Gender:
Actions to Achieve Positive Change

Workshop 1
Challenging gender imbalances in degree courses

Scottish Funding Council
Promoting further and higher education

Scottish Wider Access Programme

Gender equality conference

15th June 2015

Scottish Wider Access
Programme

We are SWAP

Why?

'To get the education I didn't get at school'

'Yearning to do something with my life'

'Get a good job'

Changes?

'My sister used to say "get a grip" but now she's telling people that her sister is going to University'

'I was a painter and decorator, I am going to make a great nurse'

Glad you returned to education?

'Absolutely' 'Definitely' 'Without a doubt'

Best bits?

'human biology,' 'self discovery' 'confidence' 'making friends'

How?

'Determination really'
'Support was immense by everyone at College they pushed me'

Scottish Wider Access Programme

SWAP overview

SWAP national

West - partnership of 9 Colleges and 8 HEIs

East - partnership of 5 Colleges and 11 HEIs

Funding from members and Scottish Funding Council. Small central team with a highly devolved structure utilising fully the talents of partners.

Our objectives:

1. Provide access programmes for adults
2. Create Structures for collaboration
3. Work with others to promote adults returning to education
4. Provide information, advice and guidance for adults returning to education

A little about SWAP

Programme for adults seeking to return to higher education but who have few or no Qualifications.

Target those living in most socially and economically deprived areas.

Full time one year programme delivered at local College with consortium progression routes to University partners.

Three elements of the SWAP model:

1. Broad curriculum: humanities, social sciences, education, science technology engineering and maths, nursing, allied health professions, medical studies – provide an entrance qualification.

2. Guidance - Preparation for Higher Education

3. Partnership working

Guess the programme

Guess the programme

Guess the programme

Guess the programme

some student thoughts

1) Motivation to return to education

2) How much did you factor in gender imbalance when you were thinking about your degree choice

What did your family / friends think

Would you have done this if you were younger

3) How did you feel on the programme. Was it a motivator / de-motivator or not really come in to your thoughts.

Who helped?

Where are we now?
'We are at university studying psychology, sociology, politics, philosophy, law, anthropology, languages, religious studies, primary education, social work …'

For us to think about

Getting in:
Staying in:
Moving on:

Practical measures to increase numbers of male students

in to nursing / Primary ed
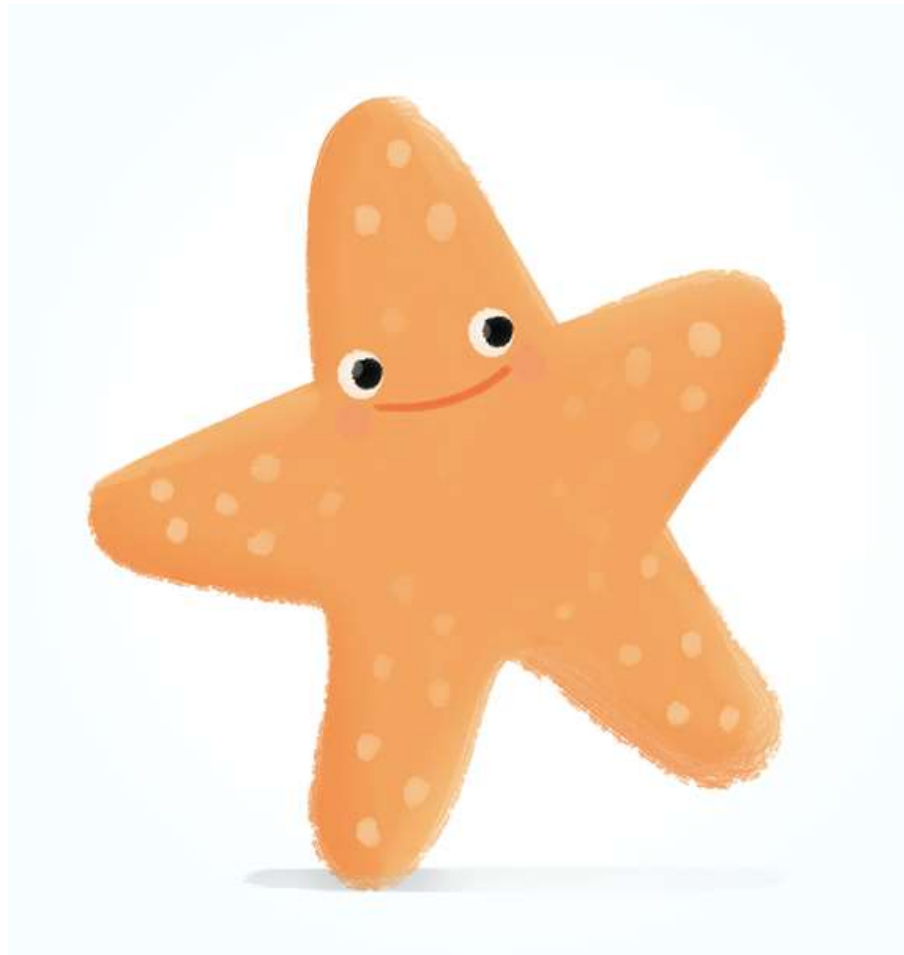
and

female students in to Engineering and STEM.

Where are we now?
"We are now at university studying biomedical science, marine biology, podiatry, occupational therapy, physiotherapy…'

the scottish funding council

Scottish Wider Access
Programme

Contact us

Kenny Anderson and Lesley Dunbar

Scottish Wider Access Programme

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Email: swapwest@scottishwideraccess.org / swapeast@scottishwideraccess.org

Web: http://www.scottishwideraccess.org

For further info, our community engagement work, new partnerships and a chat

Gender:
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Workshop 2
Gender plus: understanding the multiple factors that influence student access

Scottish Funding Council

Promoting further and higher education

Gender plus: understanding the multiple factors that influence student access

Gemma Tracey & David Bass

Senior Policy Advisers

Gender - actions to achieve positive change, Stirling, June 2015

Advancing equality and diversity in universities and colleges

Icebreaker

Participation rate of women in engineering among entrants?

Participation rate of women in engineering from SIMD20 postcodes: ?

Participation rate of women in engineering from families with no parental HE experience: ?

Participation rate of men in education among entrants: ?

Participation rate of men in education among young entrants (under 21) from SIMD20 postcodes: ?

Participation rate of men among young entrants (under 21) in education: ?

Participation rate of men in education from SIMD20 postcodes: ?

Advancing equality and diversity in universities and colleges

Icebreaker

Equality Challenge Unit

Participation rate of women in engineering among entrants: 16.5%

Participation rate of women in engineering from SIMD20 postcodes: 17.4%

Participation rate of women in engineering from families with no parental HE experience: 13.9%

Participation rate of men in education among entrants: 22.4%

Participation rate of men in education among young entrants (under 21) from SIMD20 postcodes: 14.6%

Participation rate of men among young entrants (under 21) in education: 20.6%

Participation rate of men in education from SIMD20 postcodes: 17.3%

Advancing equality and diversity in universities and colleges

Defining intersectionality

= According to an intersectionality perspective, inequities are never the result of single, distinct factors. Rather, they are the outcome of intersections of different social locations, power relations and experiences.

Source: The Institute for Intersectionality Research & Policy, SFU

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Intersectionality is **"the best chance for an effective diagnosis and ultimately an effective prescription."**

Source: Hancock, 2007, p.73

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Examples

=Women in school from low SES backgrounds discriminated against in math w/ implications for subject choice
=Disability types, gender and SIMD
=Older women who've been away from labour market due to child birth/care face barriers in accessing college due to issues getting references
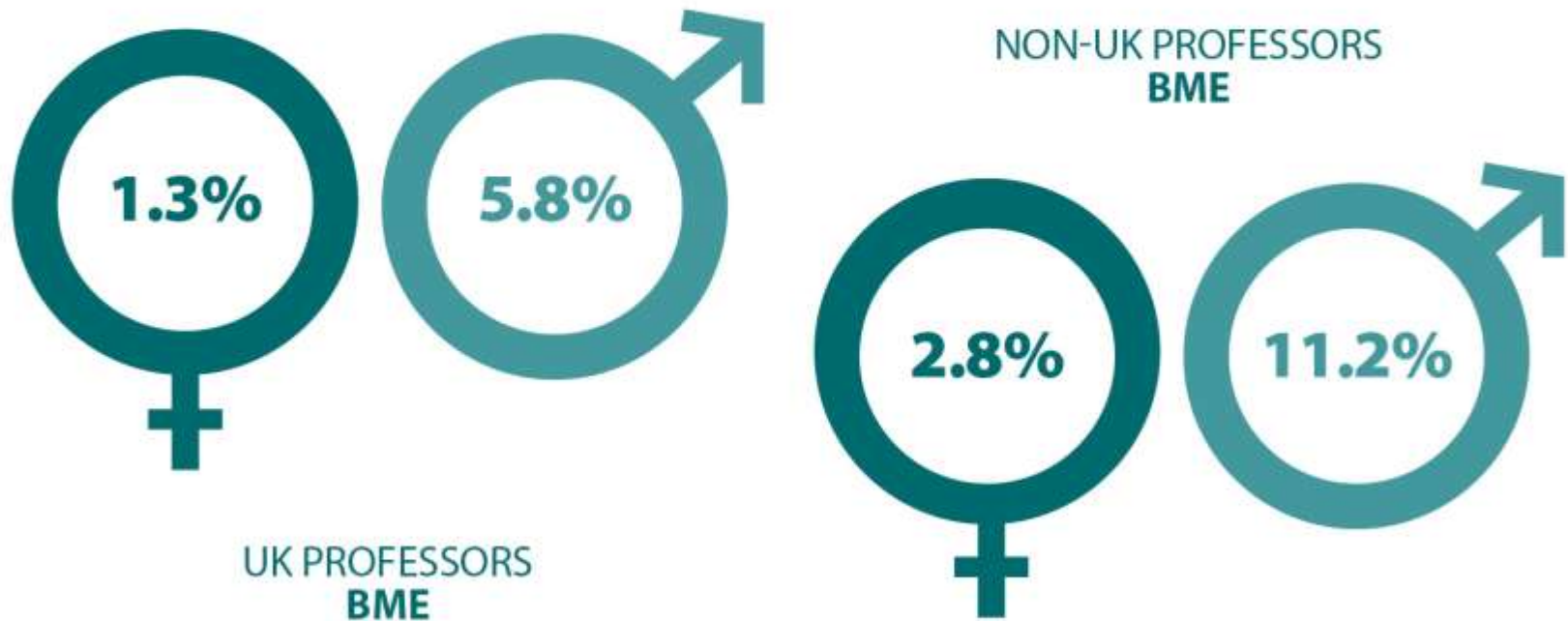=Articulating students – more gender segregation in STEM subjects

Advancing equality and diversity in universities and colleges

Examples

14: TOP 10 MAJORS WITH THE HIGHEST MEDIAN EARNINGS FOR WOMEN*

First Field of Degree 5% code	Percent Female	Median Female Earnings	Percent Male	Median Male Earnings
Pharmacy Pharmaceutical Sciences and Administration	42	100,000	58	110,000
Information Sciences	26	75,000	74	65,000
Chemical Engineering	23	72,000	77	92,000
Computer Science	22	70,000	78	79,000
Electrical Engineering	7	70,000	93	86,000
Mechanical Engineering	7	70,000	93	80,000
Industrial and Manufacturing Engineering	17	67,000	83	80,000
Computer Engineering	14	67,000	86	80,000
Business Economics	30	64,000	70	80,000
Civil Engineering	13	62,000	87	80,000

* Full-time, full-year workers with a terminal Bachelor's.

Advancing equality and diversity in universities and colleges

Only **5.8%** of UK professors were Black and Minority Ethnic (BME) men and only **1.3%** of UK professors were BME women. The difference was also apparent in non-UK professors where **11.2%** were BME men and **2.8%** were BME women.

1.3%

5.8%

NON-UK PROFESSORS
BME

2.8%

11.2%

UK PROFESSORS
BME

Equality Challenge Unit

www.ecu.ac.uk **E:** info@ecu.ac.uk

The learner journey

Activity

Advancing equality and diversity in universities and colleges

The student journey

= So, we have mapped out the student journey and the multiple and overlapping factors that influence student access

= We asked you to think about how the different factors might combine. Have any stood out?

Examples of programmes

= Relevant practice from:

- USA
- England
- Scotland

= Common methodology

= Emphasis on intersectionality

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ECU's Attracting Diversity project

= A similar methodology

- – Multifunction teams

- – Quantitative analysis/review of data

- – Qualitative research

- – Development of tailored initiatives

= Questions from the project on intersectionality

- – What are the differences in M/F BME applicants?

- – How do we attract more students with disabilities and from more deprived postcodes?

- – What other factors could we consider to better understand barriers for rural applicants?

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Example: using intersectionality to better target specific groups

Equality Challenge Unit

national center for
women&
INFORMATION TECHNOLOGY

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Inicio   Recursos   Videos   Perfiles   Enlaces

Latinas & Tecnología de la Información

El Centro Nacional para las Mujeres y la Tecnología de la Información (National Center for Women & Information Technology, NCWIT por su sigla en inglés) ofrece recursos para animar a las niñas y las mujeres a dedicarse a la computación, una carrera apasionante, creativa y bien remunerada. El sitio web Latinas en computación del NCWIT incluye útiles tarjetas

Advancing equality and diversity in universities and colleges

Example: using intersectionality to reach multiple groups

Student Demographics

Category	Incoming Students	CS101X
White Men	49%	26%
Asian Men	10%	7%
Hispanic/Other Men	9%	5%
Black Students	6%	23%
Women Students	26%	49%

White alone, percent, 2013 (a)	70.8%
Black or African American alone, percent, 2013 (a)	19.7%
American Indian and Alaska Native alone, percent, 2013 (a)	0.5%
Asian alone, percent, 2013 (a)	6.1%
Native Hawaiian and Other Pacific Islander alone, percent, 2013 (a)	0.1%
Two or More Races, percent, 2013	2.7%
Hispanic or Latino, percent, 2013 (b)	8.6%
White alone, not Hispanic or Latino, percent, 2013	63.6%

Equality Challenge Unit

Nottingham Trent University's 'Closing the Gap' initiative

= Focus on young male BME applicants in widening participation and tackling 'BME attainment gap'

= **Key factors:**

= Equality & Diversity and Widening Participation Data Analysis Reports produced for each School:

– Equality and diversity groups, and socio-economic background.

– Student lifecycle: admissions, progression, degree classification, graduate level occupation.

= Understanding local/student context

= The Vice-Chancellor has endorsed this project as his first 'E&D theme' lead.

= University wide Working Group.

= Long term approach

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Learner portraits

Activity

Before you leave

What 1 thing are you going to do differently back in your institution as a result of this workshop?

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Workshop 3
Achieving non-gendered pathways from school choices to employment outcomes
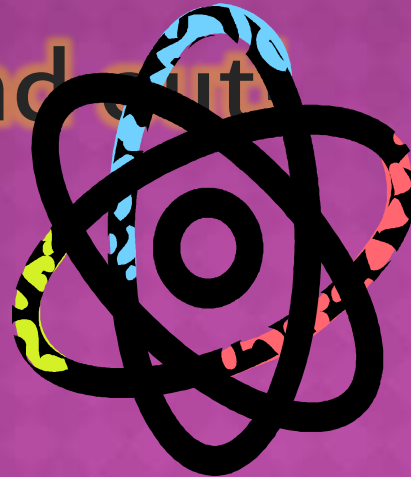
Scottish Funding Council
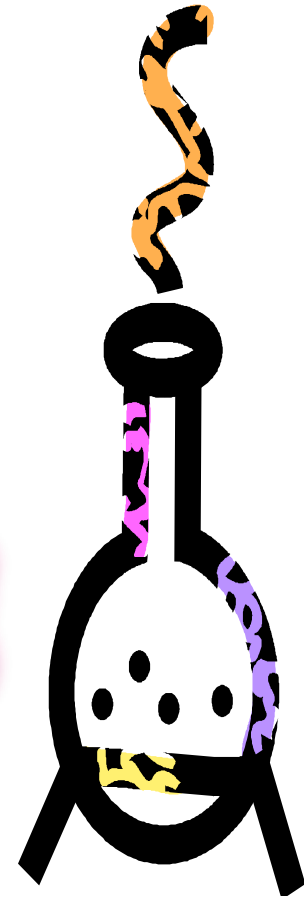Promoting further and higher education

S.T.E.M club

what have we learned in S.T.E.M club? Now you'll find out.

By
Paige mcmillan
S.T.E.M club
2014!

what is S.T.E.M?

- S cience
- T echnology
- E ngineering
- M aths

What have we done?

- We got our DNA
- Doodle bugs
- Oil Rigs
- Acid rainbows
- Slime
- Noisy putty
- Maths cat
- Building a computer
- After eight mint experiment
- Games Design

And lots more!

ENGINEERING - MAKING AN OIL RIG
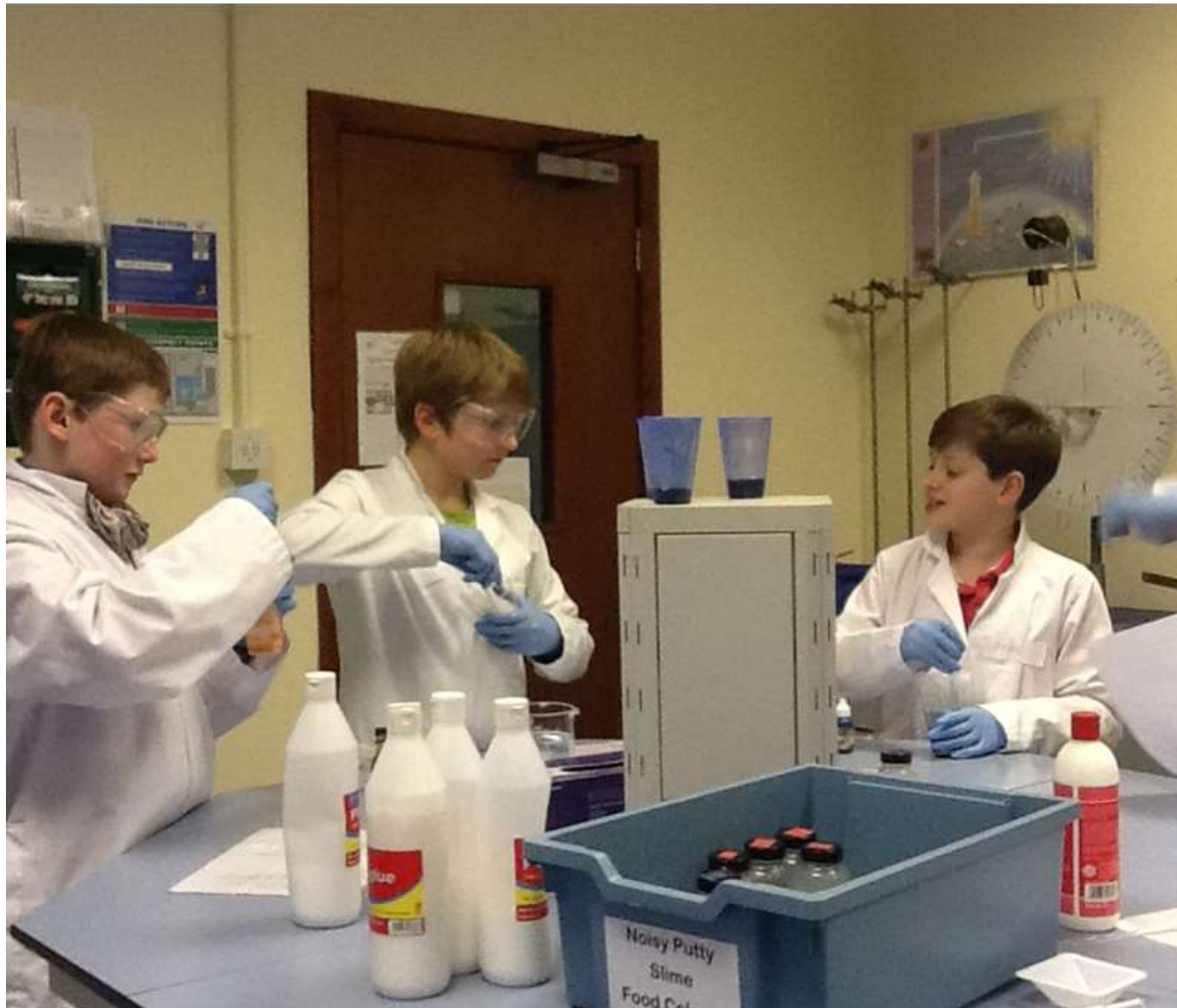
BIOLOGY – STEM CELLS AND MICROSCOPES

HUMAN ANATOMY

CHEMISTRY

CHROMATOGRAPHY

MAKING SLIME

GAME DESIGN – WORLD WAR WABBIT

A Wabbit = a Rabbit

MR WABBIT

Mr Wabbit is an evil Rabbit who is trying to take over the animal world with his army of squirrels!

SQUIRREL ARMY

MARK JONES

Army general sent on a secret mission to stop MR Wabbit when he goes through the portal he turns into a dog. This is you and only you can stop MMR WABBIT.

TOM DAR WOOF

Tom is a dog in an organisation against MR WABBIT. You can also play as Tom

A TYPICAL ROTATION

STEM Club rotation			
	Falkirk Tuesday	Falkirk Thursday	
Week 1	Intro to forensics Who killed Kenny	Intro to forensics Who killed Kenny	
Week 2	Intro to chemistry Slime and noisy putty	Making Oil Rigs	
Week 3	Engineering project doodlebugs	Rockets and explosions	
Week 4	Engineering project Was kit cars	Intro to chemistry Slime and noisy putty	
Week 5	Computing software Gamemaker Alice	Engineering project Was doodlebugs	
Week 6	Computing hardware Raspberry pi Robotic arm Mindstorm	Engineering project Was kit cars	
Week 7	Rockets and explosions	Computing software Gamemaker Alice	
Week 8	Making Oil Rigs	Computing hardware Raspberry pi Robotic arm Mindstorm	

SCOTS

School
College
Opportunity
To
Succeed

The Structure

› Eight taster sessions over 24 weeks

› 4 week specialised activity

› Taster sessions from:

- Science
- Broadcasting
- Business
- Construction Technology
- Construction (Carpentry and Joinery)
- Early Education
- Health care
- Hospitality
- Hair and Beauty
- Engineering
- Sport

The Figures

› SCOTS Stirling 60% female

› SCOTS Falkirk41% female

Next Steps

› Automatic Progression to:
  – SfW Engineering
  – SfW Construction
  – SfW Early Education
  – NPA Sound Production

› [SCOTS](#)

Gender:
Actions to Achieve Positive Change

Workshop 4
Let's Talk About Sex: utilising funding to kick start STEM gender equality

Scottish Funding Council

Promoting further and higher education

Lets talk about sex:
Utilising funding to kick start STEM gender equality

Allison Johnstone,
Equate Scotland

Dr Sandra Cairncross,
Edinburgh Napier University

EQUATE Scotland
For Women in Science, Engineering & Technology

Edinburgh Napier
UNIVERSITY

Strategic Intent

- Commitment to widening access, promoting diversity.
- Reinvigorate gender equality activity at Edinburgh Napier
- Look wider than academic schools
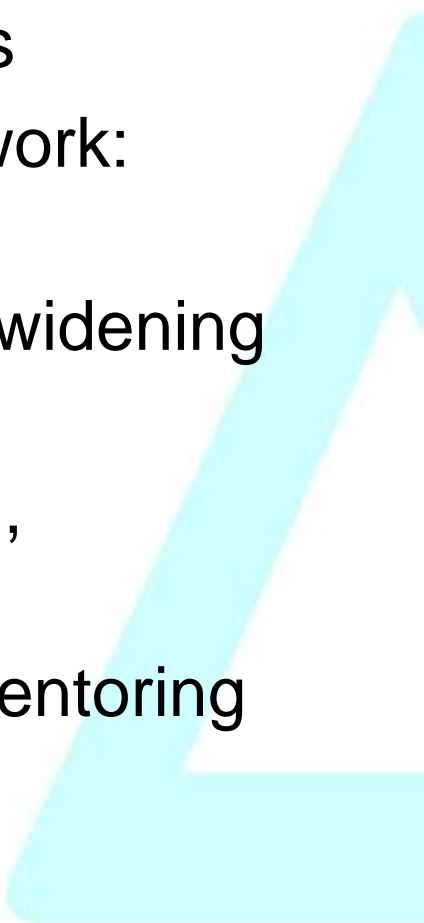- Decision to focus on engineering and computing initially

Institutional Capacity to Gender Mainstream: Source Y. Galligan/Yellow Door
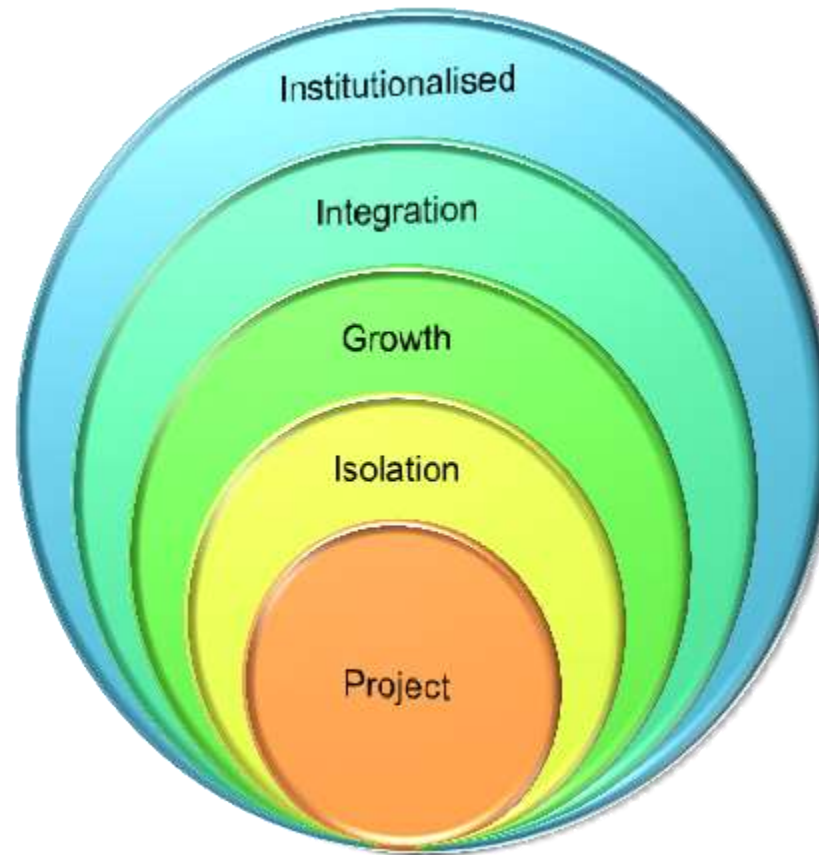
History & Background

- Equate Scotland (Scottish Resource Centre for Women in Science, Engineering & Technology) hosted by Edinburgh Napier since 2006
- Research carried out at Edinburgh Napier into women students' experiences leading to ssf4f being established
- Lead on to Equate developing the Interconnect student network across Scotland

Research URL: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=4720299&tag=1

What we did: Recruitment and Retention

- Re-invigorated the Connect student groups
- Recognised the wider implications of this work: considered the pipeline
- Open dialogue with planning, admissions, widening access, recruitment and academic schools
- Gender considered in open days, outreach, marketing
- Expanded current provision of employer mentoring

Dear FIRST NAME

Thanks for your recent application to Edinburgh Napier University.

We just wanted to let you know about **Connect**: the Edinburgh Napier network for women studying computing, engineering or the built environment.

We get together regularly to meet inspiring females from industry, go on site visits, meet potential employers and most importantly socialise.

Below you can hear about our recent site visit to a Balfour Beatty construction site in Edinburgh, but if you'd like to find out more please check out our facebook groups or get in touch.

Best wishes

Connect Student Group

Balfour Beatty Site Visit

The 'Connect: Women in Engineering' group recently had the opportunity to undertake a site visit with international construction company Balfour Beatty. Lise Thenault, Edinburgh Napier MEng Civil Engineering graduate (2011), who is an engineer with the company arranged this and came along to the university beforehand to prepare us for the visit and also to talk about her experience so far working in the construction industry.

We were given a guided tour around the site by Lise and the site engineer Tanvir Miah and then had the opportunity to see how what we are learning at university translates to a real construction project, make some new contacts in industry and get some on-site experience in preparation for our future careers.

"Being involved with Connect has given me a great opportunity to network with my fellow students, staff and many inspiring women in the industry. The group has also helped me to realise the potential and opportunities out there for me upon graduating with a computing degree from Edinburgh Napier University."
Tracey, first year School of Computing student

Progression Year to Year
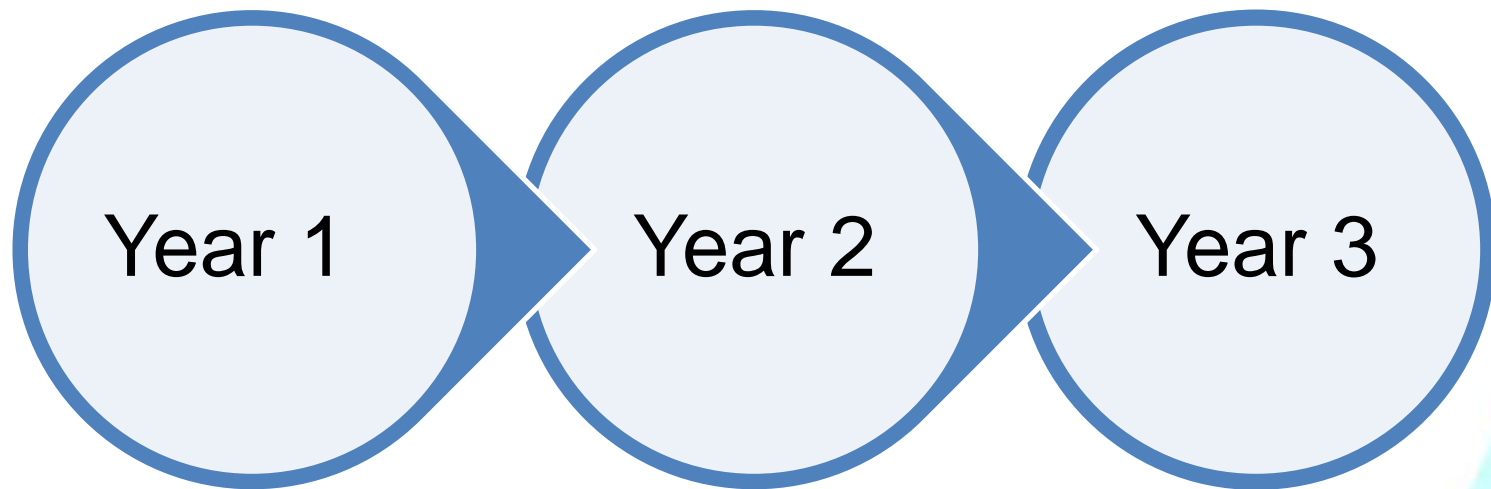
Year 1

- Work largely held within Equate
- Student Champions linked Connect and Interconnect
- Quarterly governance meetings within university

Year 2

- Academic champions recruited to bridge the gap and take dialogue within Schools
- Moving beyond separate project

Year 3

- Post funded within Schools to support Connect Groups
- Athena Swan work re-focused

Speed networking

3 minutes then move on (10 mins in total)

- Your response to this?
- How would it work in your institution?
- Other factors to consider?
- Perceived barriers/benefits?
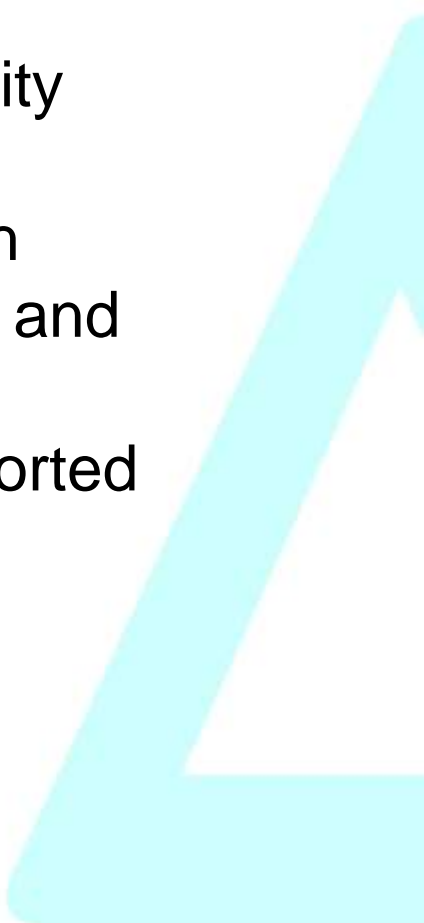- What have you done in your own institution?

Key Challenges

- Moving from project status: embedding work within planning cycles
- Data, data, data:
  - reconciliation between school and university level
  - developing a shared understanding of what the data tells us
- Issue multi-faceted
  - need to work with others to maximise impact
  - deep change takes time

.... and we are overcoming these !

Impact

- Re-invigorated a dialogue within the university around gender equality
- Kick started our Athena Swan process which has resulted in our University Bronze award and also widened out the discussion further
- Enhanced the student experience and supported students to develop confidence and employability skills

"I really enjoyed the wiki event and I felt as if I learnt a lot. It is a shame that so few wiki editors are women, so I am pleased to have made a small difference!"

'Women are still under represented in the workplace and it's still tough out there for us. Connect gives female students a good base from which to start and helps students to build on our academic and professional skills.'

'Before joining connect. I was feeling that I am alone and I have no future in Engineering as it is mainly men field. Now I am much more confident and I believe that women can do what the man cannot.'

Next steps: Discussion

10 minutes

- Reflections on the workshop?
- Key learning?
- Key action point?
- Changes you'd like to see?

www.equatescotland.org.uk

http://www.napier.ac.uk/faculties/engineering-computing-creative/Pages/Connect.aspx

http://www.napier.ac.uk/policies/equality-diversity/Pages/Athena-SWAN.aspx