

RSE Tapping All Our Talents Review 2018: Women in STEM – response from the University of Strathclyde

The following represents collated responses from Strathclyde’s internal consultation, including with academic staff in STEM departments and those leading on Athena SWAN or women in STEM initiatives.

Section 1: *In brief*

Q1 Do you believe progress has been made towards achieving gender equality in the STEM workplace in Scotland since 2012? (Yes/no).

- Yes, overall.
- Some respondents to our internal consultation reported that this is largely with regard to increased momentum and raised awareness of the problem. While there has been consciousness raising, it was felt that there is still much to be done with regards to implementation of practices that will make a big difference to gender equality within the STEM workplace in Scotland.

Q2 If yes, what action(s) do you believe have had the greatest impact on improving gender equality in STEM in Scotland? (List maximum of 3).

- In HE, Athena SWAN and its effect on the thinking of some academic departments and managers. Some respondents suggested that change would be faster and stronger if funding success across all research councils was linked to Athena SWAN. Linked to this, the recognition of individual institutions that gender equality enhances business efficiency has had an impact.
- Paternity/shared parental leave was cited as one of the most promising developments, but it was felt that there are still problems with how it is implemented and that truly shared parental leave (like in Scandinavia) would be better. There are barriers to uptake for men, both practical and socially. Men thinking about shared parental leave are considering that it may be harmful to their careers. Employers need more help and incentives in implementing parental leave in general.
- Scottish Government making gender equality a strategic priority.

Q3 Where you do not believe progress has been made, or could be improved upon, what do you believe have been the key limiting factors? (List maximum of 3).

- Respondents suggested that there is still an overarching focus across sectors/industries on training women to perform and lead in men’s image and a lack of recognition that

excellence comes in different forms and that all CVs and working behaviours do not have to be the same. Also, societal assumptions about 'women's work' / unconscious bias still maintain. Excellence in all forms should be rewarded. This collection of behaviours and perceptions disadvantages men, too. Some men's careers are impacted negatively and some men leave HE, too, for many similar reasons. Their delayed career progressions and/or departures are not as visible as women's. For example, it was suggested that the publication rates required for the REF disadvantage people of all sexes who contribute to their departments in other ways (e.g. development of impact case studies which only require 2* papers; taking on significant departmental leadership and citizenship roles).

- Respondents stated that increased and significant financial resource toward addressing gender inequality issues in the HE sector would be an improvement. This includes institutions ensuring that the work of (often female) staff to deliver equality initiatives is properly valued and rewarded, including with staff time, backfill, and career recognition. In particular Athena SWAN self assessment teams and those involved in writing applications are often women at early stages of their career; spending lots of time on these activities as well as others which drive gender equality impacts on their time available to conduct research, write publications and grant proposals all of which are critical if they wish to be promoted.
- There is a lack of robust evidence-based data-gathering to determine the success of individual intervention strategies, and to think 'outside the box' about how to keep talented women, e.g. what should KPIs look like if you are part-time for some years? Or if you have had periods of maternity leave? Respondents stated that academic research on equality issues is focused on documenting inequality (and constantly updating the figures) and much less on assessing relative merits of interventions. Evidence base for sound policy decisions for institutions is lacking. Trialling interventions and gathering evidence of their effectiveness is essential to this process. Interventions that work well in one workplace or sector may not translate to others. Approaches involving randomised controlled trials may be beneficial and substantial evidence exists to support this practice in the development of public policy.

Q4 Which of the recommendations made in the 2012 *Tapping All Our Talents* report do you believe should be prioritised going forward? (List maximum of 3).

- Improve provision of high quality, accessible childcare (1c)
- Introduce quality part-time employment (3c)
- Commitment to equal pay, developing progressive policies, championing gender equality, and negating the impact of maternity/paternity leave on long-term career (5b)

Q5 What further recommendations (if any) would you make to policy-makers, educators or employers to tackle gender inequality in STEM in Scotland? (List maximum of 3).

- The availability of increased and lower cost childcare (including after school care) would undoubtedly benefit both parents but more so mothers who are often left to deal with this responsibility therefore reducing hours, or working consolidated hours in order to juggle child drop offs and collection, or make up the time at night/weekends (where jobs are flexible).
- It was suggested that research councils should analyse and publish success rates by sex since reviewing is not double blind, which is disadvantaging for the people most likely to be negatively impacted by bias. Reducing/eliminating the emphasis on track record may help people who may have been disadvantaged by having career gaps or other factors whose proposals may be overlooked for reasons of unconscious [or conscious] bias. Research funding should be awarded on how well constructed the proposal is. One suggestion made was that proposals are reviewed online in two parts. The first part is blind (i.e. without the track record and information on who the individual might be) and reviewers submit their scores – then as soon as the score is submitted, they have access to the track record. This is then reviewed separately (immediately afterwards).
- To fund projects that aim to define what differing models of excellence might look like in different STEM sectors, then to explicitly train managers in promoting individuals with a range of experience and characteristics.

Section 2: *In detail*

Women in STEM in Scotland 2018

Q6 What lessons do you believe have been learned from initiatives undertaken since 2012 to tackle gender inequality in the STEM workforce across the public, academic and/or industry sectors?

Examples of good practice would be useful.

- The importance of outreach activities in tackling gender imbalance in the medium to long term and addressing stereotypes which are a barrier to female participation
- The need to use specific outcomes that reflect the different needs and drivers of different groups to evaluate equality and diversity
- Positive changes to address barriers to female participation benefit all genders e.g. high quality, accessible childcare can benefit men and women by supporting dual-career partnerships and encouraging everyone to work.
- Re Athena Swan charter: focus should be on activity to improve work lives of females in academia and not on overly-burdensome recording / evidencing

Q7 In 2018's economic, political and social context, what do you consider to be the key influencers (positive and negative) on gender equality in STEM in Scotland?

- It was suggested that the political landscape in Scotland is an interesting influencer – and that it is positive to see female leaders of the main political parties, and LGBT represented in government – all of this raises awareness and gives hope for a change in culture
- It was stated that the media have a disproportionate influence (with regard to reinforcing gender stereotypes)
- Scottish government focus on socially progressive policies, in comparison to UK government approach
- Positive female role models
- Affordable childcare (or lack of)
- Occupational segregation

Q8 To what extent do you believe that the issue of gender inequality in STEM is being recognised as a priority and to what extent do you believe that rhetoric is being met with action?

- Respondents suggested that there is good, wide-spread awareness of the problem(s) and actions are seen to be undertaken. However, it is less clear what the effectiveness and impact of specific actions has been. There was a lack of awareness of studies, for example, that are evaluating the effectiveness of various actions to improve gender balance in STEM. The issue of how to measure the ongoing impact of introducing changes in early-years education was also raised.
- It was recognised that efforts are clearly being made but there remains a challenge around wider societal problems including unconscious bias and occupational segregation.

Education

Q9 What do you believe should be done to encourage more girls and young women to engage with STEM subjects in early years, primary and secondary education?

- Respondents stated that there is clear, peer-reviewed evidence that biases and conditioning toward traditional gender roles start very young. While localised initiatives may be in place to support teachers and schools, it was felt that there is a lack of a coherent structure or plan for how to tackle this problem and that while good resources are available, current approaches leave teachers to seek these out on their own time and trial interventions with no real support. For example, formal training of nursery, primary, and secondary school teachers on when and how to intervene would be extremely beneficial. This sort of training

should be mandatory and rewarded. Likewise, training for career advisors should be improved.

- Boys need protection from gender bias, too. School can be filled with direct and indirect reinforcing and contradictory messages about stereotypes and gender roles. Boys may face rapid, overly harsh punishments for perceived bad behaviour while girls may experience similar harshness around things like dress codes. In other circumstances, certain boys' behaviours and attitudes, particularly sexist behaviours, may be dismissed ("boys will be boys"). Likewise, tolerance of girls' bad behaviour may be higher.
- Respondents suggested that science teaching in primary schools should be valued and gender stereo-typed play from nurseries and primary schools removed. It was suggested that Physics should not be taught by Chemists and Biologists at secondary school, as it was felt that this can lead to rote teaching which discourages children. It was raised that when pupils subsequently need to pick a single science, they are more likely to pick a science that their friends have chosen (e.g. the girls pick biology).
- Focused female-only schemes to nurture talent
- Continued Scottish Government drive to force institutions to consider whether/how they can make an impact on gender imbalances in particular courses

Q10 What innovative or impactful practice do you know of or believe should be taking place in universities and colleges to tackle issues of gender disparities in STEM subjects? What do you think can be done to embed STEM gender equality thinking across universities and colleges?

- The introduction of quality part-time employment was cited as an example. E.g. are there statistics on what levels of employees take part-time work? e.g., lecturer/post-doc vs professor/senior management? While most people traditionally had children in the earlier stages of their career, where part-time might have less of an impact, with statistics on the age of parents increasing to late-30s/40s, how does this affect staff in more senior positions where part-time arrangements are not that practical?
- In a general sense, it was suggested that gender equality should be strongly embedded into KPIs with a link to universities' funding. Respondents stated that, at the moment, women into STEM activities tend to land on female staff (who are eager to get involved in the hope that it will help things improve) but they are the ones most likely to be already suffering from the competing pressures of work and family commitments. Therefore men should be given an incentive to contribute.

Cultural Change

Q11 In what ways do you believe industry can lead by example to tackle inequality within workplace culture?

- High quality part-time work
- Subsidised nurseries
- More agile and flexible working opportunities
- Role models

Q12 What do you believe are the most effective ways to challenge and change deep-rooted attitudes and institutional culture in order to improve gender equality in STEM?

- Bystander programmes
- Colleagues expressing biased views/prejudice should be challenged by peers. There should be a clear reporting mechanism and also clear university training on what kind of behaviour/comments are not acceptable
- Mandatory and meaningful diversity training for all staff, especially managers, taught the way first aid training and health and safety training are, where training must be refreshed on a regular basis. Offer a range of trainings to satisfy this requirement so staff are not sitting through the exact same programme in these refreshers and instead offer new, challenging curriculum.
- Some aspect relating to contribution to equality should be included and valued in staff annual development reviews.

Q13 How do you suggest culture change can be measured in a meaningful way?

- Encouraging open discussion and transparency, and not relying overwhelmingly on the women and LGBT and BME representatives in the institutions to gather the evidence (e.g. for Athena SWAN applications), to fight the battle and to try to instigate change. In the end, everyone has to be on board for the culture in our institutions to become more inclusive, not just women and minority groups.
- Individual academics and Universities as a whole, have an extremely strong track-record of responding to Government initiatives (e.g. REF/TEF, Impact Case studies, Scottish Government outcome agreements for Universities etc). If you can design a system that rewards both the individual academics, and the University as a whole, for achieving gender diversity, then talented staff will find a way of making it happen.
- Staff surveys

- Gender pay statistics