

Onwards and Upwards? Aurora Longitudinal Study

Summary report on the impact of Aurora

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1. Introduction

1.1 Overview

The Aurora Longitudinal Study conducted by Sarah Barnard, John Arnold, Sara Bosley and Fehmidah Munir at Loughborough University, gathered and considered the views and progression of participants of Advance HE's Aurora leadership programme. Using longitudinal mixed-methods research, the objectives were fourfold:

- + to track and analyse the career pathways of women in higher education (HE)
- + to explore perspectives on (and engagement with) leadership roles and activities
- + to explore perceptions of confidence, aspirations, role and professional development, work/life balance, opportunities, and challenges to development/progression
- + to assess commitment of women to their role, discipline, institution and own professional development.

The majority of respondents were undertaking the Aurora programme but an additional group of women in similar university roles who had not undertaken Aurora were tracked over the same time period. The study included women working in both academic and professional services roles in the UK and Republic of Ireland.

This summary report outlines the impact of Aurora on individual participants and their experiences in relation to the above objectives, as the study comes to an end.

1.2 Context

The study has now completed its final year of data collection and analysis. Commencing in 2015 and spanning five years in total, this section outlines the results from each year of the study, which focused on varying themes around women in leadership. Further insights and reports from Year's 1, 2 and 3 can be found [here](#).

Results from Year 1 represented the start of the five-year research project looking into the careers, experiences, aspirations and leadership of women. The themes emerging from the report suggested that while women had substantial opportunities for leadership activities, a negative workplace culture had the ability to negate these experiences.

The themes emerging from the Year 2 data analysis revolved around two key areas: leadership approaches and practice, and institutional structures and practices. The study considered what was working or making a difference, as well as the challenges women faced and what needed to change.

Year 2 survey responses revealed that while women did not believe that they lacked leadership skills, they found it challenging to secure opportunities to employ their skills effectively. Similar to Year 1, reported contexts in which women were working were perceived to be problematic, and the culture and practices were seen as limiting women's leadership potential.

However, results from the Year 2 data pointed to some positive effects of the Aurora programme. Participants in Aurora reported increased leadership skills, motivation, and willingness to advance their career and ease with being in a position of authority. Overall, evidence suggested that the Aurora programme stimulated engagement in greater career self-management activity in comparison to those who had not undertaken Aurora.

The third year of the study surveyed a further 658 women who were just starting the Aurora programme. The themes emerging from the Year 3 data analysis focused on women as change-makers (ie the motivation to change or overcome structural and cultural barriers to leadership). The results showed that systemic progress continued to be slow, but that the personal impact on women undertaking Aurora had been recognised. Respondents again reported increased confidence, self-awareness and knowledge, all of which can lead to women making changes in policy and practice.

1.3 Approach

The study developed a mixed-methods longitudinal research design, incorporating online surveys, semi-structured interviews, and diaries at set time points with different groups of women who participated in Aurora. Aurora mentors also participated in the interviews.

In total, 3796 women contributed to survey data, of whom 3423 participated in Aurora either before or during the study. A comparison group of non-Aurora women was also organically recruited to the online survey throughout the study. The numbers of women taking part in the surveys across the different time points are outlined in Table 1.

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Table 1: Women taking part in the Aurora Onwards and Upwards Surveys in years 1 – 4

Respondents	Time 1 (pre-Aurora)	Time 2 (3-6 months post-Aurora)	Time 3 (15-18 months post-Aurora)	Time 4 (3+ years after Aurora)
Women taking part in Aurora				
Cohort 1 (2013-14)	-	-	195	
Cohort 2 (2014-15)	-	408	172	75
Cohort 3 (2015-16)	667	262	123	85
Cohort 4 (2016-17)	597	192	-	-
Cohort 5 (2017-18)	658	234	-	-
Cohort 6 (2018-19)	898	280	-	-
Comparison women*				
	373	124	-	55
Total	3193	1500	749	215

*These respondents were not intending to participate in Aurora at Time 1, though a small number did so in later years. The time frames indicated in the column headings therefore do not strictly apply to them. For these respondents, Times 2 and 4 were one year and four years after first questionnaire completion.

As the study has now come to a close, it is also possible to review respondent data at a more detailed level, including protected characteristics. Out of the 3796 respondents, 47% were professional services staff and 53% were academics, with 86% of respondents working full-time.

The demographics of respondents were varied, with 9.1% BAME respondents taking part in the study, and 7.8% considering themselves to have a disability or impairment. These percentages presented a similar picture to that of UK staff working in higher education institutions (HEIs) in 2018/19, with 10.3% identifying as BAME, and 5.3% having disclosed a disability (Advance HE Equality in Higher Education: Staff Statistical Report 2020). In addition, 60% of respondents reported that they had primary responsibility for managing a household of two or more people.

In researching the impact of Aurora specifically, there were three sources of data that help paint a picture of Aurorans' development in the context of their employing institutions:

- + what effects respondents thought Aurora had on them
- + comparing Aurorans with the comparison group on various quantitative measures to assess whether changes over time differed for the two groups
- + statements made in response to open-ended questions on the questionnaire, and in interviews and diaries.

1.4 Limitations

Due to the volume and diversity of the data across the four years of the study, there are inevitable limitations. The research team cannot be sure that the participants are typical of women working in HE in the United Kingdom and Republic of Ireland. There are also variations in recruitment to Aurora across universities, from volunteers to highly selective processes. It should be noted that while this summary report focuses on the impact of the Aurora programme, it would be a reasonable hypothesis that those participating in Aurora, and this study, are already predisposed to see themselves as potential leaders, and more interested in progressing to leadership roles than other women in academic and professional services roles.

A more detailed acknowledgment of the limitations of the study has been outlined in the full Year 4 report.

1.5 About the Aurora programme

Aurora is open to women up to tenured associate professor level (or professional services equivalent) who would like to develop and explore issues relating to leadership roles and responsibilities. It is delivered primarily through a series of day events. Women keynote speakers and 'role models' are important contributors to these days. The topics focused on are:

- + Identify, Impact and Voice
- + Power and Politics
- + Core Leadership Skills
- + Adaptable Leadership Skills.

Readings and materials are made available online to feed into and extend the focus of the programme and support the development of 'action learning sets': small groups of women that focus on individual issues and experiences.

2. Key findings

2.1 Perceived effects of Aurora

Across the duration of the study, Aurorans were asked within the survey to what extent the perceived effects of Aurora had increased as a result of participating in the programme. The percentage of respondents who agreed with the statements were captured at three time points:

- + three to six months post Aurora (N=1374)
- + 15 to 18 months post Aurora (N=749)
- + three years or more post Aurora (N=160).

There were 14 statements in total (including two added part way through the study), ranging from 'I seek out leadership roles' to 'I feel comfortable in positions of authority'. On average, participants reported increases in six of the original statements, while others maintained similar scores. A table outlining all of the statements and scores is included in Appendix One.

The strongest perceived effects related to the motivation to seek out leadership roles ('I seek out leadership roles'), the social skills of leadership ('I demonstrate the people skills needed for leadership roles') and proactive career management ('I engage in leadership at work that is not part of my description/role'). Three or more years post-Aurora, 68%, 67% and 64% respondents agreed with these statements respectively.

Statements which increased the most between the first and last time point were 'other people see me as a leader' (13 percentage point difference), 'I engage in leadership at work that is not part of my job description/role' (12 percentage point difference), and 'I act as a mentor at work' (12 percentage point difference).

It is a notable finding that the majority perceived effects of Aurora did not significantly decline over the three years after completing the programme. This demonstrates strong evidence of the long-term impact of Aurora on those who participate in it. In comparison, 'I actively develop my career support network' was one such example where it was perceived to be slightly less likely to be an effect of Aurora as time went on. On the whole, only very small numbers reported reductions attributable to the programme overall.

When disaggregating the data across the protected characteristics, at both three-six months and 15 to 18 months post-Aurora, BAME respondents were significantly more likely than staff from other ethnic groups to say that Aurora had led them to challenge the workplace systems and/or culture.

There were no significant differences between responses from academic and professional services staff. However, academics were more likely to report effects on their attempts to advance and manage their careers, while professional services staff were more likely to say that Aurora had led them to engage more in leadership that was not a part of their job description.

2.2 Comparisons between Aurorans and non-Aurorans

Those who participated in the Aurora programme and those who did not participate were invited to share their responses on career development and leadership within the survey. There were some notable, positive differences between the two groups which are outlined below:

- + **Career development:** three to six months after Aurora, 18.6% of Aurorans said they had been promoted compared with 7.1% of the comparison group. Similarly, 25.1% of Aurorans reported receiving an accelerated or discretionary increment compared with 16.1% of the comparison group. Three years or more after Aurora, participants were again more likely than the comparison group to report receiving an increment in the last 12 months.

Aurorans increased substantially over time in self-reported engagement in career self-management and career confidence, whereas the comparison group did not. This effect was strongest three to six months after Aurora, but was maintained or increased thereafter.

- + **Leadership:** respondents' self-rated leadership skills and styles were assessed using 18 questions within the survey. Most of these reflected either relational aspects or assertive aspects of leadership.

Three to six months after Aurora, participants increased in their self-ratings, especially for assertive leadership, while the comparison group did not increase. This meant they caught up with the comparison group, having started with a lower score.

The gains in self-ratings experienced by Aurorans remained steady, but did not increase over the subsequent three years. A similar pattern was observed for the extent to which respondents sought out leadership opportunities in their day to day work. Self-reported engagement with leadership activities, as an official or unofficial part of job duties, was higher for Aurorans than for the comparison group throughout the study, although the gap between them and the comparison group did not widen during or after Aurora.

Finally, analysis of survey data showed that part-time working and caring responsibilities did not prevent these women to take on leadership roles. Only small differences between full-time and part-time workers' extent to which they sought out leadership roles and responsibilities were noted.

2.3 Aurora programme benefits – qualitative responses

Comments made on the impact of Aurora in the questionnaire and in interviews were overwhelmingly positive. Quotes from participants related to the following themes:

- + increased self-confidence in abilities and capabilities
- + increased self-awareness of the type of role to aspire to
- + a growing use of assertive and influential leadership, often related to increased self-confidence and awareness of gender inequality in the workplace
- + increased recognition of self-worth, and therefore a confidence to apply for more senior roles/a promotion
- + a shift in perception around what 'leadership' means, and to recognise leadership qualities in existing behaviours
- + increased recognition that problems with leadership are often not individual, but due to the wider institutional culture.

"Confidence has increased immeasurably. Self-awareness and an understanding we're not super-human and other individuals are feeling/experiencing the same and we just don't know it. This in itself has alleviated some of the stress associated with imposter syndrome.'

"This programme has made me feel validated in my aspirations to 'do things differently' and 'be a different kind of leader'. It has increased my confidence as a leader."

"I think Aurora was the starting point for me to recognise that the issues I faced were not just down to my individual situation but were structural so this gave me the confidence to be more assertive and take action."

In contrast, Aurorans that expressed disappointment did so as they felt that there was not enough challenge to the system, and that institutional culture was holding back any progression made through the programme.

"Leadership itself is not valued, it's seen as something you put on someone in addition to everything else. If the university really valued leadership it would adjust its expectations of people in these roles."

This implies that while there are many positives that can be gleaned from the Aurora programme, particularly around individual's self-confidence and self-awareness of leadership, HEIs must be ready to enable women who have completed Aurora to implement their learning in the workplace. HEIs must commit to increased scrutiny of their organisational culture, especially if gendered practices are found to be hampering women's progression to leadership roles in HE.

3. Conclusion and recommendations

The mixed-methods data drawn from across the five-year longitudinal study has provided an ideal and robust opportunity to map change and progression in the leadership experiences and careers of professional services and academic women working in higher education in the UK and Republic of Ireland. The final Year 4 report, in addition to the three interim reports published [here](#), have created a valuable commentary on the context of women in leadership roles, and in particular the role and impact the Aurora programme has had on their experiences.

The Aurora programme presents an opportunity for women looking to increase self-confidence and motivation to apply for leadership roles. There is a noticeable difference in experience compared with women who did not undertake Aurora, as Aurora participants reported receiving a promotion and/or a salary increment at a higher rate than the comparison group in the months and years following the programme.

The majority of perceived effects of Aurora, such as 'I demonstrate the people skills needed for leadership roles' and 'other people see me as a leader' all increased across the three time points from when data was captured post-Aurora. This demonstrates a tangible impact for participants that continues well beyond the end of the programme.

Qualitative responses from Aurora participants bolster the quantitative findings of the study, with Aurorans expressing increased self-confidence in their capabilities as a result of undertaking the programme, and a greater understanding of what 'leadership' means to them.

In the full report, a number of recommendations relating to leadership experiences for women in HE have been included. The recommendations are directed at managers, institutions and policy makers, as well as a separate set of recommendations for women in HE. For the purposes of this summary report, the following recommendations relate only to the Aurora programme:

- + institutional leaders and managers should consider supporting, or continue supporting, the Aurora programme by sponsoring women academics and professional services staff to participate
- + institutions should consider strategies to ensure the skills, confidence and ambition gained from the programme are fully integrated into the workplace. Proactively create ample opportunities for women to disseminate and implement their learnings back into the institution and enact their leadership potential
- + ensure that women working part-time or with caring responsibilities continue to be considered for leadership roles, as the extent to which they seek out leadership roles and responsibilities is similar to that of women working full-time
- + institutions should commit to an ongoing review of gendered workplace practices and politics that are hampering women's efforts to benefit from the learnings of the Aurora programme
- + women who participate in Aurora should ensure that the 'collective consciousness' continues beyond the programme, perhaps by setting up institution specific Aurora 'graduate' groups
- + while the benefits of Aurora evidently endure beyond the end of the programme, consider ways to organically 'grow' these learnings further, for example by focusing on career self-management.

Appendix one

Perceived effects of Aurora

% of respondents saying that Aurora has increased the extent to which:	3-6 months post Aurora (N=1374)	15 - 18 months post-Aurora (N=749)	3+ years post Aurora (N=160)
I seek out leadership roles	67	68	68
I demonstrate the people skills needed for leadership roles	67	66	67
I know what I want from my career	59	57	54
I put myself forward for career advancement	57	58	62
I feel comfortable in positions of authority	55	59	63
I engage in leadership at work that is not part of my description/role	52	55	64
I actively develop my career support network	50	47	39
I act as a mentor at work	44	50	56
I communicate a clear vision of what needs to be done at work	44	41	45
I find ways of turning the systems and/or culture of my workplace to my advantage*	42	35	41
I am decisive at work	42	41	38
Other people see me as a leader	41	46	54
I openly challenge the systems and/or culture of my workplace*	32	32	36
I manage my work-life balance effectively	22	27	22

*Item added part way through the study. About two thirds of respondents answered it.



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