Women in Physics in the UK: update 2005-2008

Gillian Butcher\textsuperscript{a}, Ann Marks\textsuperscript{b}, Saher Ahmed\textsuperscript{c} and Katharine Hollinshead\textsuperscript{c}

\textsuperscript{a}University of Leicester, UK, \textsuperscript{b}University of Sheffield, UK \textsuperscript{c}Diversity Programme, Institute of Physics, UK

Abstract. The UK continues to address issues of gender equality and diversity in all aspects of society. The Institute of Physics is regarded as a leading proponent of these issues not just in physics but in disseminating its good practice to the other learned societies for science, engineering and technology (SET). Within the Institute both the Women in Physics Group, which is a membership organisation with 2700 members, including students, and a dedicated Diversity Programme which feeds into a high-level strategic Diversity Committee, are very active. In this paper we highlight some of the many initiatives that have taken place in the last few years as well as present statistics on women in physics in the UK, demonstrating that progress has been made.

Keywords: Women, physics.

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INTRODUCTION

Since 2002, when the Robert’s Report \textit{SET for Success} \cite{1} was published predicting a shortage of SET graduates, there has been considerable time and effort expended at many levels to improve participation and retention of people within SET. There has been considerable advancement in gender equality within society in general and many initiatives specifically aimed at women in physics, with the Institute of Physics committed to leading the way.

PRESENT SITUATION

The percentage of women at all levels within physics is consistently improving. Overall numbers studying at A-level have increased slightly after decreasing for over a decade, although the percentage of girls remains at about 22\% \cite{2}. Figure 1a shows that the percentage of female undergraduates is slowly rising and at present is 23\%. At PhD level there is only recent gender disaggregated data which shows that in 2007 27\% of this cohort are women \cite{3}. The percentage of women researchers has risen slowly to 18\%. The percentage of women lecturers, Figure 1b, shows a steady rise with a leap in 2005 and currently is about 18\%. Senior lecturer levels have also risen. Figure 1c shows the statistics for professors, which shows the biggest improvement, from 4 to 31 women (5\%) \cite{3}.

![Figure 1.](image)

FIGURE 1. percentage of women at different levels in academic physics over last 11 years. Ref \cite{3}

PROGRESS

An important national development has been the introduction by the Government of the Gender Equality Duty, which places the onus on public bodies including universities to demonstrate that they are actively engaged in improving gender equality. The UK Resource Centre for Women in SET is the Government’s primary national initiative that aims to address the under-representation of women in SET. It recently launched its Action Network of
professional institutions for sharing resources and expertise. It provides funding for other national schemes such as MentorSET, a mentoring scheme run by the Women’s Engineering Society (WES). Set up in 2005, the Athena SWAN Charter is a scheme that recognizes excellence in SET women’s employment in higher education. The Athena Forum’s mission is to provide an oversight of developments that advance the career progression and representation of women in STEM in higher education and research.

The Diversity Programme of the Institute of Physics (IOP) aims to foster an inclusive and diverse physics community [4]. Some recent IOP projects and initiatives focusing on gender include: Girls in physics: a review of research on girls’ participation in the physics classroom; a teachers’ guide for action and two short films aimed at helping teachers find ways of encouraging more girls to study physics. At the university level: a report based on a site visit scheme that examined the gender culture within university physics departments, Women in University Physics Departments: a Site Visit Scheme; the Juno Code of Practice which sets out practical ideas for actions that departments can take to address the under-representation of women in university physics. Other publications include Best practice in career-break management and a statistical digest. The IOP is a founding member of the Athena Partnership, which is a grouping of STEM professional institutions and learned societies that are committed to fostering good practice in higher education STEM subjects. The ‘Physicists in Primary Schools’ project is a free resource for physicists to excite the interest of young children in physics.

The Women in Physics Group (WIPG) is a member group of the IOP [5]. From 2006 all women physics student members of the IOP have free membership of WIPG. To support the students the group holds career meetings, where women physicists discuss their experiences, and funds students to hold informal meetings locally. A major new development has been the Very Early Career Woman Physicist of the Year Award, which seeks to recognise the quality of physics work that a recently graduated woman does and also provide role models. The group continues to host professional development workshops for its members and organise networking events for women physicists.

PECULIARITIES OF THE COUNTRY

Almost all students in state schools take GCSE combined science at age of 14. A level examinations are taken typically at age 18 and are the standard entry requirement for university. Lecturer is a permanent academic position, with career progression to either senior lecturer or reader. The title Professor is restricted to the most senior position in academia.

STATUS OF THE UK WORKING GROUP

Much of the extensive programme of work is carried out by the complementary activities of the Women in Physics Group and the Diversity Programme.

FUTURE

The next few years will hopefully continue to show progress, at a faster rate, as universities work towards meeting their goals of their Athena SWAN and Juno Code of Practice commitments. Monitoring of the efficacy of initiatives should be continued, with sharing of best practice with other science and gender bodies. The Athena Forum will ensure that the issues are kept under the spotlight, and will publish a report which will draw together its findings and will provide a baseline against which progress can be monitored.

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REFERENCES