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Connecting women: the potential and use of electronic conferencing

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Introduction

The topic for this paper emerged as a result of my role in managing many electronic conferences in my work at the Water Engineering and Development Centre (WEDC), Loughborough University, UK¹. It soon became clear that certain disparities existed between levels of the men's and women's participation in these forums, although the extent and reasons for this were unclear. This paper aims to investigate the extent of these differentials, and to explore some of the reasons for women's greater reluctance to take part in electronic discussions of this type. The findings are based on a rapid, initial exploratory survey, the purpose of which was to identify whether there was an issue here worth looking at. The results suggest that there is more to learn about the gendered nature of e-conferencing and that an in-depth study would be beneficial to provide guidance on the design and implementation of future women-friendly e-conferences.

This question echoes the debate within the literature about the extent to which information communication technologies (ICTs) and electronic forms of communication act as an opportunity or a threat for women. At a fundamental level, Derbyshire (2003) confirms that, in sub-Saharan Africa for instance, a gender gap currently exists in the opportunity for girls to develop ICT skills in schools. More broadly, it has been suggested that women may avoid the use of ICTs, as they do not conform to women's preferred methods of interaction (Kirkup 1992; Rathgeber 2000). However, a recent study by the Women's Programme of the Association for Progressive Communications found that women are making increasing use of ICTs, particularly email (APC 1999, quoted in Karelse and Seye Sylla 2000), although Gibbs (1998) confirms that men still predominate in use of the web and email.

The same paper by Gibbs outlines a number of papers given at two conferences in 1995 and 1997 which focussed on women and the World Wide Web. The Internet is seen as a male tool which nevertheless has opportunities for women to adapt for their own uses and benefits (paper by Bellingham) as the informality of the media is conducive to women's involvement (paper by Plant). Derbyshire (2003) points to work by Hsi and Hoadley (cited in Volman and Eck, 2002) that girls' involvement in classroom discussions was enhanced by using electronic media, as there was time for reflection and they could determine the pace of the discussion in spite of their more dominant and outspoken classmates.

The evidence presented in this paper is broadly consistent with these studies. It examines particular instances of women's use of e-conferencing in a specific professional sector. However, questions raised by this initial scoping study have wider applicability to other professional sectors and for those engaged in the management and moderation of e-conference activities.

Women in the water and sanitation sector

The e-conferences in question are all related to issues within the development sector and more specifically to water supply and sanitation provision. In order to assess women's participation in these fora, some sense of their involvement in this sector must be ascertained. However, the international water and sanitation sector encompasses a vast range of organisations and personnel within them and as such, there are no figures which show a breakdown in terms of the numbers of men and women employed. Some proxy measures are offered although it must be recognised that these are only indicative of this missing data:

- Each year WEDC holds a conference alternatively in Africa and in Asia. Records for 2001 show that 23.5 per cent of international delegates were women, with the figure for 2002 being 19.8 per cent. These conferences may reflect a slightly higher proportion of women than are actually working in the sector as gender issues relating to water and sanitation are covered and women are encouraged to attend and submit papers.
- Membership figures for the Chartered Institution of Water and Environmental Management (CIWEM) and the Institute of Civil Engineers (ICE) show that women make up 15 and 16 per cent respectively of their total membership. This provides a snap shot of UK membership in the sector only.
- To give a broader picture of women in the sector internationally, numbers of women working as key staff members of eight organisations dealing in water and sanitation are useful. These form part of the Resource Centre Network for Water, Sanitation and Environmental Health (WELL)ⁱⁱ for the UK Department for International Development and its partners. The percentages of key resource centre staff who are women are:
 - Kenya (AMREFⁱⁱⁱ) 36 per cent;
 - Columbia (CINARA^{iv}) 35 per cent (half of these are in administrative posts);
 - Russia (EHC^v) 66 per cent;
 - Bangladesh (ICDDR-B^{vi}) 0 per cent;
 - Zimbabwe (IWSD^{vii}) 43 per cent (42 per cent of these are in administrative posts);
 - India (SEUF^{viii}) 35 per cent;
 - Ghana (TREND^{ix}) 22 per cent;
 - Kenya (NETWAS^x) 40 per cent.

There are obvious limitations of this data, as it is not clear what positions women actually hold within these organisations and support posts are more likely to be occupied by women, as evidenced by figures from CINARA and IWSD. It is also not clear which posts would allow or necessitate access to e-conferencing, for either men or women. However, it is hoped that these figures capture both the upper and lower ranges of women's involvement in the sector, in lieu of any other measure. It is shown clearly that women make up a minority within these organisations with a median

figure of 29.55 per cent. This needs to be taken into account when we are assessing figures for involvement in e-conferences in the sector.

E-conference participation by gender and location

The forum for an e-conference is an electronic listserv, which sends messages to a list of members who have subscribed to the list. The listserv can operate automatically so that any member can send a message to the whole of the list, or it can be moderated, in which case, someone is designated as having responsibility for checking the relevance and appropriateness of messages sent to the list.

The Knowledge Management Group (KMG) at WEDC has been successfully managing electronic conferences since 1996. These have been part of the Streams of Knowledge^{xi} e-conference series and as part of a number of e-conferences commissioned by the Water Supply and Sanitation Collaborative Council (WSSCC)^{xii}. E-conference management involves a range of tasks including liaising with the conference initiators to allocate the roles of chairperson and facilitators, promoting the conference and subscribing members, moderating and distributing messages and general trouble shooting. The data presented here relates to six e-conferences, hosted on six different listservers, moderated by WEDC KMG. The listservers are all related to the development sector, and within this, to different aspects of water supply and sanitation, such as rainwater harvesting, hygiene behaviour and disabled access to services.

Table 1: E-conference subscribers and participants

	Conf.1^{xiii}	Conf.2^{xiv}	Conf.3^{xv}	Conf.4^{xvi}	Conf.5^{xvii}	Conf.6^{xviii}
No. of subscribers	230	44	187	375	200	274
% of Sn. subscribers	43.9	43.0	51.9	51.0	44.5	50.0
No. or participants	51	12	30	20	53	40
% Sn. participants	29.0	75.0	70.0	45.0	58.0	67.5
% female subscribers	26.0	50.0	19.8	30.1	25.0	19.0
% Sn. female subscribers	37.3	27.0	49.6	39.8	38.7	42.3
% female participants	17.0	27.0	15.6	6.2	32.7	9.6
% Sn. female participants	30.0	50.0	40.0	57.1	75.0	60.0

What follows is a brief analysis of subscription to and participation in six of these e-conferences, in relation to both gender and location. The following table shows subscription and participation rates for six recent e-conferences (scheduled from

March 2002 to March 2003). Figures are also given for the percentage of subscribers and participants working in the South, and for numbers of women subscribers and participants, again including a breakdown for those in the South.

Subscription levels of members are roughly equal for those working in both the North and the South. For participants as a whole, those from the South are more likely to contribute than those from the North, (e.g. figures of 75%, 70%, 68% of the total participants working in the South). This is a strong indication of the value of e-conferencing for those working in developing countries, as it provides an international discussion forum which would not otherwise be open to them.

The percentage of women subscribers varies across the e-conferences, with a minimum of 19 per cent and a maximum of 50 per cent. Of these women, between 27 to 50 per cent are from the South. This is partly accounted for by the fact that fewer women are employed in the sector.

However, when we look at the percentages of subscribers who then take an active role in the e-conferences by sending messages (referred to here as participants), the range for men scales much higher than for women. Between six and 33 per cent of women subscribers participated in these e-conferences, and of these, between 30 and 75 per cent were from the South. For men, between six and 70 per cent of male subscribers participated, and of these between 34 and 76 per cent were working in the South. Men are therefore much more likely to make an active contribution to the discussions than are women. However, for those men and women who do contribute, the number of those working in the South is roughly comparable and figures again demonstrate the popularity of e-conferencing in the South.

The survey

In order to investigate this disparity further, an email questionnaire was distributed via twelve listservers which are managed by the KMG, including the six which were the fora for the above e-conferences. All the listservers are related to the development sector and most to the sub-sector of water supply and sanitation. The target group for these lists is worldwide, and encompasses researchers, practitioners, non-governmental personnel, local government and consultants, with roughly one in three subscribers being women. The potential population for this study exceeds 2500. 206 were returned (about eight per cent of the potential recipients). These respondents can be disaggregated as follows:

Table 2: Survey respondents by gender and location

	In the North	In the South	Total
Male	34	60	94 (46%)
Female	60	52	112 (54%)
Total	94 (46%)	112 (54%)	206 (100%)

Slightly more women than men responded to the questionnaire sent out with the subject header of 'E-conferencing and gender survey'. 54 per cent of replies came from the South. Within this, more men from the North participated although this situation was reversed for women.

The questionnaire was short and was intended to take only five minutes to complete. Respondents were asked to state their gender and country of work, the quality of their email facilities and the frequency with which they used email. They were then asked about their past participation in e-conferences, in terms of both subscribing and sending messages. They were also asked to state any disadvantages to participation they might have experienced and whether they felt their gender had any impact on their level of participation.

The results

Access to email

Generally, email facilities in the North were unproblematic and respondents used email daily. Some problems with access were noted by about 25 per cent of respondents in the South, both men and women e.g.:

- distance from email services;
- high operating costs;
- unreliable and slow network connections; and
- old computing equipment.

Women's participation and the impact of being a woman

Only 19 (nine per cent) of all respondents responded positively to the question of whether they felt in any way disadvantaged in an e-conference as a result of their gender. All were from women and constituted 17 per cent of all women respondents. Eleven of the responses were from Africa, three from Asia, three from Latin America and one was from Europe. None of the 94 male respondents felt that the fact that they were men had any impact on their performance in an e-conference.

On a positive note, three women (South Africa) felt that e-conferencing provided a forum in which any disadvantages they might usually experience in large group

discussions might be overcome. Online conferencing allows anonymity to be maintained, with women sometimes being reluctant to specify their gender, and enjoying a greater degree of confidence than a physical forum would allow them. One woman (Nigeria) said that the fact that she was female made her more determined to play an active part in e-conferencing, because she was allowed the opportunity to do so.

Most of the comments from these respondents were negative however. These problems relate to physical access to the necessary facilities, perceptions of male dominance in these forums, and finally, to the lack of professional opportunity to gain the required skills.

One of the first hurdles was simply getting access to email facilities. This was felt to be a particular problem in small towns. A woman (Bangladesh) reported that as a woman in the workplace, she would be one of the last to be given access to the Internet, after the men, and that often this would not happen at all. Other women accessed e-conferences using net-cafes or similar venues. The view held by another woman (Pakistan) was that these were used mainly by men to view pornographic sites and consequently, she did not feel comfortable in this environment. Airport internet kiosks were also said to be used very rarely by women.

Cost is another factor which was a common disincentive for both men and women, but which was further highlighted in this section as a particularly difficult issue for women, with an instance given of having to pay up to five per cent of annual salary for internet connection in Pakistan. This combined with the slowness of the service makes it even less affordable for women, generally on lower salary rates than men. Accessing email by mobile phones was also limited for women due to their prohibitive cost.

The problems women experienced were also rooted in their perceptions that e-conferences were male dominated domains. Consequently women felt intimidated by this (Dominican Republic) and had experienced instances in which women's comments and suggestions were not taken seriously as evidenced by their lack of inclusion in the final summary report (Columbia). Related to this, another woman said she experienced a lack of confidence in an e-conference as she perceived them to be large public arenas. She feels more comfortable in smaller, more personal settings such as workshop groups (Kenya).

The content of e-conferences is an additional factor which stops women contributing. A woman from Zimbabwe felt that such discussions tend to be very academic, effectively silencing women on the issues which may be important to them. Another respondent from India felt that the way in which men and women converse in such a

forum was different, as men tend to contribute facts while some women offer suggestions in a much more tentative way.

Other issues related to access are related to the prohibitive effect of women's lack of ICT skills, as they reported that women were given far less opportunity than men to develop this area of expertise. Technophobia was perceived, rightly or wrongly, to be more of a problem for women in Zimbabwe and in South Africa than for men. It was also felt that it was generally harder for women to gain professional recognition and as contributing to e-conferencing would not count towards this, it was not a priority.

The way forward

It is clear that one in five women experience problems and disincentives in relation to e-conferences, which are not experienced by men. Further study should reveal more about how these difficulties might be ameliorated and could address questions such as:

- Can the promotion and publicising of e-conferences be designed to encourage more subscriptions from women?
- How can we ensure that gender is mainstreamed in the e-conference topic, thematic structure, terms and language?
- Would positive discrimination in terms of women's involvement in the organisation and implementation of e-conferencing (as chairpersons, facilitators, moderators) encourage their greater participation in the discussions?
- Are there any measures that could be taken by e-conference moderators to ensure that women are given sufficient time and voice within the e-conference forum?
- How can the perceived strengths of e-conferencing for some women such as their anonymity and their existence without the necessity for the physical presence of participants be optimized?

It is not the aim of this paper to provide answers to the problems outlined above, but it is its aim to raise them as issues requiring attention. It is these types of questions which demand further investigation if women are to engage equitably with men in this arena and are to benefit equally from the opportunities for discussion, networking and knowledge sharing which are offered. The potential production of some form of guidelines in this area for managers, moderators and facilitators of e-conferences would be a valuable resource.

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ⁱ Internet: www.lboro.ac.uk/departments/cv/wedc/index.html

ⁱⁱ Internet: www.lboro.ac.uk/well/

ⁱⁱⁱ African Medical and Research Foundation

Internet: www.amref.org/

^{iv} Instituto de Investigacion y Desarrollo en Agua Potable, Saneamiento Basico y Conservacion del recurso Hydrico

Internet: www.cinara.org.co/

^v Environmental Health Centre

^{vi} Centre for Health and Population Research

Internet: <http://202.136.7.26/>

^{vii} The Institute of Water and Sanitation Development

Internet: www.iwsd.co.zw/

^{viii} Socio-Economic Unit Foundation

^{ix} Training Research and Networking for Development Group

^x Network for Water and Sanitation

Internet: www.netwasgroup.com/

^{xi} Internet: www.streamsofknowledge.net/booklet.html

^{xii} Internet: www.wsscc.org

^{xiii} "Beyond the community": scaling up community management of rural water supplies (03/06/02-12/07/02)

Internet: www.jiscmail.ac.uk/cgi-bin/wa.exe?A1=ind0206&L=wsscmanp

^{xiv} "Access and use of domestic water and sanitation facilities by disabled people in low income communities" (09/0902-27/09/02)

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^{xviii} "Rain in the City: Catch It". (17/02/03-12/03/03)

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