, Legon. The proceeding sections discuss the findings of the research.

### 5.1 Qualification at recruitment

In academia, recruitment is based on merit and universities look out for potential faculty who are poised for academic excellence and ready for the rigorous nature of academic life. To understand the way faculties have progressed over the period, the study sought to find out the qualification at recruitment. Of the 33 female faculty members, 33.3 percent were ${ }^{4} \mathrm{MA} / L L M / \mathrm{MBA} / \mathrm{MFA} / \mathrm{MSC}$ holders as at the time of recruitment as compared to 20.1 percent male faculty; The degree held by faculty members peaks at M.Phil for both gender; female faculty were 42.4 percent as compared to 40.4 percent of their male counterpart. Respondents with the highest degree at recruitment which is PhD , PhD with MD and MPH was the next highest frequency for both gender; female faculty members with PhD and male faculty members with the same qualification were 21.3 and 38.5 percent respectively, an indication that there are more qualified male than there are female faculty members. A typical reflection of what prevails in Ghanaian higher institutions. Table 1 depicts the data of qualification at recruitment.

[^0]Table 1: Qualification And Rank

| QUALIFICATION AND RANK | Female N=33 <br> PERCENT | Male N=109 <br> PERCENT |
| :--- | :--- | :--- |
| Degree at recruitment |  |  |
| MA/LLM/MSC/MBA/MFA/MD\&MPH | 33.3 | 20.1 |
| M.PHIL | 42.4 | 40.4 |
| PHD/MD\&MPH\&PHD | 21.3 | 38.5 |
| OTHERS | 3.0 | 1.4 |
| Rank at recruitment |  |  |
| Tutor | 15.0 | 2.8 |
| Assistant lecturer | 6.0 | 7.3 |
| Lecturer/Res. Fellow | 75.8 | 87.2 |
| Senior Lecturer/Senior Res. Fellow | 3.0 | 2.2 |
| Current degres held of respondents |  |  |
| MA/LLM/MSC/MBA/MFA/MD\&MPH | 15.0 | 5.5 |
| M.PHIL | 30.3 | 30.3 |
| PHD/MD\&MPH\&PHD | 48.5 | 61.5 |
| Others | 6.1 | 0.9 |
| Current rank | 6.1 |  |
| Tutor | 3.0 | 2.8 |
| Assistant lecturer | 45.4 | 0.9 |
| Lecturer/Res. Fellow | 42.4 | 57.8 |
| Senior Lecturer/Senior Res. Fellow | - | 27.5 |
| Associate professor | 3.0 | 5.5 |
| Professor |  | 5.5 |
| No. of years on current rank | 60.7 |  |
| One - four years | 28.6 | 40.6 |
| Five - nine years | 10.7 | 41.6 |
| Ten and more years |  | 17.8 |

### 5.1.1 Highest Degree of respondents

Data on this was collected to compare and contrast how both gender have progressed since being recruited in the university. The highest degree of respondents is indicated in Table 1, female faculty represents the highest percentage in the lower degrees, except in MD/MPH/PhD where female faculty accounts for 15.0 percent. Female faculty who held MA/LLM/MSC/MBA/MFA/MD/MPH at the time of recruitment was 33.3 percent and currently stands at 15 percent, whilst male faculty accounted for 20.1 percent and currently stands at 5.5 percent. This shows that there has been improvement in the qualification as at the time they were recruited and the time of the study. Table 1 clearly depicts a remarkable improvement in the qualification of faculty members.

Progression of faculty suggests that comparatively male faculty have improved upon their degrees hence the highest degree of male faculty members over the years. What account for more male faculty pursuing higher degree compared to the female faculty was captured in the interview with faculty. Some male faculty opined that there are equal opportunities opened to both genders. Female faculty however, were of the view that the situation in which they find themselves does not easily make it possible to take up certain challenges. This is what a female faculty had to say with respect to getting funding for further education:
"it is not easy getting funding for PhD, you need to be highly connected and especially when you have senior members as mentors."

They claimed that lack of mentors and related issues limit access and sometimes pose as a big huddle to their advancement. On the other hand, some women in spite of the challenges have been able to break through the 'glass ceiling' with the support of spouses and family members.

### 5.2 Promotion Issues

Promotion is the recognition of one's work through the tangible reward of moving from a lower position/rank to a higher position/rank. One of the issues as far as the glass ceiling is concerned is the lack of promotion of female workers in organizations that would propel them into leadership positions. Academic career demands that faculty members produce a certain number of scientific publications and within a specific number of years before one is qualified for promotion. Female faculty who indicated that they had been promoted before was 46.7 percent, whilst 42.7 percent male faculty said that they had ever been promoted. Even though more female than male faculty in the sample said they had been promoted, it does not seem to make them as visible as their
male counterparts. Again, an indication that even though male faculty fall within the category with the highest number of scientific publication, not all of them are interested in promotions as asserted by some of them during the interviews.

### 5.2.1 Rank at recruitment and Current rank

To situate the problem of progression of both genders it was important to look at how far both genders have progressed in terms of promotion and what precipitated it. Again, Table 1 gives indicate the responses. At the time of their recruitment female faculty who were tutors and assistant lecturers accounted for about 21 percent and the current rank indicate that just like there has been improvement in the qualification, there is also an improvement in the rank, currently at 9.1 percent and 3.7 percent for male faculty, in deed, a remarkably vertical improvement. The highest rank peaks at lectureship and senior lectureship positions. What account for this progression has been publishing papers - there is a saying in academic that 'if you don't publish, you perish', hence the need to publish to be promoted.

### 5.2.2 Number of years spent on current rank

On the issue of number of years spent on current rank, about 61 percent female faculty had spent between one and four years; 28.6 percent had spent between five and nine years on their current rank and 10.7 percent had spent ten and more years on their current rank. On the other hand, 40.6 percent of male faculty had spent between one and four years on their current rank, 41.6 percent had spent between five and nines year, 17.8 percent had spent between ten and more years on their current rank. In general, length of time spent on a particular rank depends on the individual faculty. However, all male faculty interviewed said even though they were qualified for promotion, they were pre-occupied with other things they considered more important than applying for promotion. On the other hand, some female faculty interviewed complained that they have had to stay long on their current rank because processes for promotion were too long, apart from the long processing of documents, they thought it was a deliberate attempt to stifle their effort. Another female faculty said she has had to spend so long a time because it was difficult getting researchable topics in her field of study. One of the typical examples of challenges faced by female faculty in higher education.

Table 2: Promotional issues

| Promotional issues | Female N=30 <br> Percent (100.0) | Male N=103 <br> Percent (100.0) |
| :--- | :--- | :--- |
| Ever been promoted |  |  |
| Yes | 46.7 | 42.7 |
| No | 53.3 | 57.3 |
| No. of years served before first promotion |  |  |
| Two -four years | 23.1 | 27.9 |
| Five - seven years | 38.5 | 53.5 |
| Eight - ten years | 15.4 | 14.0 |
| Eleven years and more | 23.0 | 4.6 |
|  |  |  |
| No. of years on Last promotion | 27.3 | 26.2 |
| One - four years ago | 36.4 | 31.0 |
| Five - nine years ago | 27.3 | 38.1 |
| Ten and more years | 9.0 | 4.7 |
| Yet to be reviewed |  |  |
| Reasons for promotion | 14.3 | 29.5 |
| Publication | 21.4 | 9.1 |
| Teaching | 64.3 | 61.4 |
| Publication and teaching |  |  |

Among the female respondents who have ever been promoted, 23.1 percent worked for between two and fours years before being promoted as against 27.9 percent male respondents for the same number of years. In this situation, if they were using scientific publications as a yardstick for promotion then more male than female would be promoted since they produce more scientific publications. The number of years worked before first promotion peaks between five and seven years for both female and male respondents; 38.5 and 53.5 respectively. The qualitative data presents a different twist to the promotion issue. At the global level, personal advancement does not seem to be a crucial motivation for men. It played an important or very important role in the decision of only $15.5 \%$ of men and $20.3 \%$ of women. According to Latour and Portet (2003) women tend to see a better possibility for personal advancement in a career in academia than men. Indeed, female faculty complained of
some undermining with regard to promotion in their department, whilst male faculty who have not been promoted even though they were due for promotion said they did not see it as a priority.

According to the Statutes of the University of Ghana (August 2004), promotion of faculty is based not only on the number of scholarly work as exemplified through research or contribution to knowledge through scientific publication but on teaching and extension work or service. Female faculty heavy responsibilities in the public and private spheres put a heavy burden on them and so they are unable to produce the kind of publications as male faculty. This was emphasised by a female faculty who intimated during an interview that combining all three roles makes it difficult for her to produce research work like that of her male colleagues. Her seven years in academia has yielded one paper which is under review whilst another male with that same length of time has produced several research works. On the contrary the quantitative data reported more female faculty ( $64.3 \%$ ) being promoted based on research and teaching as compared to 61.4 percent of male faculty. However, 29.5 percent male faculty were promoted based on research/publications only, as compared to 14.3 percent of female faculty. Data from the survey also indicated that male faculty have produced more scientific work than their female faculty (from peer reviewed papers Male faculty; (77.1\%) female faculty; ( $60.6 \%$ ); books; men - 36.7\%); women - $(27.3 \%)$; to chapters; men $-40.4 \%$; women $-21.1 \%$ ). This is a confirmation of Sonnert (1995), whose study found that men in academia produce on average 0.5 more scientific publications than women per year. The qualitative data also confirms some discriminatory practices in some departments concerning promotion. A female faculty whose promotion was due since 2003 at the time of the study was yet to be promoted, even though other male colleagues have had their promotion. To conclude, the processes for promotion in the university are somehow different for both gender. Whilst some male faculty who are qualified for promotion are reluctant to apply, female faculty who applied long ago have not been given hearing. The study found some form of subtle discrimination against some female faculty. The study delve into the level of institutional financial support given to faculty for research - whether there is equality in allocation of resource for both genders. Both gender were highly dissatisfied with support they get from the university. The interviews revealed that male faculty got funding through networks whilst female faculty said they solely fund their research projects and are less likely to get funding from the university. For release time offered by the University for Research, 45.4 percent female faculty said that they were dissatisfied as compared to 44 percent of male faculty. About 49 percent female faculty remained neutral as compared to 44 percent male faculty. Only 6.1 percent female faculty said that they were satisfied as compared to 11.9 percent male faculty. Respondents view on release time for research offered by the University: For opportunities to publish in the university, 27.3 female faculty were dissatisfied as compared to 40.3 percent male faculty. About 51 percent female faculty remained neutral as compared to 26.6 percent male faculty, whilst 21.1 were satisfied as compared to 33 percent male faculty.

### 5.3 Leadership Issue

On the issue of leadership in tertiary institutions, a look at the academic scene indicates that women are not visible when it comes to leadership positions. There is also a stereotypical perception that female workers are not committed to taking up additional responsibility because of their commitment at home especially for working mothers. However, faculty members interviewed see the importance of having leadership positions. More female faculty than male faculty said that they deemed it very important having a departmental/college leadership positions; 51.5 percent as compared to 38.5 for male faculty. When asked whether both gender were willing to take on time consuming tasks 39.4 percent of female faculty as compared to 41.2 percent of male faculty said that they were willing, an indication that women social responsibilities hamper their ability to participate in other time consuming tasks in the university. Indeed, the interviews revealed that female faculty were prepared to take on leadership positions and the challenges that come with it; while male faculty feel that they were too busy with research to add such responsibilities.

The interviews found out that only heads of department constitute most 'powerful' boards and since majority of heads of department are male faculty they constitute the powerful boards such as the Academic Board. Thus it corroborates the quantitative findings presented in Table 3. Serving on committees are means to getting promoted since that is also deemed service or extension work - and constitute points when assessing faculty for promotion. Table 3 shows respondents who have or were serving of boards at the time of the survey.

Table 3: Leadership positions

| Ever served on the | Female N=33 | Male N=109 |
| :--- | :--- | :--- |
| ff. positions: | Percent $(100.00)$ | Percent $(100.00)$ |


| University Council: |  |  |
| :--- | :--- | :--- |
| Yes | -- | 4.0 |
| No | 100.0 | 96.0 |
| Academic Board: | 33.3 | 55.2 |
| Yes | 66.7 | 44.8 |
| No | 25.0 | 36.2 |
| Head of Dept/Centre: | 75.0 | 63.8 |
| Yes | 40.7 | 40.4 |
| No | 59.3 | 59.6 |
| Head of Division/Section |  |  |
| Yes | 15.4 | 28.2 |
| No | 84.6 | 71.8 |
| Chair of a Committee: |  |  |
| Yes |  |  |
| No |  |  |

Table 3 indicates that women faculty had made substantial gains in terms of their representation in leadership positions, looking at their small population. However, when asked whether they had been undermined in any leadership positions, more female faculty reported being undermined ( 50.0 percent) as compared to ( 12.5 percent) male faculty. The interviews confirmed the quantitative findings by female faculty being undermined in leadership positions. In fact not only were they undermined, they were made to feel that being a woman is synonymous to being inferior and therefore one cannot express one's mind on issues.

### 5.4 Discussions

This article has been able to delve into some gender inequality in academic, which is hardly discussed publicly. It has been able to confirm Massiah's conceptual framework which has been used extensively in Prah's work, and used to situate the study. This findings also support Larwood and Gutek (1987) assertion that women's career development does not simply lag behind that of men, but it proceeds in a completely different manner. Again, the findings support Mavin (2001) study which also stipulates that career of women has been traditionally understood as "an ordered sequence of development extending over a period of years and the introduction of progressively more responsible roles within an occupation". Underlying this definition is the assumption of linear upward progression for which both gender have demonstrated. However, this definition does not fit in the career development of most women as they confront the glass ceiling; especially for those women who felt their efforts have been thwarted in a bid to seeking promotion. As far as professional career is concerned, both female and male faculty are interested in seeing their academic career move on to a higher level. In the mist of the challenges, female faculty are visible and tend to move from what Massiah describes as conceptual and subjectivity visibility to the level 3 visibility which talks of socio-economic and political visibility, in fact women are able to balance both private and public spheres perfectly. The study also supports the findings of O'Leary and Mitchell (1990) who opined that there are still far too few women in the academic profession at all levels. With regards to the number of publication, the findings supports Several United States of American studies which have shown that, overall, women scientists publish less than men (Bielby, 1991; Cole \& Singer, 1991; Cole \& Zuckerman, 1991; Primack \& O’Leary, 1993; Sonnert, I995; Zuckerman, 1991). Female respondents were of the view that the university as an institution is so masculine in its structures because when the colonial masters established it they did not have the female faculty in mind. Female faculty need to be exceptionally visible in all spheres to receive the same recognition and acknowledgement as their male counterparts. This study found out that are more females who were/are willing and actually taken up leadership positions, this is in contrast to Bagihole (1993) findings which indicates that women are not visible in leadership positions

### 5.5 Conclusion

Findings from the study suggest that there are no overt institutional barriers to the advancement of women in the University of Ghana, but there exist some sort of subtle discrimination against women. This is because there are equal access to facilities and recruitment, but those who wield power are predominantly male and they continue to reproduce their kind, leading to more men in the helm of affairs.

## Reference

Bagilhole, B. (1993), `'Survivor in a male preserve: a study of British women academics‘ experiences and perceptions of discrimination in a UK University", Higher Education, Vol. 26, pp. 431-47
Bielby, William T. and Denise D. Bielby. (1992) "I Will Follow Him: Family Ties, Gender-Role Beliefs, and Reluctance to Relocate for a Better Job." The American Journal of Sociology, March 1992, V97, N5, p. 12-41.
Cann, J., Jones, G. and Martin, I. (1991), "Behind the rhetoric: women academic staff in colleges of higher education in England", Gender and Education, Vol. 3 No. 1, pp. 15-29.
Cole, J. R., \& Zuckerman, H. (1991). Marriage, motherhood, and research performance in science. In H. Zuckerman, J. R. Cole, \&J. T. Bruer (Eds.), The Outer Circle: Women in the Scientific Community (pp. 157170). New York: W. W. Norton and Company.

Cole, J. R., \& Singer, B. (1991). A theory of limited differences: Explaining the productivity puzzle in science. In H. Zuckerman, J. R. Cole, \& J.T. Bruer (Eds.), The Outer Circle: Women in the Scientific Community (pp. 277-310). New York: W. W. Norton \& Company.
Larwood, L. and Gutek, B.A. (1987) Working toward a theory of women's career development. In Gutek, B.A. and Larwood, L. (eds), Women's career development (Vol. 3, pp. 171-183). Newbury
Latour E. Portet S. (2003) Gender and Career Paths in French Universities - An E-mail Survey AND Building Networks in French Academia
http://csn.uni-muenster.de/women-eu/download: (accessed on 1/12/13)
Mavin, S. (2001), "Women's career in theory and practice: Time for change", Women in Management Review, Vol. 16 No. 4, pp. 183-192.
O'Leary, V. and Mitchell, J. (1990), "Women connecting with women: networks and mentors in the United States", in Lie, S. and Osbom, M. (1994). Policy forum: Status and prospects for women in science in Europe. Science. 263(March 11), 1389-1391
Prah M. (2002) "Gender Issues in Ghanaian Tertiary Institutions." In Ghana Studies 5, Pages 83122
Primack, R. B., \& O'Leary, V. (1993). Cumulative disadvantages in the careers of women ecologists. Bioscience. 43(March 3), 158-1 65.
Rey De la. (1998) South African Women in Higher Education. A Review of their Experiences. Penguin Fastprint. Pgs.5-20
Sonnert, G. (1995). What makes a good scientists ? Determinants of peer evaluation among biologists. Social Studies of Science. 25, 35-55.
Taylor H. B., (2003). The nature of glass ceiling in a service industry; a case study of S.I.C. An unpublished post graduate diploma dissertation. University of Ghana, Legon
University of Ghana, Legon 2006 Congregational Brochure,
Wirth L. (2001). Breaking through the Glass Ceiling: Women in management. Geneva, International Labour Office (pg.25-147)
Zuckerman, H. Cole, J. R. \&. Bruer J. T (Eds.) (1991) The Outer Circle: Women in the Scientific Community (Pg. 171-204). New York: W. W. Norton and Company.

Appendix 1

| No. of Publication by respondents |  |  |
| :--- | :--- | :--- |
| Publication issues | Female N=33 <br> Percent | Male N=109 <br> Percent |
| No. Of books |  |  |
| Non | 72.7 | 36.7 |
| One | 15.2 | 15.6 |
| Two | 9.1 | 6.4 |
| Three | 3.0 | 10.1 |
| Four and above | 3.0 | 4.6 |
| No. of peer reviewed papers |  |  |
| Non | 60.6 | 22.9 |
| One - four | 21.2 | 27.5 |
| Five - nine | 15.2 | 12.8 |
| Ten - fourteen | 18.2 | 16.5 |
| Fifteen and more | 6.0 | 20.1 |
| Contributions to books (chapters) |  |  |
| Non | 78.8 | 59.6 |
| One | 6.1 | 7.3 |
| Two | 6.1 | 16.5 |
| Three | - | 7.3 |
| Four and more | 9.1 | 9.2 |

## Appendix 2

| Publications |  |  |
| :--- | :--- | :--- |
| Scholarly books and articles <br> published by respondents | Female N=33 <br> Percent (100.0) | Male N=109 <br> Percent (100.0) |
| Books authored |  |  |
| Non | 75.8 | 60.5 |
| One | 15.1 | 21.1 |
| Two | 6.1 | 13.8 |
| Three | 3.0 | 2.7 |
| Four and more | - | 1.8 |
| Books edited |  |  |
| Non | 75.8 | 84.4 |
| One | 12.2 | 4.6 |
| Two | 3.0 | 7.3 |
| Three | 6.1 | 0.9 |
| Four and more | 3.0 | 1.8 |
| Articles published in books |  |  |
| Non | 54.5 | 61.5 |
| One to four articles | 36.4 | 33.9 |
| Five to nine articles | 6.1 | 4.6 |
| Ten or more articles | 3.0 | - |
| Articles published in |  |  |
| journals |  | 29.3 |
| Non | 36.4 | 32.1 |
| One to four articles | 39.4 | 16.5 |
| Five to nine articles | 3.0 | 22.0 |
| Ten or more articles | - |  |

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

## CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

## MORE RESOURCES

Book publication information: http://www.iiste.org/book/

## IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library, NewJour, Google Scholar



[^0]:    ${ }^{4}$ MA $=$ Master of Arts, LLM=Master of Law, MSC=Masters in Science, MBA=Masters in Business Administration, MD=Medical Doctor, MPH= Masters in Public Health

