



School of Mathematics
University of Bristol

STEMM Department Application
Silver Award

November 2017

Institution Award
Bronze - 2017



Legend

A^{A1} Refers to current action

I^{AS1} Refers to impact from previous Bronze award action

School Refers to the School of Mathematics

University Refers to the institution, University of Bristol

Percentages are displayed with 0 decimal places so have been rounded up or down as appropriate
Figures provided in this application are based on full person equivalent
Benchmarking data is taken from the Higher Education Statistics Agency

Glossary

CDT	Centre for Doctoral Training
DEDI	Director of Equality, Diversity and Inclusion
DUS	Director of Undergraduate Studies
EDI	Equality, Diversity and Inclusion
EPA	Employability Partnership Agreement
EPRSC	Engineering and Physical Sciences Research Council
ERC	European Research Council
FPE	Full Person Equivalent
GCHQ	Government Communications Headquarters
GW4	Regional University network consisting of Bath, Bristol, Cardiff and Exeter
HESA	Higher Education Statistics Agency
HoS	Head of School
LMS	London Mathematical Society
PDRA	Postdoctoral Research Associate
PG	Postgraduate
PGR	Postgraduate Research
PGT	Postgraduate Taught
REF	Research Excellence Framework
SPARC	School Planning and Resourcing Committee
UG	Undergraduate
UKPSF	UK Professional Standards Framework

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT

An accompanying letter of endorsement from the head of department should be included. If the head of department is soon to be succeeded, or has recently taken up the post, applicants should include an additional short statement from the incoming head.

*Note: Please insert the endorsement letter **immediately after** this cover page.*



Professor Jens Marklof FRS
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Equality Charters Manager
Equality Challenge Unit
7th Floor, Queens House
55/56 Lincoln's Inn Fields
London
WC2A 3LJ

22 November 2017

Dear Athena SWAN manager,

I consider it my key responsibility to create an environment in which every student and staff member can realise their potential, irrespective of disability, ethnicity, family background or gender. This letter demonstrates my personal vision and commitment to this end. My letter complements the detailed departmental strategy outlined in our Athena SWAN application, which I strongly endorse. I have been personally involved in the design of the application's action plan and will be responsible for its implementation.

I have two young children and share the responsibilities for their care with my partner, who works fulltime. This gives me first-hand experience of the demands on staff with caring responsibilities, and the positive effect even simple helpful arrangements by the line manager can have on an employee's work-life balance.

I make a point in not promoting excessive work hours; I do not send emails to staff in the evenings/weekends and arrange meetings only in core hours.

When the University Nursery was faced with the threat of closure, I joined the parents' campaign and wrote a personal letter to the University's senior management.

When the University proposed to extend lecturing to 8am-6pm, I argued very strongly for an adequate opt-out possibility for staff with caring responsibilities (which is now incorporated in the time-tabling) as well as extended childcare provision for students.

I actively encourage staff in taking parental leave, compassionate leave, or study leave (where I have put in place a new formal sabbatical procedure). When discussing requests for leave, I ensure I don't convey the impression that they have made life more difficult for their colleagues.

Our recruitment process pays particular attention to female applicants, and I personally review female applicants that have not been shortlisted. I am delighted for the School to have appointed four female lecturers in the past two years, which is more than half of all appointments made at this level. Bristol Mathematics has now its first female professor, Professor Corinna Ulcigrai, who started her career in Bristol in 2007 as an RCUK research fellow and has since built an outstanding research group around her.

My personal target is to have at least three female professors in Bristol by the end of my term as Head in 2020. This will be achieved through dedicated support of promotion cases and seeking external appointments.

An effective measure against subconscious bias is to celebrate the achievements of underrepresented groups in the profession. My plan for the new mathematics building is to develop with our undergraduates a permanent exhibition “Bristol mathematicians” that celebrates the diversity of our students, staff and alumni by showcasing individual successes and life stories, balanced across all age groups, genders and backgrounds.

The enclosed Athena SWAN application was prepared by our self-assessment team under the leadership of Professor Oliver Johnson, the School’s Director of Equality and Diversity. I can certify that the data and information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the School.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Jens Marklof', written in a cursive style.

Professor Jens Marklof FRS
Head of School

2. DESCRIPTION OF THE DEPARTMENT

Please provide a brief description of the department including any relevant contextual information. Present data on the total number of academic staff, professional and support staff and students by gender.

The School is a leading centre for research and teaching in Mathematics in the UK, ranked **5th for research** in the 2014 REF, and **9th for teaching** in the 2018 Complete University Guide. It is a large Mathematics department by national standards, with the 5th largest number of staff submitted to the 2014 REF.

To coordinate research, the School contains 5 Institutes: Applied, Mathematical Physics, Probability, Analysis and Dynamics, Pure, and Statistical Science, though many staff belong to more than one Institute, strengthening interdisciplinary collaboration. There is a strong research ethos in the School, with over 200 seminars each year across 20 categories and substantial research grant income (£11.8 million of new grants started in the last two years). The School values **interdisciplinarity** and its members collaborate locally, nationally and internationally, including supervising PhD students from CDTs. A notable collaboration is with GCHQ with whom the School co-established the **Heilbronn Institute** in 2005; it funds 20-25 post-doctoral fellows and many seminars, conferences and visitors.

Figures 1 and 2 show the overall gender balance. In 2015/16 there were 34% female undergraduates, 30% female postgraduates and 15% female academics. Professional Services staff were 93% female on average, though in 2016/17 two additional posts were funded, with one female and one male appointed, slightly increasing the male percentage to from 7% to 11%.

Figure 1: Total number of staff by category and gender

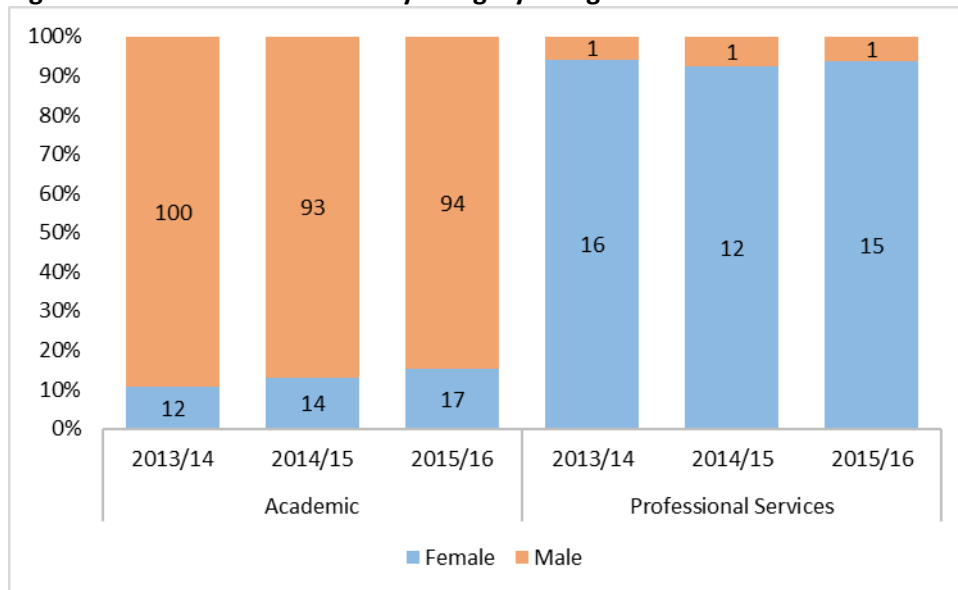
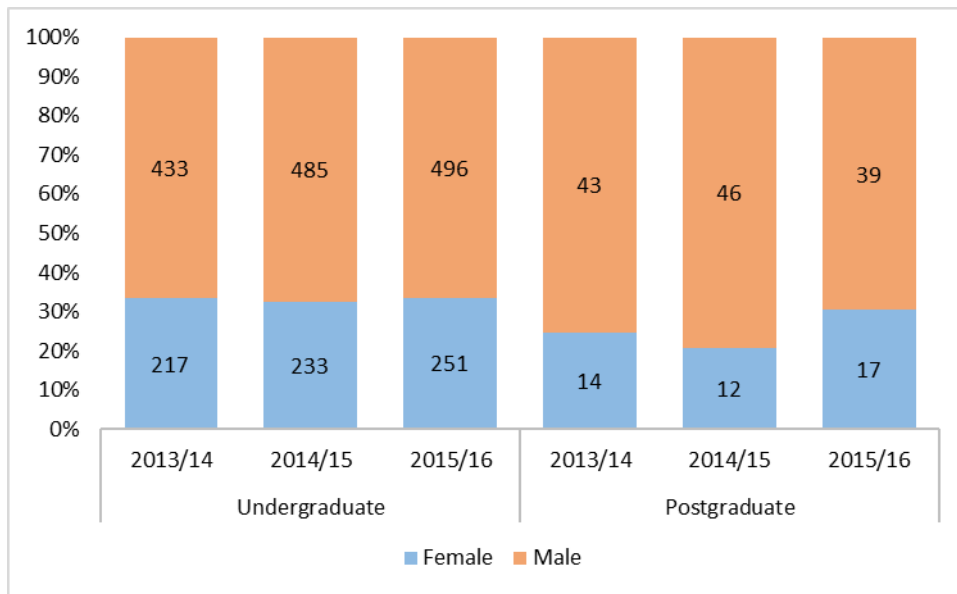


Figure 2: Total number of students by category and gender



The School has ownership (including responsibility for progression decisions) of **11 UG programmes** with high entrance requirements. Our single honours Mathematics degree has an A-level tariff of A*A*A (with A* in Mathematics) or A*AA (including both Mathematics and Further Mathematics), although we make contextual offers to Widening Participation candidates. There have been **two PGT programmes** in the School; one has been discontinued, however a new MSc in Mathematical Cybersecurity will start in 2018/19. The majority of PGRs are studying for PhDs and a handful of students study the Mathematics by Research MSc.

Figures 3 and 4 show staff pathways. For academic staff, there are clearly defined procedures determining changes between positions, with different criteria for promotion, progression and movement. Professional Services staff are all administrative (services such as IT, Finance, HR are centralised).

Figure 3: Career pathways for academic staff

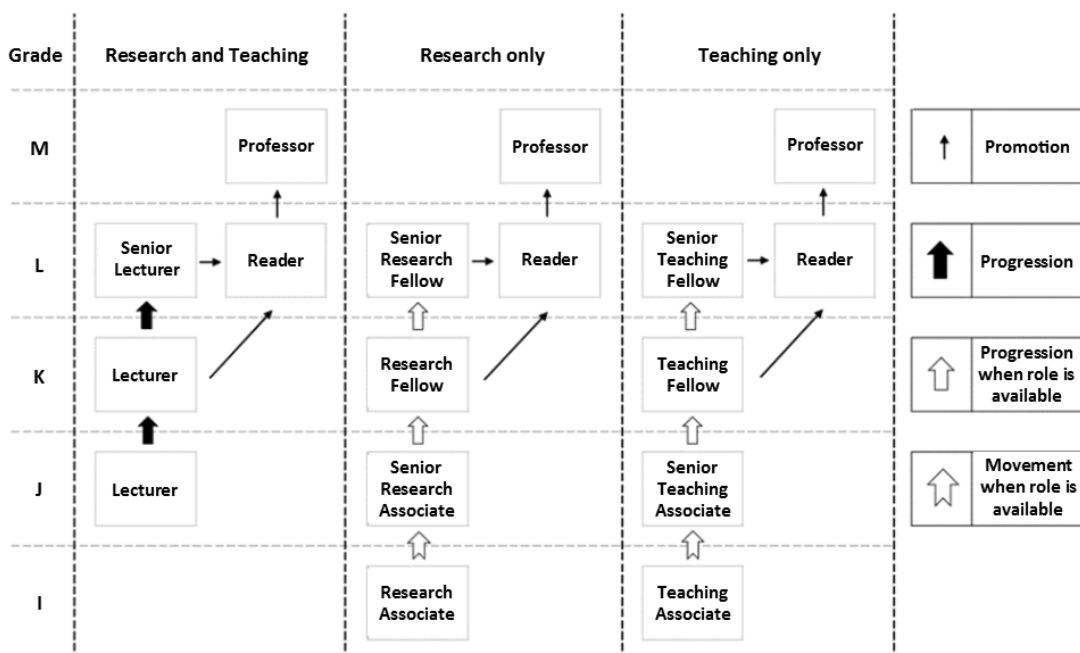
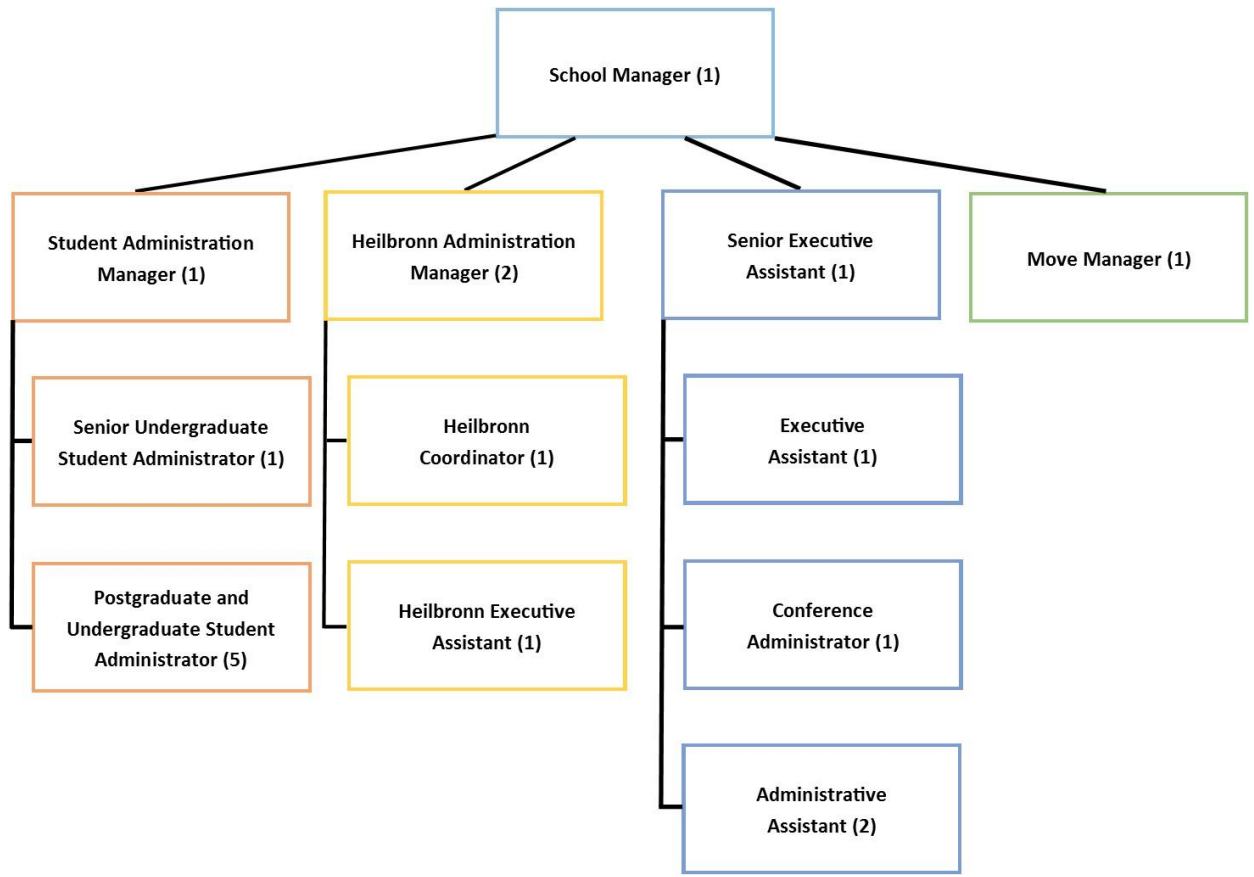


Figure 4: Professional Services Staff Organisation Chart in the School of Mathematics 2016/17










The School is currently housed in two buildings (separated by a 5-minute walk) which creates challenges in maintaining a sense of community. Female staff and students tell us that they feel this keenly, and given their relatively small number, it would be particularly problematic if they could not meet other female members of the School. Activities are organised within the School to mitigate this, including the **Women and Non-Binary People in Maths network and lunches**, Colloquia followed by drinks (four per term with equal number of male and female speakers), the Welcome, Winter, and End of Year parties, Afternoon Tea for Pathway 2 staff, social media presence and the newsletter. In 2018 the School will move into a **single building** (see Section 7 for details).





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3. THE SELF-ASSESSMENT PROCESS

Describe the self-assessment process. This should include:

- (i) A description of the self-assessment team

	Name	Maths Role	SAT Role	Biography
	Oliver Johnson	Chair of the SAT and Director of Equality, Diversity and Inclusion (DEDI). Professor of Information Theory	Chair	Member of Faculty EDI Committee. Mentor for staff and PhD students. Took paternity leave for his two children.
	Anna Coates	Undergraduate Student Administrator	Administrative Lead	Worked in HR before joining Maths in 2017. Engaged with inclusivity staff networks. Leads a staff prayer group.
	Brian Conrey	Professor of Number Theory	Academic Staff Representative	Executive Director of the American Institute of Mathematics. Has three children and two grandchildren.
	Kevin Hughes	Heilbronn Research Fellow	Postdoctoral Representative	Previously postdoc representative on Edinburgh Mathematics E&D Committee and has passed on best practice from there.
	Kathryn Leeming	Mathematics PhD Student and Teaching Support Assistant	Postgraduate Student Representative	PhD (2nd year). Studied Mathematics MSci at Bristol 2011-2015. Interested in undergraduate and postgraduate student experience.
	Sam Livingstone	Research Associate	Postdoctoral Representative, Data Analysis	Involved in UCL Athena SWAN application during his PhD, has passed on best practice from there.
	Richard Porter	Senior Lecturer in Applied Mathematics and Undergraduate Admissions Tutor	Academic Staff Representative and Admissions	Lecturer at Bristol. Undergraduate Admissions Tutor. Interest in unconscious bias.

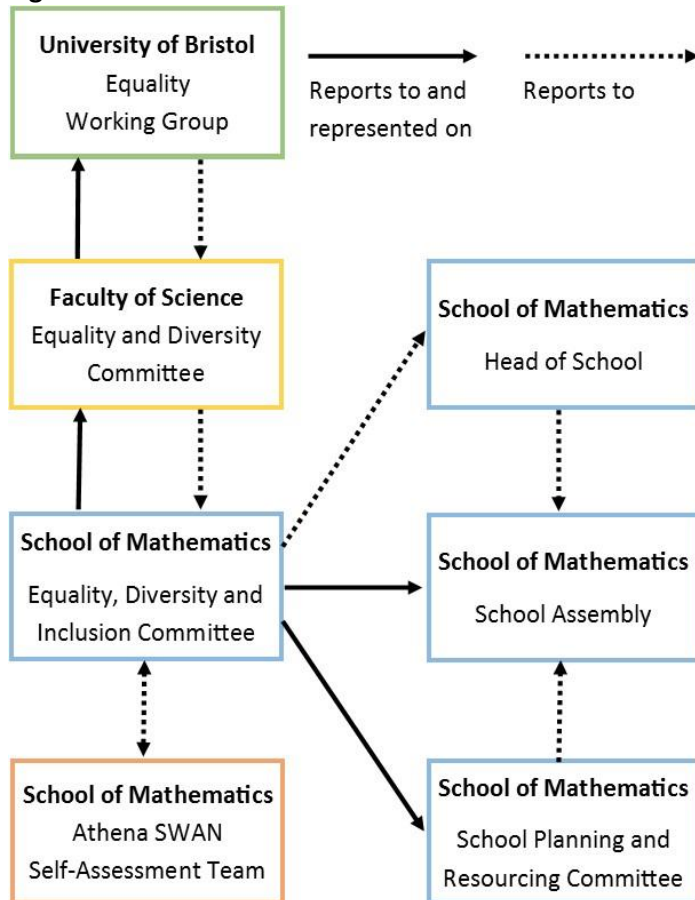
	Name	Maths Role	SAT Role	Biography
	John Russo	Lecturer in Applied Mathematics and Royal Society University Research Fellow	Academic Staff Representative	Lecturer and Royal Society University Research Fellow.
	Kirsten Slater	Student Administration Manager	Professional Services Staff Representative	Worked in various administrative roles at Bristol since 1997. Interested in equality of opportunity.
	Nina Snaith	Reader	Academic Staff Representative	STEMM Mentoring Circle Leader. Primary carer for two children and a disabled adult. Leads female initiatives.
	Corinna Ulcigrai	Professor of Pure Mathematics	Academic Staff Representative focused on flexible working and career breaks	ERC Starting Grant. Leads a research team. Has two children.

The Self-Assessment Team is part of the Equality, Diversity and Inclusion (EDI) Committee, meeting at least three times a year, with members communicating using a dedicated email list in between meetings. The Chair is appointed by the HoS, and any potential members who express interest can be co-opted by the committee throughout the year. The Chair ensures a representation of academic staff, professional services staff and students as well as a balance of genders.

The DEDI attends termly meetings at Faculty level, chaired by the Dean of Faculty, where issues from across the Science Faculty are discussed and best practice is shared. This Faculty EDI Committee, and EDI matters in general, are supported by the dedicated university team within HR.

(ii) An account of the self-assessment process

Figure 5: EDI structure



In September 2013, the Head of School appointed a **Director of Equality, Diversity and Inclusion (DEDI)** who is also the Athena SWAN lead. At that stage, the Self-Assessment Team was established based on volunteers, ensuring that it represented the diversity of the School. It has continued to meet on average four times per year, and has successfully carried out bronze actions G2, G4, G5, UG5 and PG8.

I G2, G4, G5, UG5, PG8 Have created EDI intranet resources, surveyed staff and monitored staff, UG and PG data.

In August 2016, the first School DEDI, Dr Vanessa Didelez, left the University and was replaced by Professor Oliver Johnson. The EDI Committee has a representative (Dr Nina Snaith, not the DEDI, to increase female representation on an 'attendance only' basis, see section 5.6iii) on the School Planning and Resource Committee (SPARC). SPARC feeds into the School Assembly chaired by the HoS, with the DEDI making a verbal or written report at each School Assembly.

The first EDI Committee meeting of the academic year 2016/17 introduced new members to the SAT and all agreed upon the aspiration to apply for the Silver Award. Following this, an HR Diversity Officer attended the next meeting to describe the application process and changes to regulations and requirements since the School's Bronze application in 2014. The third EDI Committee meeting of the year focused almost entirely on the application, analysing data and creating a plan for submission.

Following the committee meetings, the SAT held several Athena SWAN-specific meetings to write the application together, and information and updates were regularly disseminated to all team members by email. An online shared drive was created where team members could **work collaboratively** on draft

documents. According to their expertise and interest, team members each led particular sections of the application, consulting appropriate staff, with drafts presented to the whole team for comment. Following this, the SAT split into sub-groups to focus on larger sections to update and improve the content. Finally, the SAT reformed as a group and made final amendments together both in person, by email, and via the shared drive. The whole application has been circulated to the School for information and comment.

The Chair of the SAT met regularly with the Administrative Lead, who has been responsible for collecting quantitative data and collating the application during the process, to ensure that the progress of the application is monitored.

The raw quantitative data was collected from central and faculty HR teams, Student Systems and Information and Strategic Planning and Governance, then extracted into relevant formats to be analysed.

In 2017 the SAT separately **surveyed** academic and professional services staff in the School, in order to gather additional qualitative data. Academic staff were surveyed previously as part of the School's Bronze application in 2014, providing comparison data. Such comparison was not possible for the professional services staff survey as it was not required in the previous Bronze application.

The application has been reviewed by a mock panel of SAT Chairs from other departments. Members of the SAT have attended the LMS Good Practice Scheme and GW4 EDI workshops. The final application is a result of **collaboration** between all SAT members, with data and information having been sought from staff both inside and outside the School.

(iii) Plans for the future of the self-assessment team

Following the November submission, a sub-group from the EDI Committee will be formed to continue the SAT and monitor the implementation of the action plan, using the Gantt chart in Section 8. They will report regularly back to the EDI Committee at each meeting and to SPARC and School Assembly which have Equality, Diversity and Inclusion as a standing agenda item.

Meeting minutes will continue to be uploaded to the staff intranet and the EDI webpage will be updated regularly. All staff in the School will be informed about ongoing initiatives through other School committees, the staff newsletter, and by email.

The DEDI will ensure that the team has a diversity of members each year, by approaching staff and students to join as appropriate. To ensure that appropriate balance is achieved, membership will not be based on departmental roles. Work will be distributed fairly amongst the SAT.

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4. A PICTURE OF THE DEPARTMENT

4.1. Student data

If courses in the categories below do not exist, please enter n/a.

Summary

- Undergraduate female numbers of 32-34% are slightly low by national standards, but above the national average for Further Maths A-level students.
- Embedding several Bronze initiatives to raise visibility of female role models during undergraduate recruitment led to an increase to 38% of accepted offers being from female students in 2015/16, maintained in 2016/17 admissions.
- In 2015/16 30% of postgraduates were female, compared with 33% of undergraduates, narrowing the previous gap.

(i) Numbers of men and women on access or foundation courses

N/a

(ii) Numbers of undergraduate students by gender

Full- and part-time by programme. Provide data on course applications, offers, and acceptance rates, and degree attainment by gender.

Admissions

Overall, student numbers are increasing and the percentage of female students is holding steady, like the national average. Notably, the range 32-34% is above the 29% of female students taking A-level Further Maths (although it is deliberately not a formal entry requirement to encourage diversity in applications, approximately 80% of our students have A-level Further Maths).

Undergraduate programmes do not have part-time study available. However, there are flexible options for students with extenuating circumstances, decided on a case-by-case basis.

Table 1: Total undergraduate students compared with national data

Sector	2013/14		2014/15		2015/16	
	Female	Male	Female	Male	Female	Male
School of Mathematics, University of Bristol	217	433	233	485	251	496
	33%	67%	32%	68%	34%	66%
Mathematical Sciences, UK Sector	13810	21760	13570	21945	13600	22525
	39%	61%	38%	62%	38%	62%

Figure 6: Percentage of female undergraduate students compared with national data

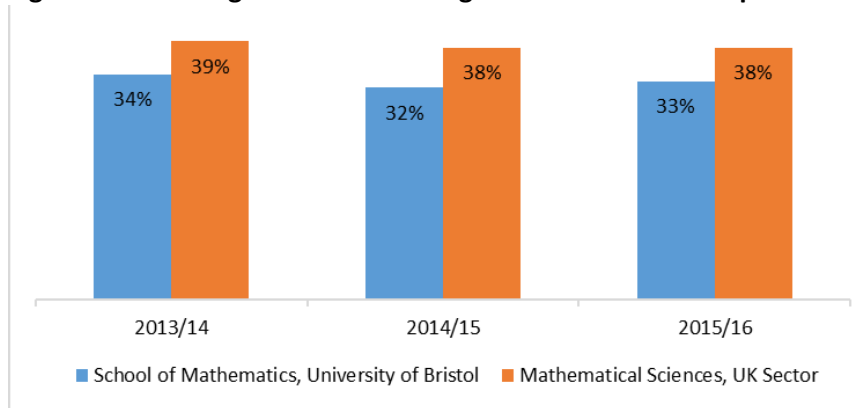


Figure 7: Number of full-time undergraduate students on single honours programmes

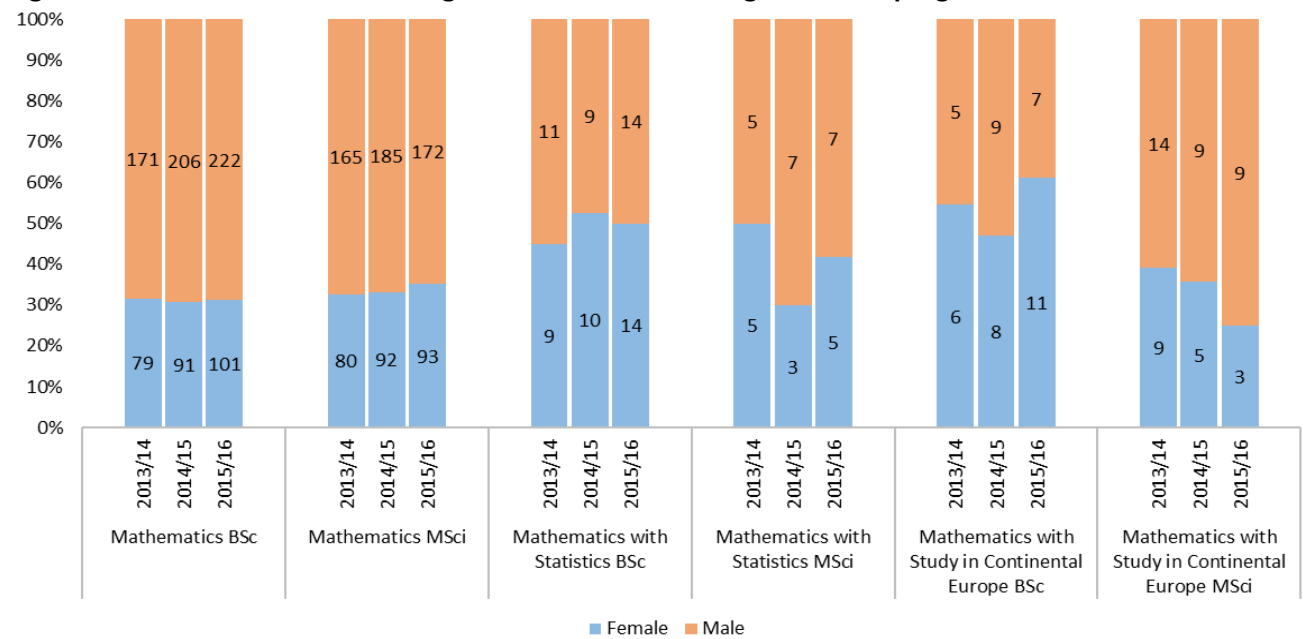
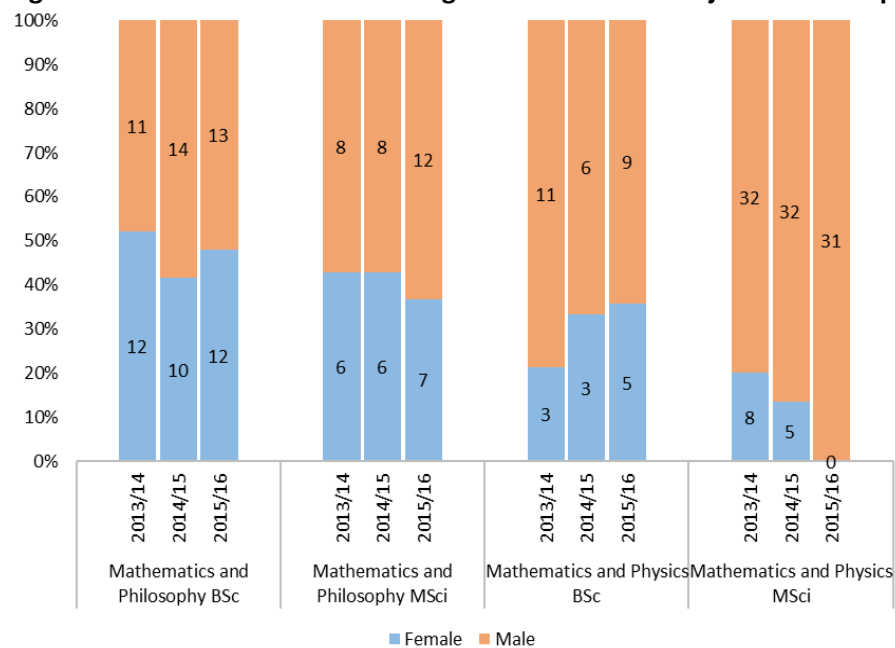


Figure 8: Number of full-time undergraduate students on joint honours programmes



Our admissions selection process is, with very few exceptions, algorithmic and based on a weighted average of attained and predicted GCSE/A-level qualifications, reducing unconscious bias effects. The percentages of offers from applications are very similar between genders in all years, see Figure 9.

Our Bronze Action Plan introduced **new admissions initiatives** in 2015 to increase applications from female students and conversion of offers to acceptances. We reviewed our admissions web pages and prospectus to promote key diversity messages. At each Open Day, the School offers two maths lectures, with one given by a female staff member. Pictures of male and female staff are used, and the Maths Admissions Tutor highlights the role of Athena SWAN and comments on the success of female students on our degree programmes. Displayed research posters include photographs and biographical information of equal numbers of female and male staff, and usually around 75% of undergraduate helpers at Open Days are female.

I UG1, UG2 Increase visibility of female role models, in web pages and prospectus, and at open days using presentations and posters

These initiatives are repeated at the Post-Offer Visit Days where, additionally, applicants attend a talk by two current students (but never by two male students). Surveys show this is the most popular and influential element of the day, with 93% of attendees showing a positive experience. Figure 9 and Table 2 show the impact of these initiatives. The proportion of offers accepted by female students greatly increased in 2015/16 to 38%, **in line with the national average** of female undergraduate students, indicating that action UG2 may be having a positive effect. Indeed, informal analysis of the cohort admitted in 2016/17 shows that our first year again has 38% female students.

Figure 9: Numbers of undergraduate course applications, offers, and accepted places

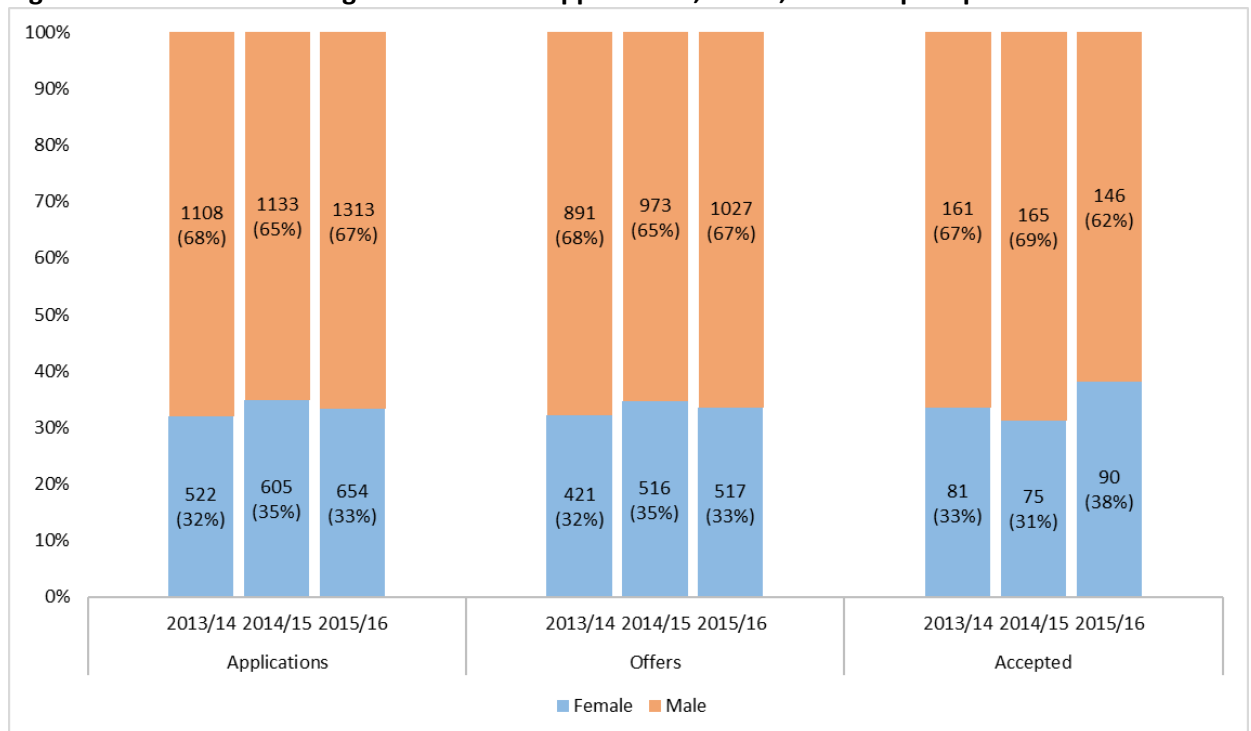


Table 2: Percentage of offers and acceptance rates for undergraduate course applications

Year	% Offers from Applications		% Acceptances from Offers	
	Female	Male	Female	Male
2013/14	80%	80%	19%	18%
2014/15	85%	86%	15%	17%
2015/16	79%	78%	17%	14%

We will continue these initiatives, monitor the data and additionally:

A S1 Ensure prospective female students are not isolated in small subgroups used during visit days

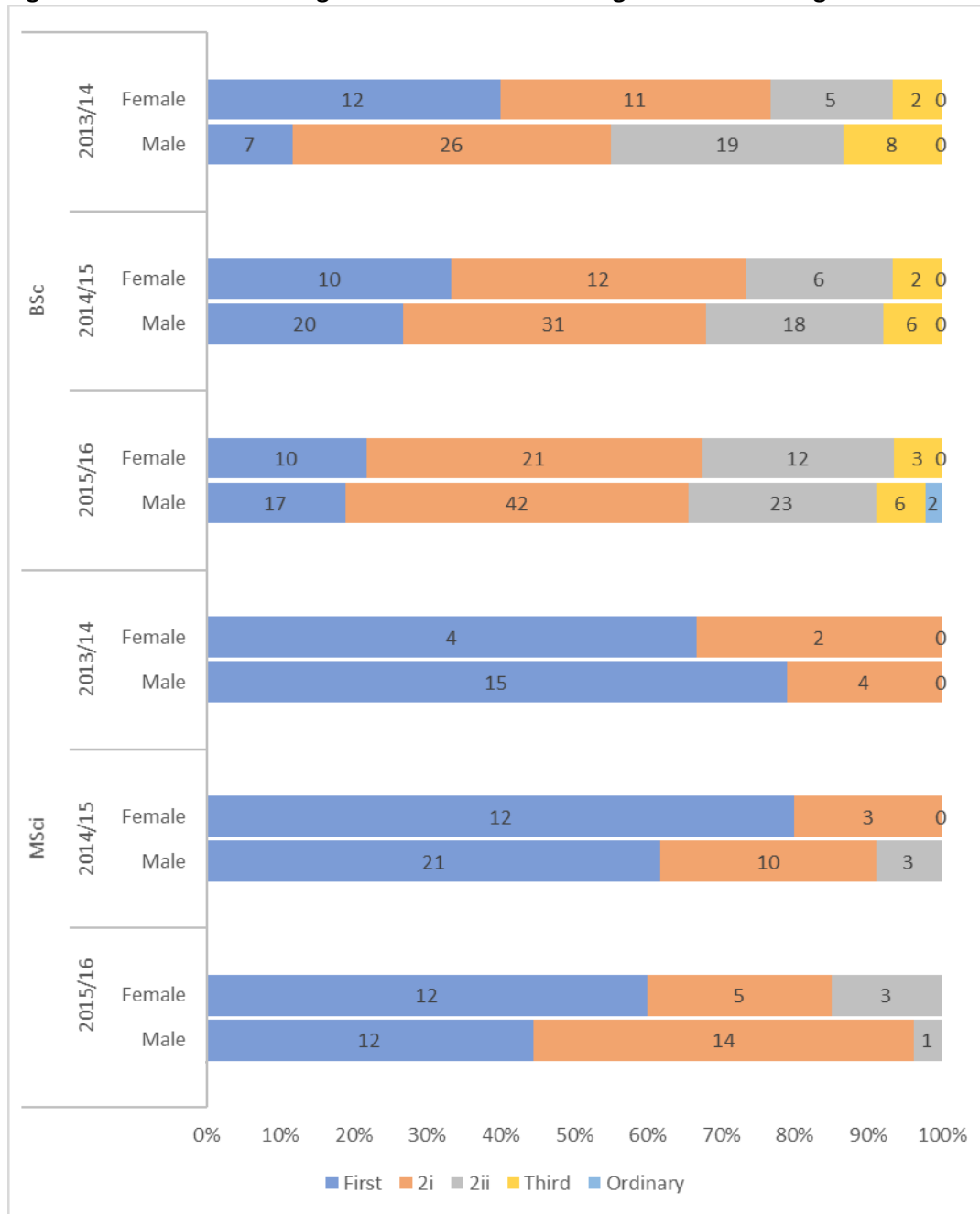
A S2 Use gender positive imagery in the open spaces in the new School of Mathematics building, including Athena SWAN and references to successful female students

Attainment

Figure 10 illustrates two notable features. Firstly, female students typically **attain at least as high degree classes** as their male counterparts. Secondly, there is strong evidence that Bronze action PG3 (to encourage more female undergraduates to study the 4-year MSci programmes) is working, with female MSci graduates rising from 6 (24%) to 20 (43%) over three years.

I PG3 Personal tutors to encourage UGs to consider MSci and postgraduate studies

Figure 10: Number of undergraduate students attaining BSc and MSci degrees



(iii) Numbers of men and women on postgraduate taught degrees

Full and part-time. Provide data on course application, offers and acceptance rates and degree completion rates by gender.

Admissions

The School has offered two postgraduate taught (PGT) MSc programmes, in Mathematical Sciences and Statistics (discontinued). Table 3 shows the total number of PGT students is low by national standards, meaning that the gender balance fluctuates significantly between years. However, considering all PGT students over the three years, **38% were female**, close to the national average of 39%. PGT programmes do not have an option to study part-time, however there are flexible options for students with extenuating circumstances, decided on a case-by-case basis.

Figure 11: Number of full-time postgraduate taught students by programme

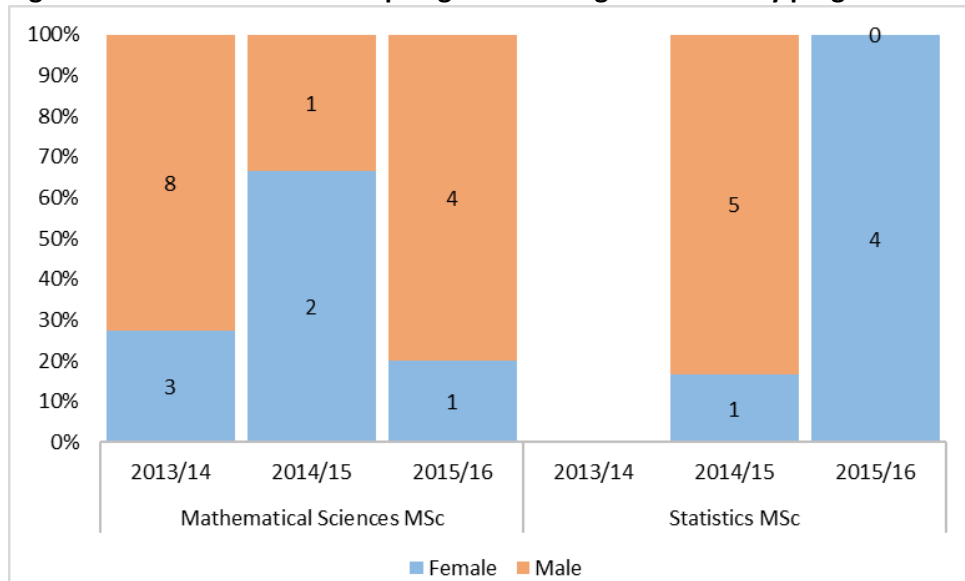


Figure 12: Percentage of female postgraduate taught students compared with the national data

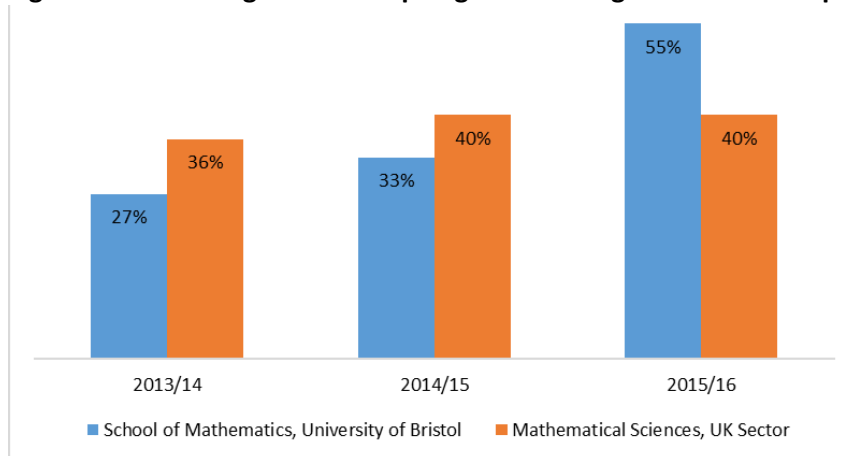


Table 3: Total postgraduate taught students compared with national data

Sector	2013/14		2014/15		2015/16	
	Female	Male	Female	Male	Female	Male
School of Mathematics, University of Bristol	3	8	3	6	5	4
	27%	73%	33%	67%	56%	44%
Mathematical Sciences, UK Sector	1155	2055	1360	2070	1405	2125
	36%	64%	40%	60%	40%	60%

Table 4: Percentage of offers from applications for post-graduate taught courses, split by home and overseas

Year	Home		Overseas	
	Female	Male	Female	Male
2013/14	100%	84%	31%	26%
2014/15	90%	89%	17%	17%
2015/16	100%	100%	22%	20%

Figure 13: Numbers of postgraduate taught course applications, offers, and accepted places

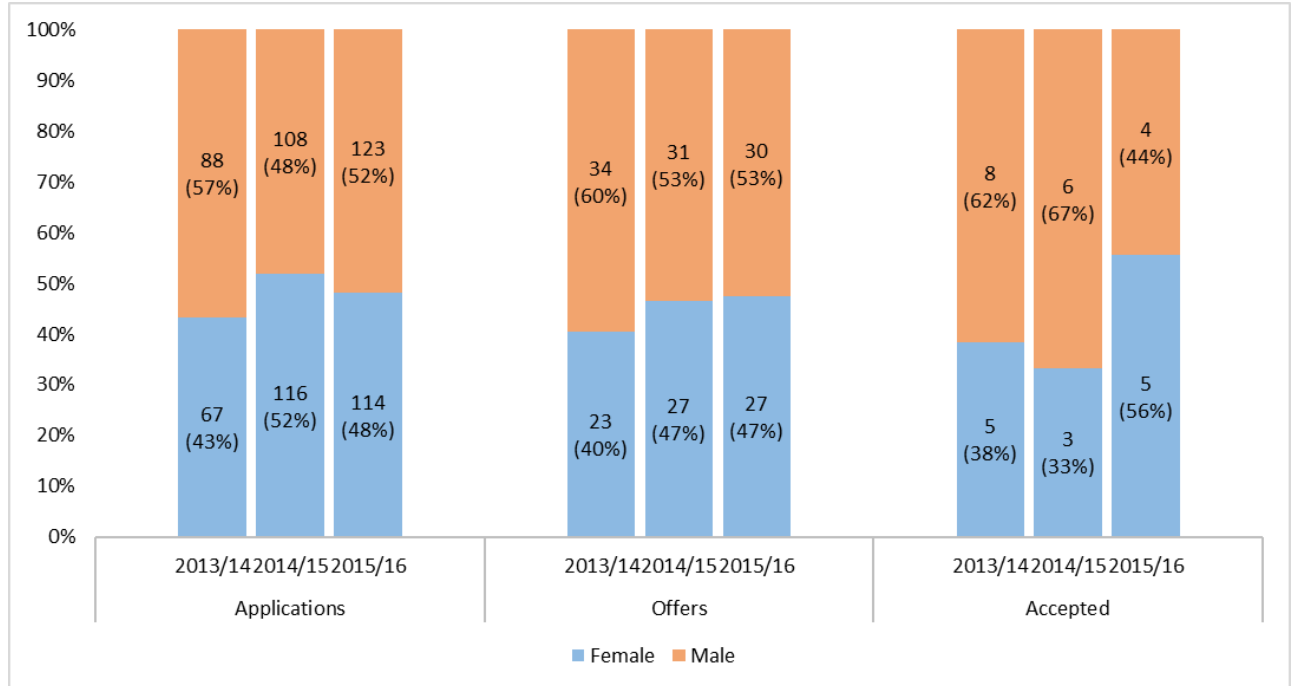


Table 5: Percentage of offers and acceptance rates for postgraduate taught course applications

Year	% Offers from Applications		% Acceptances from Offers	
	Female	Male	Female	Male
2013/14	34%	39%	22%	24%
2014/15	23%	29%	11%	19%
2015/16	24%	24%	19%	13%

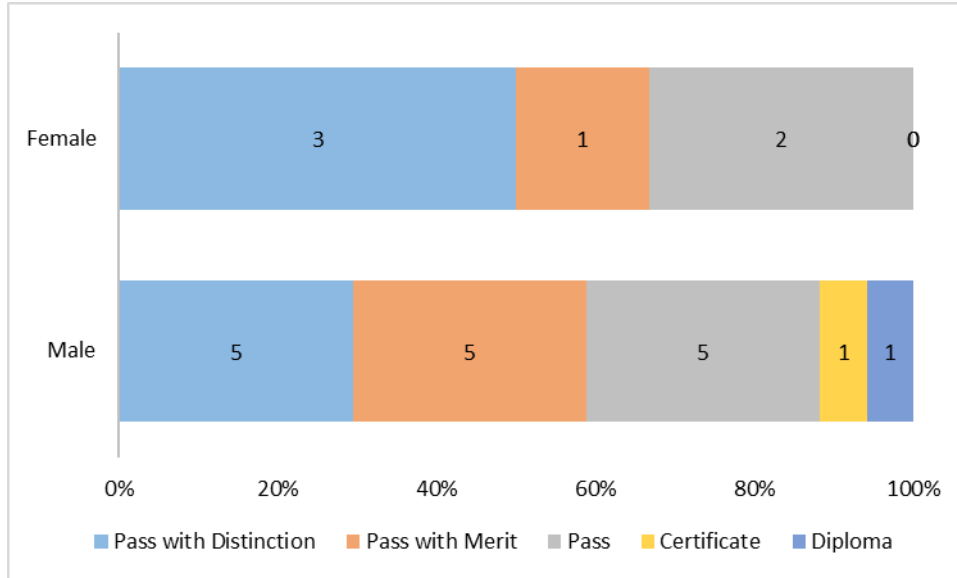
Table 4 shows that consistently, for both home and overseas students, a higher percentage of female students are offered PGT places than their male counterparts. Perhaps surprisingly, Table 5 shows that, despite this, there is a higher rate of male than female offers overall. This apparent paradox is because overseas students, who make up a higher proportion of female applicants, are less likely to be accepted overall. Table 4 gives us confidence that our PGT admissions procedures do not discriminate by gender.

Table 5 shows the acceptance rates for PGT courses are also variable, but similar between genders when all years are considered together; female and male acceptance rates are 17% and 19% respectively.

Attainment

Overall a larger proportion of female students (50%) attain the highest grade in PGT courses than male students (29%).

Figure 14: Number of postgraduate taught students attaining degrees



(iv) Numbers of men and women on postgraduate research degrees

Full and part-time. Provide data on course application, offers, acceptance and degree completion rates by gender.

Admissions

Most of our postgraduate research students (PGRs) are **full-time PhD students**. The Mathematics MSc by Research programme had one male student per year, full-time in 2013/14 and part-time in 2014/15 and 2015/16. There was one part-time PhD student in 2014/15 and 2015/16, indicating that the opportunity to undertake research degrees part-time is available, but rarely taken. The proportion of female PGRs in the School is consistently below the UK average, although the gap is smaller in 2015/16, partly due to initiatives described in Section 4.1(v).

Figure 15: Number of postgraduate research students by gender

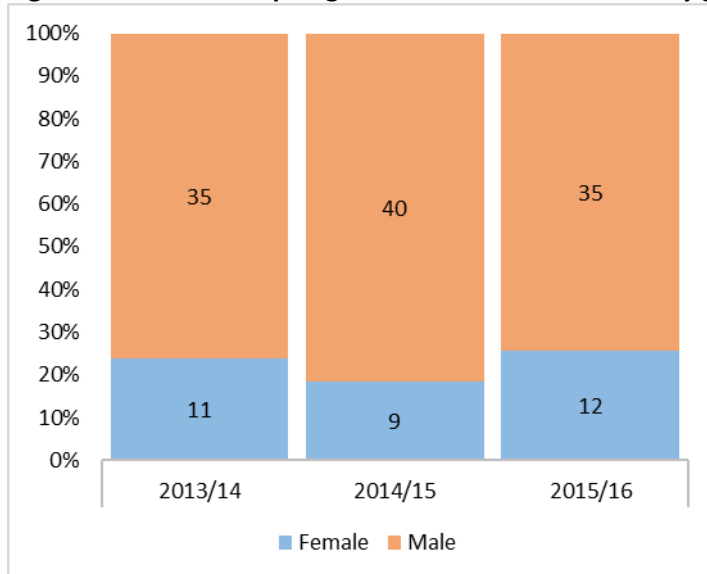
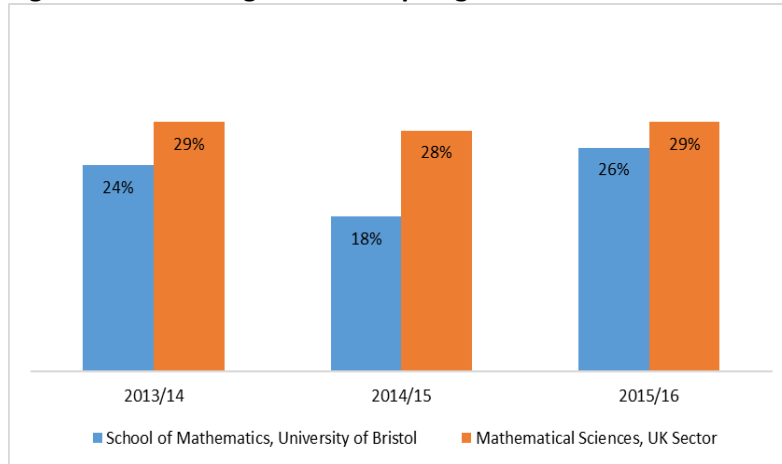


Table 6: Total postgraduate research students compared with national data

Sector	2013/14		2014/15		2015/16	
	Female	Male	Female	Male	Female	Male
School of Mathematics, University of Bristol	11	35	9	40	12	35
	24%	76%	18%	82%	26%	74%
Mathematical Sciences, UK Sector	780	1945	805	2030	830	2075
	29%	71%	28%	72%	29%	71%

Figure 16: Percentage of female postgraduate research students compared with national data



Overall, the female acceptance rate (57%) for PGRs is higher than the male acceptance rate (46%). Most recently, the female rate was especially high at 80%, perhaps influenced by the following initiative:

I PG1 Ensure that visiting prospective female PGRs meet current female PGRs

Figure 17: Numbers of postgraduate research course applications, offers, and accepted places

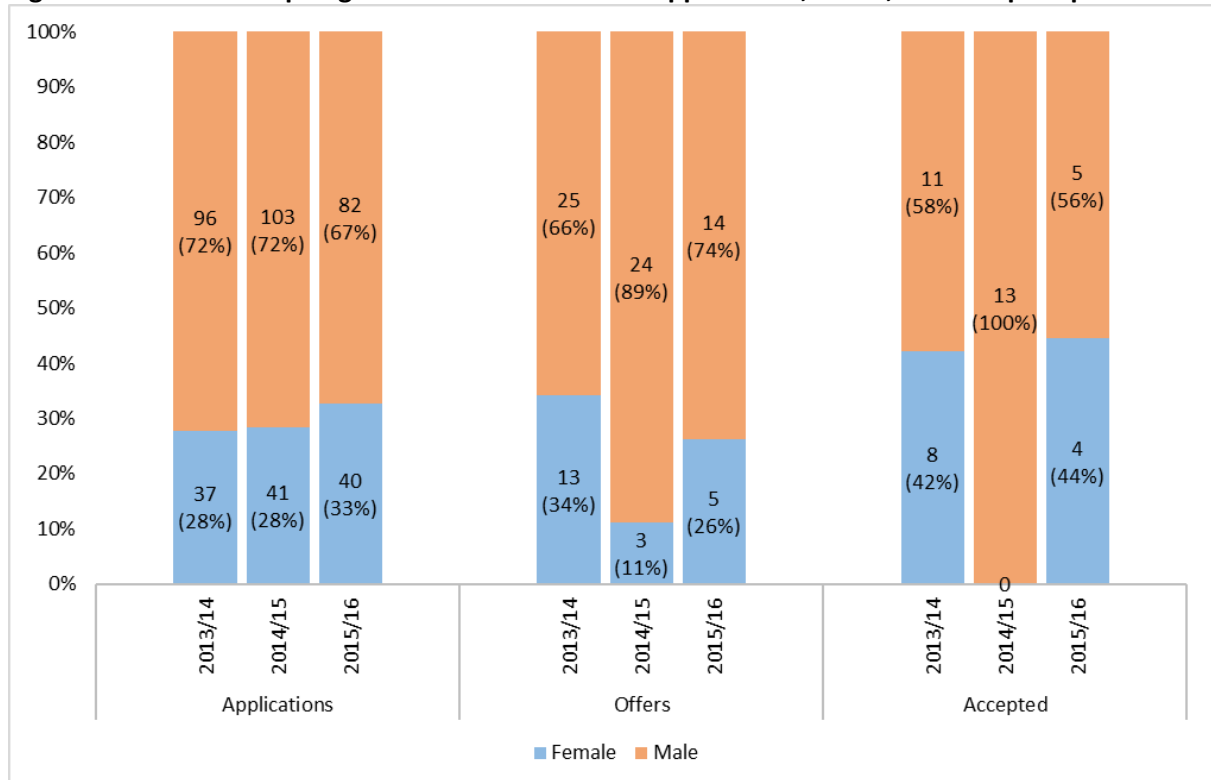


Table 7: Percentage of offers and acceptance rates for postgraduate research course applications

Year	% Offers from Applications		% Acceptances from Offers	
	Female	Male	Female	Male
2013/14	35%	26%	62%	44%
2014/15	7%	23%	0%	54%
2015/16	13%	17%	80%	36%

The year 2014/15, when no female students accepted a PGR offer, was an immediate concern. The SAT contacted the postgraduate admissions team, who showed us that there had been a lack of strong applications from female students that year. Although this analysis, and improved numbers in 2015/16 do not show an inherent bias in the applications process, female postgraduate numbers remain an area of focus, to ensure that an all-male intake is not repeated.

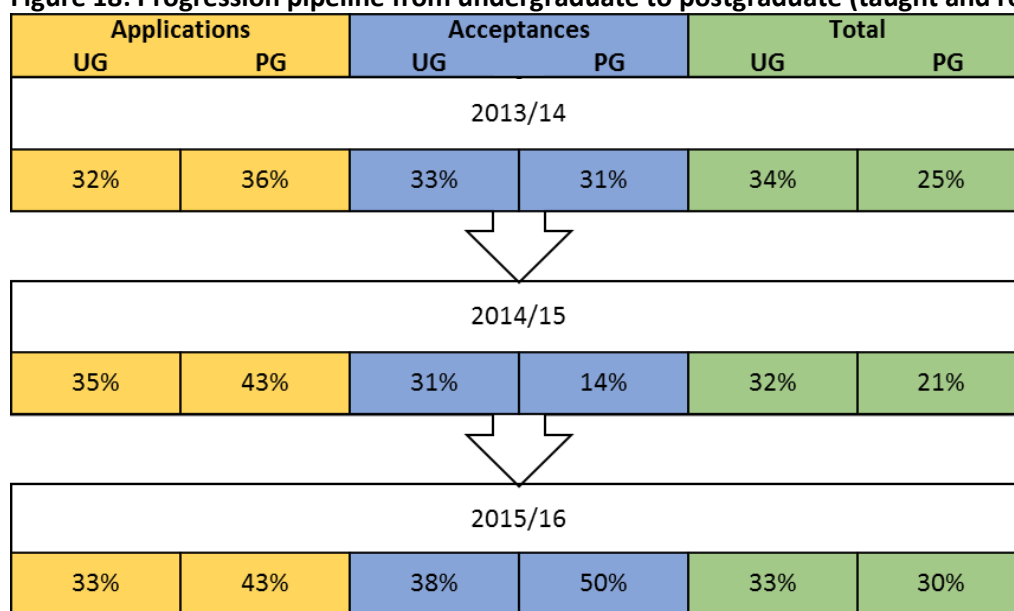
Attainment

There have been no unsuccessful leavers or withdrawals from postgraduate degrees in 2013-2016, perhaps partly due to the 'strong feeling of community' amongst postgraduate students, indicated in the 2017 Faculty Quality Team report.

(v) Progression pipeline between undergraduate and postgraduate student levels

Identify and comment on any issues in the pipeline between undergraduate and postgraduate degrees.

Figure 18: Progression pipeline from undergraduate to postgraduate (taught and research combined)



Actions to minimise inequality issues affecting progression from undergraduate to postgraduate degrees were key to our Bronze submission. We believe that the fact that 30% of our postgraduates are now female, compared with 22% in our Bronze application, shows that our actions have had some impact.

The funding model of the Heilbronn Institute has allowed us to offer **female-only PhD studentships**, recruiting high-quality students to address historical imbalances in the discipline. The first studentships began in 2016/17 and two Bristol PhDs are currently funded in this way, with a third starting in October 2017.

A S3 Ensure the continued offer of Heilbronn Institute PhD funding scheme for female students

To encourage strong female students to consider PhDs and mathematical careers, in 2016 we created a national annual **Women in Mathematics postgraduate event**, funding students from across the UK to attend. This includes mentoring and panel discussions, as well as research and career talks from carefully-selected female role models.,

The recent 2017 event was **oversubscribed**, but we accepted 52 applications. Survey data showed that 59% of participants felt likely or very likely to do a PhD on arrival, which increased to 80% on departure. Written survey feedback was very positive:

I welcomed the opportunity to talk to not only the speakers and staff (who were all wonderful!) but to other female students from across the country who are doing similar things to me

A S4 Organise the Women in Mathematics conference yearly



Women in Maths PhD conference

We have identified **undergraduate summer bursaries**, funded by the LMS, EPSRC and School, as a key method to give female students experience of research, confidence to consider a PhD and strengthened future applications. Case Study 2 provides an excellent example of the effectiveness of this. Our selection process has been made more transparent to encourage more diverse applications.

I PG4 All personal tutors asked to encourage strong female students to apply for summer bursaries.

A S5 Ensure personal tutors consistently identify female students for PhD funding, summer research bursary applications and the Women in Maths conference

4.2. Academic and research staff data

Summary

- The percentage of female staff has consistently grown each year.
- There is better representation of female BME staff than the national average.

(i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

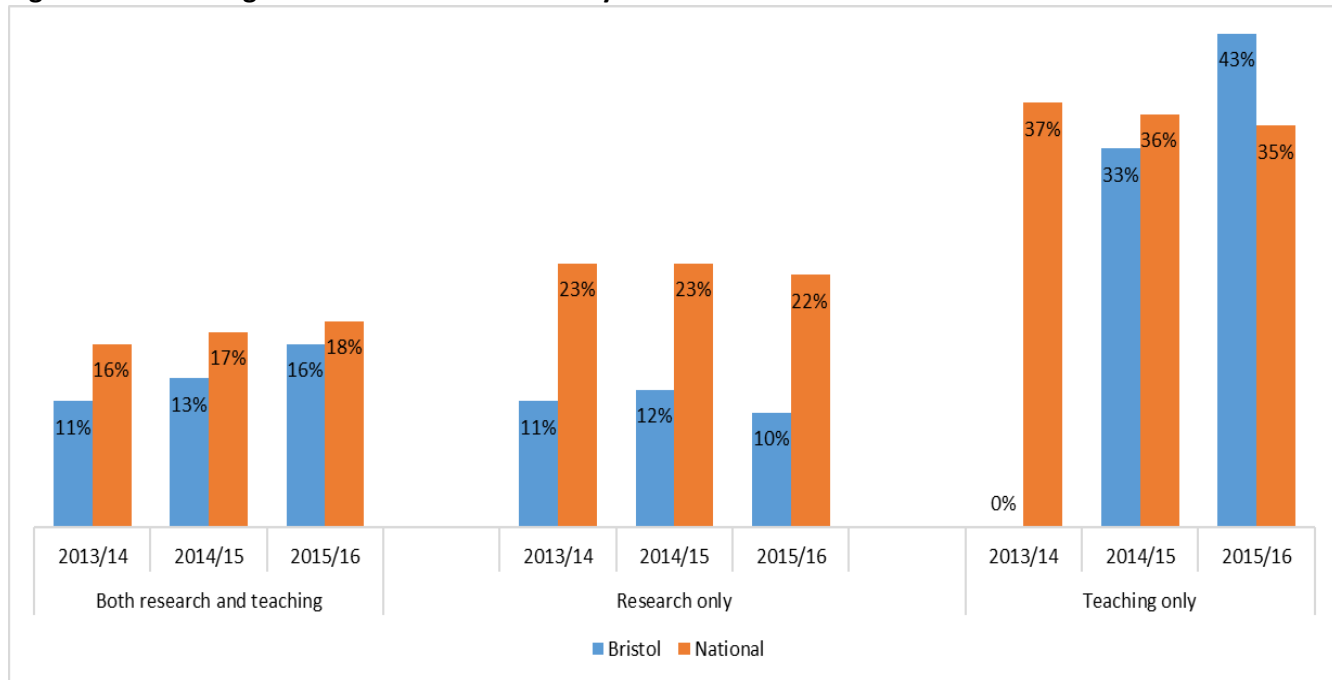
Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

As expected for a **research-intensive School**, a higher proportion of staff hold Research-only contracts and a smaller proportion hold Teaching-only contracts than the national average.

Table 8: Academic staff by contract function and gender with comparison to the national data

Contract Function	Sector	2013/14		2014/15		2015/16	
		Female	Male	Female	Male	Female	Male
Both research and teaching	Bristol	6	50	7	48	9	47
		11%	89%	13%	87%	16%	84%
	National	410	2085	435	2090	460	2125
		16%	84%	17%	83%	18%	82%
Research only	Bristol	6	49	6	43	5	43
		11%	89%	12%	88%	10%	90%
	National	210	710	205	690	200	730
		23%	77%	23%	77%	22%	78%
Teaching only	Bristol	0	1	1	2	3	4
		0%	100%	33%	67%	43%	57%
	National	430	735	400	715	395	725
		37%	63%	36%	64%	35%	65%
Total	Bristol	12	100	14	93	17	94
		11%	89%	13%	87%	15%	85%
	National	1050	3530	1040	3495	1055	3580
		23%	77%	23%	77%	23%	77%

Figure 19: Percentage of female academic staff by function



Research-and-Teaching

The proportion of female staff is slightly below the national average, although the **gap is closing** due to recent recruitment rounds for permanent staff. We believe a catalyst for this was the following successful actions to increase applications from women by:

I AS1, PDRA1 Systematic use of supportive language in adverts AS2, PDRA2 Pro-active approaches to female candidates

Research-only

There is a larger gap between the School and national average, somewhat due to Heilbronn postdocs. These are recruited in subject-specific areas within Pure Mathematics, Probability and Quantum Information, where international demographic data indicates lower-than-average percentages of female researchers. Removing Heilbronn fellows from the figures leaves an increasing trend of 12%-14%-16%. However, we remain concerned about percentages of female Research-only staff (including Heilbronn fellows). Indeed, to tackle under-representation of women among Heilbronn Fellows, a new scheme was introduced in 2017 to provide bonus research funding for staff members who encourage a female candidate to apply, assuming they are appointed.

In addition, the DEDI is now informed when each post is advertised and contacts the panel Chair regarding unconscious bias and effective School EDI practice. The Chair is required to explicitly confirm they have engaged with this material. They can contact the DEDI with queries throughout the recruitment process.

A **A1** Chairs of all appointment panels must ensure they are up-to-date with University guidelines and policies.

A **A2** Unconscious bias information to be sent to all staff involved in recruitment and the shortlisting process

Further actions associated with hiring are listed as **C1, C2** and **C3** below.

Teaching-only

Although the small numbers make statistically significant conclusions difficult, the percentage of female staff in these roles has risen each year.

Figure 20: Proportion of academic staff at each grade

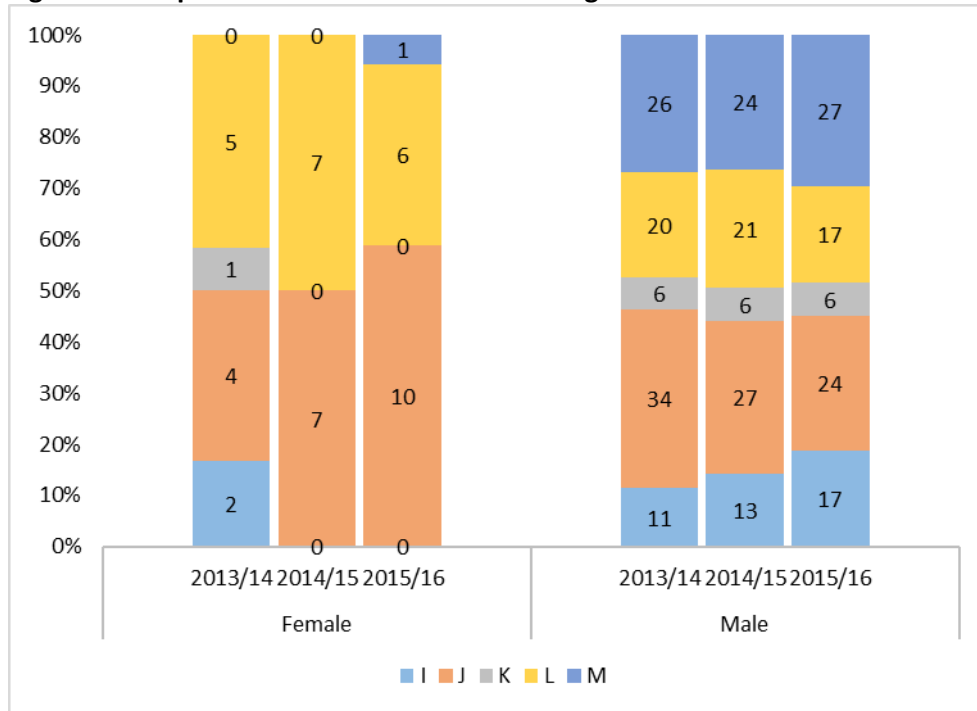
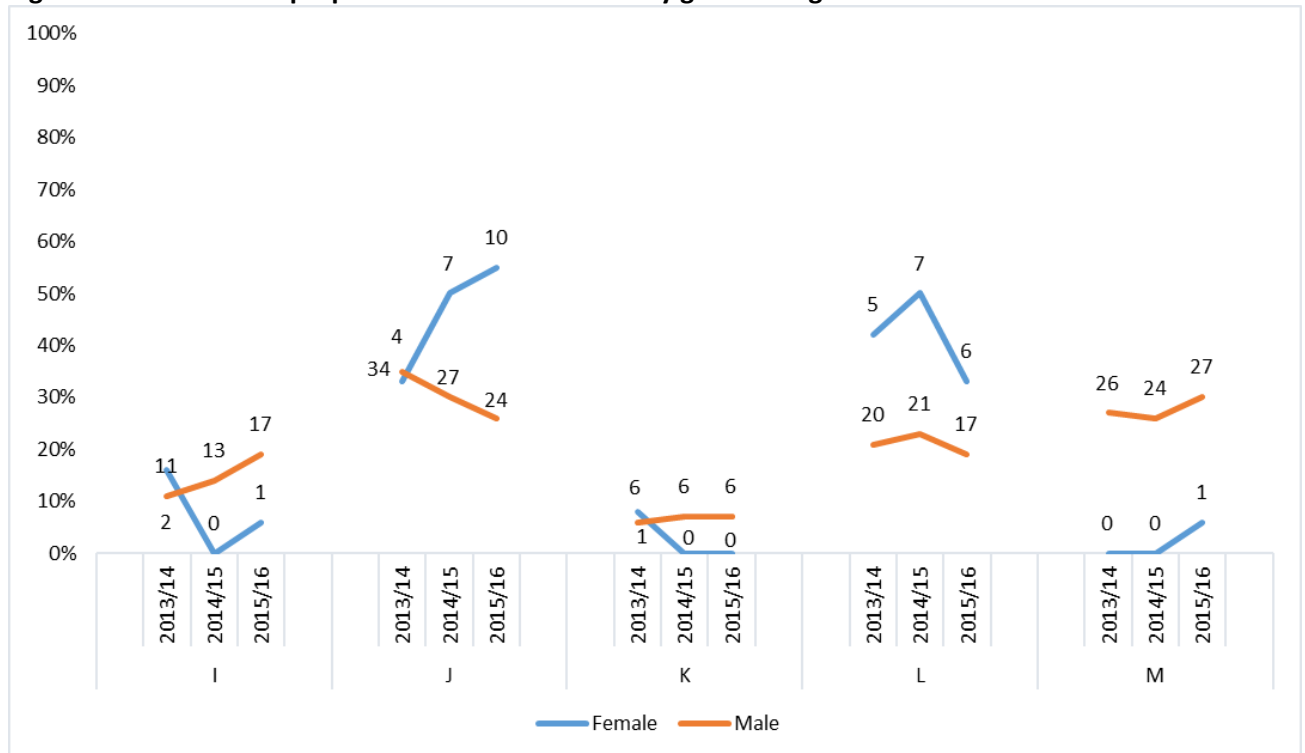


Figure 21: Trend in the proportion of academic staff by grade and gender



Figures 20 and 21 show that male distribution remains steady but there is fluctuation of female staff due to low numbers. However, Table 8 shows that the total number of female staff has consistently grown, with several recent Lecturer appointments and one promotion to Professor.

Despite encouraging anecdotal evidence in Case Study 1, it appears too early to what extent our action AS5 (Ensure suitably qualified female academics put themselves forward for promotion) has worked, so we aim to increase representation of female staff at higher grades by:

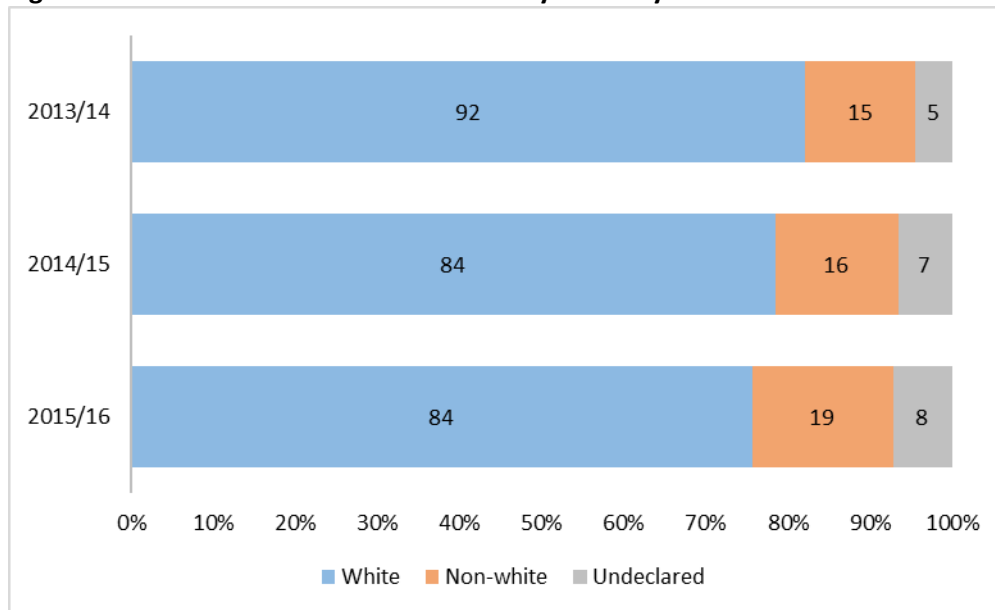
A A3 Use Exceptional Talent to identify more female appointees at Professor level

A A4 Annual review of staff CVs to identify those ready for promotion

Ethnicity

Overall there is a steady increase of non-white and undeclared academic staff.

Figure 22: Total number of academic staff by ethnicity



Analysing intersectionality in Figure 23, there is greater fluctuation within our percentages, again due to low overall numbers. This contrasts with the national data, which has remained consistent over the three years. However, Table 9 shows that the number of **non-white female staff doubled** between 2014/15 and 2015/16, now exceeding the national proportion. To ensure we understand and reflect these effects properly, we propose:

A A5 Expand the Equality, Diversity and Inclusion Committee to represent a broader range of intersectionality.

Figure 23: Percentage of non-white female academic staff compared to national data

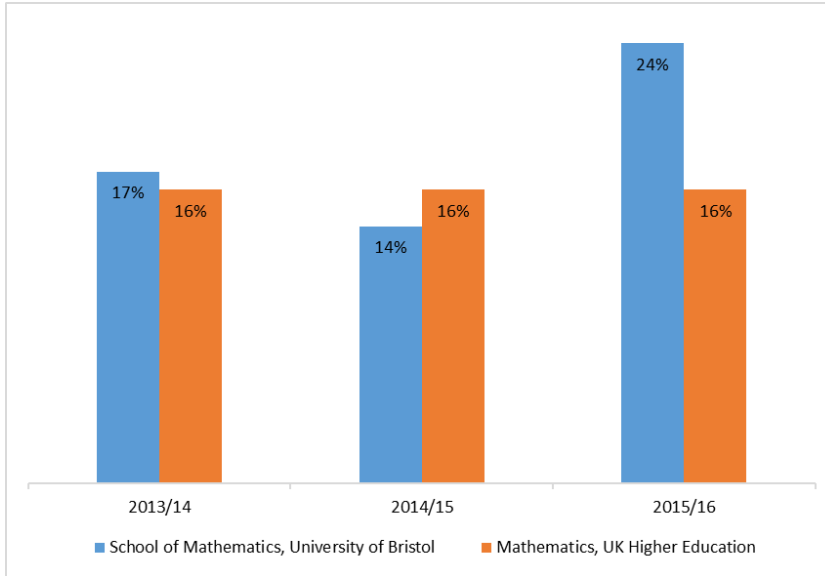


Table 9: Numbers of female academic staff by ethnicity

Ethnicity	School of Maths, Bristol			Mathematics, UK		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Non-white	2	2	4	120	120	125
White	10	12	13	560	575	600
Undeclared	0	0	0	60	70	60
Total	12	14	17	740	765	785

There is less fluctuation with the Professional Services staff data and trends can clearly be seen. The non-white percentages higher than the national data, and increase by wider margins.

Figure 24: Percentage of non-white female professional services staff compared to the national data

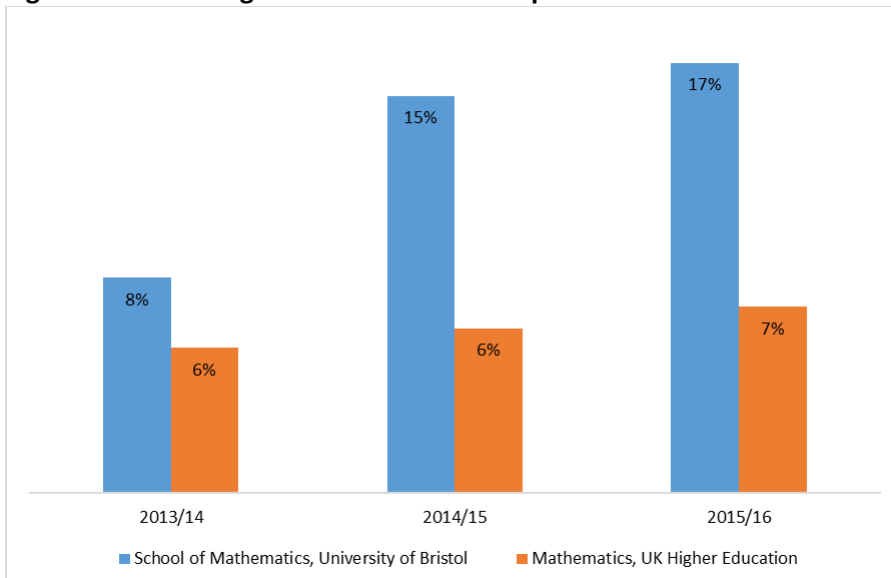


Table 10: Numbers of female professional services staff by ethnicity

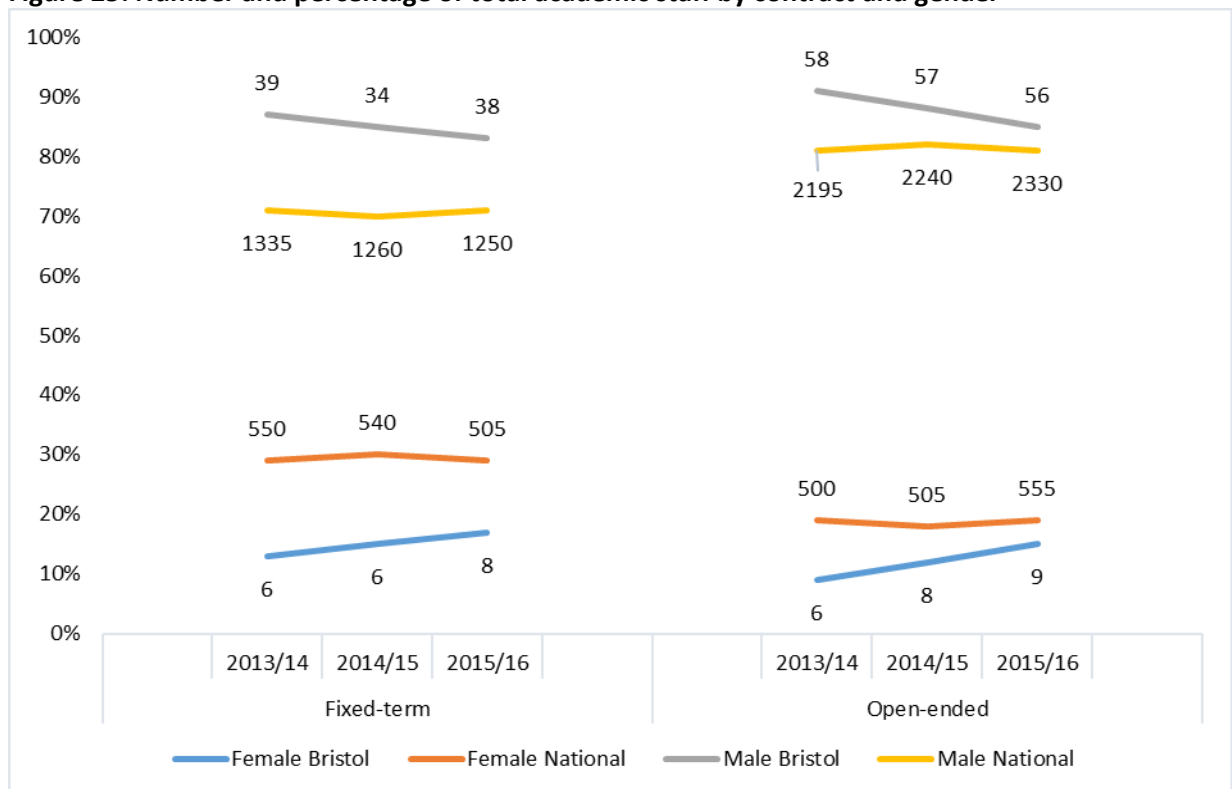
Ethnicity	School of Maths, Bristol			Mathematics, UK		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Non-white	1	2	2	25	30	35
White	11	10	9	395	410	425
Undeclared	0	1	1	25	30	25
Total	12	13	12	445	470	485

(ii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender

Comment on the proportions of men and women on these contracts. Comment on what is being done to ensure continuity of employment and to address any other issues, including redeployment schemes.

The School employs no staff on zero-hour contracts. Figure 25 shows a similar percentage of our female staff holding open-ended and fixed-term contracts, whereas nationally a higher proportion of fixed-term contracts (with greater insecurity) are held by women. While the overall percentage of female staff is higher nationally than in the School, this gap has closed recently (particularly for open-ended contracts, due to **recent appointments of female Lecturers**).

Figure 25: Number and percentage of total academic staff by contract and gender



Tables 11 and 12 demonstrate that fixed-term contracts are mostly at lower grades, before progression is available. Open-ended contracts are spread across the grades but with most at L and M. At Grade J, where both types of contract are allocated, the gender balance has improved, closing the gap with the national average.

Table 11: Number and percentage of academic staff on fixed-term contracts by grade

Grade	Female			Male		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
I	2	0	0	9	11	16
	18%	0%	0%	82%	100%	100%
J	4	6	8	28	21	20
	12%	33%	29%	88%	67%	71%
K	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%
L	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%
M	0	0	0	2	2	2
	0%	0%	0%	100%	100%	100%
Total	6	6	8	39	34	38
	13%	15%	17%	87%	85%	83%
National	550	540	505	1335	1260	1250
	29%	30%	29%	71%	70%	71%

Table 12: Number and percentage of academic staff on open-ended contracts by grade

Grade	Female			Male		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
I	0	0	0	2	2	1
	0%	0%	0%	100%	100%	100%
J	0	1	2	6	6	4
	0%	14%	33%	100%	86%	67%
K	1	0	0	6	6	6
	14%	0%	0%	86%	100%	100%
L	5	7	6	20	21	17
	20%	25%	26%	80%	75%	74%
M	0	0	1	24	22	25
	0%	0%	4%	100%	100%	96%
Total	6	8	9	58	57	53
	9%	12%	15%	91%	88%	85%
National	500	505	555	2195	2240	2330
	19%	18%	19%	81%	82%	81%

Staff reaching the end of fixed-term contracts enter the centralised University Redeployment Pool. If an appropriate position becomes available, candidates are approached to apply and have first refusal before the vacancy is advertised. Should the staff member decide to apply for the position, they will follow the University's standard recruitment process.

(iii) Academic leavers by grade and gender and full/part-time status

Comment on the reasons academic staff leave the department, any differences by gender and the mechanisms for collecting this data.

Aggregating data across all grades due to low numbers, the percentage of leavers who are female is 15%, in line with the percentage of total female staff which is 13%.

Table 13: Academic leavers by grade, gender and full- and part-time status

Grade	2013/14				2014/15				2015/16			
	Female		Male		Female		Male		Female		Male	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
I	2		4		0		4		0		8	
	1	1	3	1	0	0	3	1	0	0	8	0
J	0		14		3		8		3		9	
	0	0	14	0	2	1	8	0	3	0	9	0
K	1		1		0		0		1		1	
	1	0	1	0	0	0	0	0	0	1	1	0
L	0		0		0		1		1		0	
	0	0	0	0	0	0	1	0	1	0	0	0
M	0		3		0		0		0		3	
	0	0	3	0	0	0	0	0	0	0	1	2

A list of staff leavers was analysed by the School Manager, who could confirm staff reasons for leaving. Of the nine staff leavers with open-ended contracts, three male staff retired, three male staff and one female left for promotions elsewhere, and one female and one male left academia to pursue career changes.

As expected, the turnover of fixed-term staff was greater with 56 leavers (of whom 9 were female). The large majority reached the end of their fixed term contract which was limited due to grant funding. It is noteworthy that the School's mentoring (including practice interviews and career development events developed through Bronze actions) has led to 3 female and 5 male postdoctoral fellows being appointed to open-ended contracts worldwide.

I PDRA4 Career development and training for PDRA's via panels and dedicated events.
I PDRA5 Mentors of postdocs to provide help with CV writing.

Words: 2000

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

5.1. Key career transition points: academic staff

Summary

- The greatest number of applications are at Grade J for Lecturer positions, where offer rates are similar for male and female candidates at 63% and 60% respectively.
- Initiatives such as Exceptional Talent will identify more female candidates for Professor roles.
- The Staff Review process encourages staff to apply for promotion when relevant.

(i) Recruitment

Break down data by gender and grade for applications to academic posts including shortlisted candidates, offer and acceptance rates. Comment on how the department's recruitment processes ensure that women (and men where there is an underrepresentation in numbers) are encouraged to apply.

Table 14: Numbers of applications to academic posts by gender and grade

		Applications		Shortlisted		Offered		Accepted	
		Female	Male	Female	Male	Female	Male	Female	Male
I	2013/14	4	20	0	6	0	4	0	4
	2014/15	11	49	2	15	1	9	1	9
	2015/16	21	37	3	3	1	2	1	2
J	2013/14	15	22	3	5	3	5	3	5
	2014/15	13	108	4	23	2	14	2	14
	2015/16	58	260	8	13	4	7	4	6
K	2013/14	1	9	0	0	0	0	0	0
	2014/15	0	0	0	0	0	0	0	0
	2015/16	0	3	0	1	0	1	0	1
M	2013/14	0	3	0	1	0	1	0	0
	2014/15	1	5	1	4	0	2	0	2
	2015/16	0	0	0	0	0	0	0	0

Aggregating data across all grades and all years, there appears to be **little cause for concern**: 17% of female applicants were shortlisted (compared to 14% of male applicants), and 9% of female applicants were made an offer (compared to 9% of male applicants). All offers were accepted –the grade J male offer was deferred to 2016/17.

However, one cause for concern comes from the figures at Grade I: here only 14% of female applicants were shortlisted and 6% were made an offer. Some comfort can be found from the yearly improvement of Grade I numbers, perhaps due to implicit bias training.

I G1 Minimise the impact of implicit bias by circulating information and providing training.

Indeed, smaller overall numbers in this subsample analysis mean that these figures are less statistically significant.

Table 15: Percentage of shortlisted and offered applicants to academic posts by gender and grade

		% shortlisted from applicants		% offered from shortlisted	
		Female	Male	Female	Male
I	2013/14	0%	30%	-	67%
	2014/15	18%	31%	50%	60%
	2015/16	14%	8%	33%	67%
J	2013/14	20%	23%	100%	100%
	2014/15	31%	21%	50%	61%
	2015/16	14%	5%	50%	54%
K	2013/14	0%	0%	-	-
	2014/15	-	-	-	-
	2015/16	-	33%	-	100%
M	2013/14	-	33%	-	100%
	2014/15	100%	80%	0%	50%
	2015/16	-	-	-	-

Another area of concern remains the **overall proportion of female applicants**. Again, at Grade J we feel that this figure at 15% is too low. Although existing staff are encouraged to approach suitable candidates, bearing diversity in mind, this can be inconsistent. We believe that the higher percentage of female candidates shortlisted reflects some success in this policy, and that the overall 26% of female appointments at Grade J is good evidence that our policies for lectureship appointments are sufficiently robust. At Grade I, there is slightly more concern; 25% of female applicants (over three years) became 17% of shortlisted candidates and 11% of offers and acceptances. Therefore, have carefully considered how we can positively influence outcomes, and instigated the following actions:

- A C1** Systematically record approaches and outcomes when encouraging candidates to apply for jobs
- A C2** Pilot gender-separated long- and short-lists to improve gender balance
- A C3** Screen shortlisted applications and references for equality issues, for both academic and Professional Services staff

(ii) Induction

Describe the induction and support provided to all new academic staff at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

The School has developed an induction process, based on feedback from new academic staff, which expands on the requirements of the standard University induction template. Prior to arrival all new staff are emailed and welcomed to the School. On arrival, staff are **welcomed in person** and given a tour of relevant buildings. All new staff complete the University's online mandatory training covering Equality and Diversity, Safety and Information Security. In addition, the HoS introduces an annual welcome event for new staff. Newly appointed staff have an **appropriate mentor** chosen by the HoS.

At University level, all new staff are invited to a Welcome Fair and emailed about the University's social activities. They have an Initial Service Review at six months, which covers the new staff members' skills, conduct, capability and attendance. The review allows the member of staff to discuss key items that have arisen during this time. Completion of this review is monitored by HR.

Both the University and the School have web pages dedicated to new staff. The School provides a staff handbook which is updated yearly and includes EDI information. We regularly seek to improve the induction so obtained feedback from new Pathway 1 staff and we are working closely with the International Office to ensure international staff receive helpful information.

(iii) Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

The University has a variety of movements between roles, shown in Figure 2. **Progression** is a contractual expectation, subject to an individual achieving the level of necessary competence necessary. On Pathways two (Research-only) and three (Teaching-only), progression can only take place if a role is available to move into. **Promotion** is based on an application to a new role. The promotion to Reader can take place from Grade K or from Grade L. Promotion to Professor takes place from L to M, across all three pathways.

Staff are required to participate in the annual Staff Review and Development process (see section 5.3.(ii) for details), which has been identified as a key stage in identifying candidates for promotion, both by allowing honest discussion of areas to be addressed and by asking reviewers to **encourage qualified candidates** to apply.

In addition, Heads of Institutes independently identify and approach candidates, in some cases providing detailed feedback on draft applications. Promotions cases are considered by panels whose gender balance is carefully considered (6 male and 4 female members in 2016-17). However, in the staff survey one staff member indicated that feedback on negative cases for promotion is insufficient, so

A C4 Offer more constructive feedback on promotion applications to candidates and mentors

Table 16: Promotions by gender

Status	2013/14		2014/15		2015/16	
	Female	Male	Female	Male	Female	Male
Successful	0	3	1	4	1	0
	0%	100%	100%	100%	50%	0%
Unsuccessful	1	0	0	0	1	2
	100%	0%	0%	0%	50%	100%
Applied	1	3	1	4	2	2
	13%	10%	11%	14%	29%	7%
Did not apply	7	28	8	25	5	25
	87%	90%	89%	86%	71%	93%

Across the years, 2 out of 4 (50%) female staff who applied were successful compared to 7 out of 9 (78%) male staff. A higher proportion of female staff made applications, suggesting a positive picture that our processes do not deter female staff from applying.

I AS5 Ensure suitably qualified female academic put themselves forward for promotion
AS6 Ensure awareness of promotion criteria and process

However, the lower success rate for female candidates is a concern and we will investigate further to understand whether the more balanced numbers in 2015/16 reflect a long-term improvement due to our Bronze actions, and intervene at a School or Faculty level if necessary.

A **C5** HR to report annually to the EDI Committee and HoS on promotion outcomes; EDI Committee ensure that recent successes are maintained, and act if necessary

(iv) Department submissions to the Research Excellence Framework (REF)

Provide data on the staff, by gender, submitted to REF versus those that were eligible. Compare this to the data for the Research Assessment Exercise 2008. Comment on any gender imbalances identified.

Table 17: Research Excellence Framework 2014

Gender	Submitted	Not Submitted	Eligible Pool	% Submission
Female	12	1	13	92%
Male	75	4	79	95%
Total	87	5	92	95%

Table 18: Research Assessment Exercise 2008

Gender	Submitted	Not Submitted	Eligible Pool	% Submission
Female	10	1	11	91%
Male	75	0	75	100%
Total	85	1	86	99%

The **vast majority of eligible staff** were submitted for REF2014 and we do not believe there is a significant gender difference. For both female and male staff, the percentages submitted exceed the overall University figures (87% and 93% of eligible staff respectively).

5.2. Key career transition points: professional and support staff

Summary

- The term 'promotion' is not used for professional services staff but movement to higher grades by applying for roles is encouraged with relevant support and training.

(i) Induction

Describe the induction and support provided to all new professional and support staff, at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

All new Professional Services staff follow the same initial induction and review process as described above in Section 5.1.ii for academic staff, however the School template also includes additional information specific to Professional Services staff, such as local systems and processes, roles and responsibilities.

(ii) Promotion

Provide data on staff applying for promotion, and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

The University does not have a promotion process for Professional Services staff. However, it does have a grading system, so we class staff who leave their position for a job at a higher level as gaining a promotion.

Table 19: Professional Services grade structure

Grade	Administrative Staff
A	
B	
C	Administrative Assistant
D	
E	
F	Administrator/ Executive Assistant
G	Administrator / Supervisor / Advisor
H	Advisor / Executive Assistant
I	Officer / Deputy Manager
J	Officer / Manager
K	Manager / Team Leader
L	
M	Director / Assistant Director

Within the School there are a variety of pathways and movements which can be achieved by applying internally for roles. These can be seen in Figure 3. Staff are also encouraged to apply for roles across the University. During the period 2013-2017, there have been a number of movements amongst Professional Services staff, with some staff applying for and successfully being appointed to higher roles: including two staff, one of whom is part time from Grade D to J (via two promotions), two from Grade D to F, two from Grade F to H, and two from Grade F to G.

We have an **encouraging culture** in the School where we actively discuss career plans at the Staff Review and have promoted opportunities for staff to participate in shadowing and secondment opportunities. We support any reasonable requests for staff development to assist the individual with their next career

steps. For example, three staff have recently undertaken Prince 2 training, as they are interested in a project management career. Two other staff have been funded by the Faculty at the School's request, to attend externally-provided management courses when there was insufficient capacity in the University-run ones. We continue to be mindful of the gender balance of professional services staff by ensuring we have gender balanced recruitment panels, wherever possible. In the most recent recruitment round, we shortlisted three male and two female candidates for the role.

5.3. Career development: academic staff

Summary

- Staff can take part in training offered across the University.
- Annual Staff Reviews offer two-way career development discussions, including promotion.
- The newly introduced Institutes within the School offer a better mentoring system for staff.
- Female staff are prioritised for grant-writing training to promote diversity.

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

The central Academic Staff Development department initiated the Cultivating Research and Teaching Excellence (CREATE) continuing professional development scheme in September 2014. Staff from the School have actively engaged with the process from the beginning.

Staff can enrol onto the standard or experienced routes depending on their role. Both routes cover leadership, learning and teaching, research and scholarship, and connect with the UK Professional Standards Framework, enabling fellowship of the Higher Education Academy.

Table 20: Numbers of academic staff engaged with the CREATE Scheme

Year	Level 1 Standard		Level 2 Standard		Level 2 Experienced	
	Female	Male	Female	Male	Female	Male
Completed						
2014-15	3	2	0	0	0	1
2015-16	0	3	1	1	0	0
Enrolled						
2016-17	0	2	1	2	1	0

Staff are encouraged to take part in **training workshops, leadership programmes** and research development such as mentoring and coaching. New staff also receive relevant training and Bite-sized training sessions are given during the School Assembly. Line managers ensure that their staff have received adequate training for their role and are shown how to access further resources.

In the 2017 staff survey, 82% of respondents have taken one or more types of training in addition to the requirements of their role. Of these, 14% were female, 71% were male, 2% were non-binary, and 14% preferred not to reveal their gender, generally reflecting the gender balance of the School.

Many of the formal training sessions available to staff are organised by various departments in the University. These are reviewed and monitored outside of the School, including analysing participant evaluation forms.

(ii) Appraisal/development review

Describe current appraisal/development review schemes for staff at all levels, including postdoctoral researchers and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

Most academic staff, including postdoctoral researchers, are required to take part in an annual **Staff Review**, organised centrally through the University's Staff Development department. Staff can request specific reviewers (or change their assigned reviewer), allowing female staff to choose a female reviewer. Where possible a member of staff will have the same reviewer each year, to ensure **continuity of mentoring**.

Staff first complete an online form, allowing them to reflect on their progress, share feedback, celebrate successes, explore career aspirations and set goals for the following year. The online system allows for more than one reviewer, which is beneficial to post-doctoral researchers who may work across more than one project. Following completion of the form, a face-to-face discussion is arranged with the reviewer(s) where feedback is given, and goals are agreed. The final version of the form is then signed off, with both the staff member and reviewers having space to comment on the process. The Head of School reviews each form, providing further oversight and another chance to identify **potential candidates for promotion**.

I AS6 Ensure awareness of promotion criteria and process

In the 2017 staff survey, 11% of staff who had a formal review within the previous 12 months were female and 78% were male, reflecting the gender balance of the School (11% preferred not to disclose their gender).

All reviewers are required to attend the Staff Review and Development training course before reviewing others. This includes training in diversity, including gender and flexible working, in addition to key skills such as giving feedback, setting objectives, and adopting a coaching approach. In the 2017 staff survey, the gender balance of those undertaking this training was 11% female, 67% male and 22% who preferred not to disclose their gender.

(iii) Support given to academic staff for career progression

Comment and reflect on support given to academic staff, especially postdoctoral researchers, to assist in their career progression.

Junior academic staff receive a mentor when they join the School, and other academic staff can request a **mentor** outside of their staff review. The staff survey showed that 47% of academics have a mentor and of those that do not, 9% would like one and 26% were unsure. The recent change to an Institute structure in the School has been an improvement as Heads of Institutes offer some mentoring, however a more formal structure is desirable.

The mentoring system could be [...] made more explicit for giving equal opportunities to all staff members to benefit from it

A C6 Offer mentorship to all academic staff who request it

The School provides specific career development and training tailored to the needs of postdoctoral staff. Many of these events are organised through the Heilbronn Institute and are open to postdoctoral researchers in the School. These include **monthly events** such as panel discussions and training events (organised by internal and external facilitators). Recent topics have included interview training, advice on grants and teaching, and explanation of how to benefit from mentoring; all Heilbronn fellows have a carefully chosen mentor with subject-specific expertise, who is asked to report twice annually to the Associate Chair of the Institute.

Heilbronn is doing a good job at advising us on our future career possibilities in academia

In the 2017 academic staff survey, 94% of respondents selected 'strongly agree', 'agree' or 'neutral' to the statement 'I feel I receive effective support in developing my career', compared with 86% in 2014.

(iv) Support given to students (at any level for academic career progression)

Comment and reflect on support given to students at any level to enable them to make informed decisions about their career (including the transition to a sustainable academic career).

In 2015/16 the University introduced Employability Partnership Agreements (EPA) with each School to provide student data, review past activities and plan for future activities. The School's Senior Tutor oversees student support and acts as a Careers Contact. In response to this, the '**Employability Series**' was created and introduced to students in 2017/18, initially focusing on undergraduate students. See Table 21 for a summary of activities, including a 'How to apply for PhDs event' run by the School. Subsequent EPAs measure the success of the initiative and will also provide opportunities to review postgraduate provision more closely.

Table 21: Summary of Undergraduate ‘Employability Series’ Activities

Year	Teaching Block 1	Teaching Block 2
1	Invites to University Careers Fairs	Employability Roadmap Talk IMA Talk on Careers
2	Student Internship Talk (with Matrix Student Society) How to Find an Internship How to Apply for Jobs Invites to University Careers Fairs	Alumni Careers Talk (with Matrix Student Society) (Invite to Y1 Talks Roadmap Talk and IMA Talk on Careers)
3/4	How to Apply for PhDs (Invite to Y2 Talks How to Apply for Jobs) Invites to University Careers Fairs	(Invite to Y1 Talks Roadmap Talk and IMA Talk on Careers and Y2 Alumni Careers Talk)

In 2016/17 the School introduced the **Perspectives in Mathematics** unit, which includes training in writing mathematics, practical CV writing and job interview practice and group work. This replaced a similar unit with a more limited scope and resulted in a substantial increase of enrolments from 13 to 97.

Undergraduate and PGT students are allocated a **personal tutor** to offer support throughout their studies. The University has recently introduced a new Personal Development Planning initiative which helps to support tutors in engaging in careers discussions with their students.

Within the School, postgraduate students are expected to be involved in seminars, reading groups, and all social activities so they can talk to staff regularly about life as an academic. Postgraduate students are encouraged to talk to visiting speakers by attending seminar talks and lunches. Careers events (including Careers Service Postgraduate Introduction, Postdoc Panel & Non-academic Research Panel) focusing on both academic and non-academic positions and how to apply are organised annually. PGT students are also invited to relevant undergraduate activities

(v) Support offered to those applying for research grant applications

Comment and reflect on support given to staff who apply for funding and what support is offered to those who are unsuccessful.

All applicants for research grants are given **feedback** by subject-specific members of the School’s Research Committee, and applications for larger grants (including fellowships and ERC grants) are also supported by the University’s Research and Enterprise Development division. Where relevant, this includes specific **interview training** with an external coach. To promote diversity, the Director of Research prioritises female staff for places on training courses on grant writing and the mechanics of the application process.

Staff with failed applications receive a ‘post-mortem’, which involves reviewing the unsuccessful proposal and referee reports with the Director of Research or another senior member of the department, to identify and address any weaknesses for future applications.

Data from 2014 to 2017 shows that 16 out of 116 (14%) funding applications were made by female members of staff, reflecting the gender balance among research staff. In the same period, 14 out of 55 (25%) grant awards were made to female staff. Note that (due to the delay in reviewing and awarding grants) it is not possible to directly compare these numbers to give success rates by gender. However,

the EDI Committee was satisfied that there was no evidence of female staff being disadvantaged by internal and external procedures.

5.4. Career development: professional and support staff

Summary

- Career aspirations are discussed in annual Staff Reviews followed by support to achieve them.
- In the latest Staff Survey, 100% of Mathematics Professional Services respondents indicated that they felt supported by their manager.

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

The University's major focus on training provision is based on **personal development** and **management skills**; staff can undertake courses in Personal and Professional Skills, Managing People and Teams, Leadership and Strategy, Projects and Operations and Wellbeing. Professional Services staff can also put themselves forward to take part in Leadership programmes. In one case, the Aspiring Management course was oversubscribed so the School proactively approached the Faculty for funding for a staff member to take an alternative course. The member of staff has subsequently received a promotion.

In addition to training sessions, the Staff Development team at the university launched an **online learning platform** called KnowHow in February 2017. Staff also are encouraged to take part in shadowing and secondment opportunities.

(ii) Appraisal/development review

Describe current appraisal/development review schemes for professional and support staff at all levels and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

As for academic staff, all Professional Services staff undergo an annual **Staff Review** as part of the University's standard review processes. The School Manager reviews 3 team leaders within the School (Student Administration Manager, Senior Executive Assistant, Heilbronn Manager) who in turn review their own team members. All these team leaders receive Staff Review training.

The purpose of the Staff Review is to reflect on the previous year and any barriers to achieving objectives or successes, discuss expectations of the role, set objectives for the next year and explore promotion and development opportunities.

The Staff Review form for Professional Services staff has an additional section which asks individuals to rate themselves against a series of Professional Behaviours as defined by the AUA Continuing Professional Development Framework, and comment on strengths and weaknesses in these areas.

(iii) Support given to professional and support staff for career progression

Comment and reflect on support given to professional and support staff to assist in their career progression.

Staff are specifically asked in the Staff Review form what their **longer-term career development** or personal ambitions are. Where staff identify progression aspirations, they are supported by their managers with training, shadowing and other opportunities to expand their skill sets (see Section 5.4.iii), so they can apply for promotion or other roles at their current grades.

In the latest university Staff Survey in 2015, 100% of Professional Services staff within the School who took part indicated that they felt supported by their manager.

5.5. Flexible working and managing career breaks

Note: Present professional and support staff and academic staff data separately

All the information within this part relates to academic staff, as no professional services staff have taken career breaks or flexible working during the time presented.

Summary

- Staff surveys show an increase in staff easily accessing information on parental leave and discussing leave with their line managers.
- 86% of respondents were satisfied or very satisfied with the support received within the School to handle career breaks.
- Staff constraint requests offer flexible working options.

(i) Cover and support for maternity and adoption leave: before leave

Explain what support the department offers to staff before they go on maternity and adoption leave.

In addition to the University Maternity and Adoption package and comprehensive Maternity and Adoption leave information, Athena SWAN Bronze actions have succeeded in creating a Maths-specific **parental leave factsheet** and **maternity staff network**, and in streamlining the School's procedures. The parental leave factsheet is available on the Intranet; it summarizes information relevant for staff and contains informal advice and suggestions.

I FCB1, FCB2 and FCB3 Support before, during and after leave, and smooth resuming and progression of career

The 2017 staff survey evidenced that 86% of respondents could 'easily find the information needed on paternity, maternity or adoption leave entitlement', which is a considerable improvement compared to 61% from the 2014 survey. Nevertheless, few are aware of the factsheet and survey responses show that only 21% of staff are aware of the University's shared parental leave policy. Awareness should be raised among staff of shared parental leave and the Maths factsheet.

A **F1** Advertise the Maths parental leave factsheet and update to include further details on adoption leave, useful advice for PDRAs and Returner Carer Scheme funds

As soon as a pregnancy is communicated, the School Manager arranges a Health and Safety meeting to undertake a formal written risk assessment. A **planning meeting** with the Institute Director and the School Manager (held shortly after the parental leave notice is handed to HR) was also introduced, to

discuss arrangements during leave and options on return. While in the 2014 staff survey only 8 out of 15 respondents who were entitled to leave discussed it with their line manager, 5 out of 7 respondents from the 2017 survey did. Nevertheless, informal feedback shows that the implementation is still not streamlined, and that useful advice was not always given.

A F2 Ensure that the parental leave planning meeting and mentoring happen promptly, are embedded in the procedures and follow the Maths parental leave factsheet

Individual meetings can also be arranged with HR and Finance, which anecdotally have proved to be useful and supportive. Informal Maths mentoring puts staff applying for leave in contact with staff with previous parental leave experience.

(ii) [Cover and support for maternity and adoption leave: during leave](#)

Explain what support the department offers to staff during maternity and adoption leave.

Cover for staff duties during parental leave is discussed during the leave planning meeting. In one case, an academic staff member on leave chose to keep supervising her PhD students and PDRAs. She found the use of **Keep in Touch Days** helpful and appreciated the flexibility allowed by the School in their use, as well as the help getting visitor parking permits. Staff on parental leave can choose if and how to be contacted by the University. HR sends an official letter to confirm return dates and flexible working options on return. Overall, according to the staff survey, 86% of respondents were satisfied or very satisfied (and no one dissatisfied) with the support received within the School for career breaks.

(iii) [Cover and support for maternity and adoption leave: returning to work](#)

Explain what support the department offers to staff on return from maternity or adoption leave. Comment on any funding provided to support returning staff.

The University runs several initiatives to support staff returning to work, including a **Returning Carers Scheme** supported by a central budget, and a Maternity Mentoring Scheme. The parental leave factsheet advertises these options and we ensure that they are consistently advertised in the leave planning meeting. The Returning Carers scheme allows staff to apply for up to £10k to support their return to research. For example, one Maternity returner was awarded teaching replacement money, to allow **protected research time** upon return, and found this very beneficial to her career development. As described below, **sabbatical credit** is now earned during maternity leave. Unfortunately, in one case, incorrect advice on the Returning Carers scheme was informally given; we now ensure this does not happen by including a list of possible uses of the funds in the factsheet.

The School is in general supportive of flexible working arrangements, both formally and informally set up. Two recent Maternity leave returners chose to come back to work full time. One had a transition period of three months part-time working, while another chose to reduce her working hours upon return. The latter two found the School and their line managers very flexible and supportive.

The SAT consulted the academic staff who took parental leave to identify areas for improvement. Some issues identified were the long waiting lists for the University nurseries, and the past inability to reimbursing childcare expenses related to travelling while caring for a young child. Partly because of interventions from members of the EDI committee at Faculty level, University policy has now been updated to allow reimbursement of childcare costs from the School budget.

Due to Heilbronn's funding model, the School can **reimburse additional caring costs** incurred to attend Heilbronn-funded research events (including for example the Heilbronn Distinguished lecture series, Research Workshops and Annual Conference).

(iv) Maternity return rate

Provide data and comment on the maternity return rate in the department. Data of staff whose contracts are not renewed while on maternity leave should be included in the section along with commentary. Provide data and comment on the proportion of staff remaining in post six, 12 and 18 months after return from maternity leave.

[redacted]

(v) Paternity, shared parental, adoption, and parental leave uptake

Provide data and comment on the uptake of these types of leave by gender and grade. Comment on what the department does to promote and encourage take-up of paternity leave and shared parental leave.

[redacted]

In our Bronze Application, we committed to improve awareness of rights to paternity and adoption leave. In the 2014 Staff Survey, only 73% of staff who were eligible for parental leave used their entitlement. All eligible respondents to the 2017 Staff Survey had taken this leave (7 out of 7). The 2017 survey evidenced a lack of awareness about the option of shared parental leave (see Action F1).

I FCB4 and FCB5 Line managers and induction to cover relevant information

Line managers will be prompted to familiarise themselves on how adoption and paternity leave can be managed; we will continue to monitor satisfaction with arrangements in surveys and case-by-case feedback.

A F3 Design a teaching replacement scheme so men take short paternity leave when eligible

(vi) Flexible working

Provide information on the flexible working arrangements available.

The School embraces an **agile working culture**. Academic members of staff are generally free to work from home some of the time, as long as they fulfil their supervisory, leadership and teaching duties. Many staff take this opportunity, usually without formal arrangements, reflecting the **trusting and supportive** School culture. The University requires academic staff to be available to teach between 9am and 6pm. However, staff can request not to teach at either 9am or 5pm because of caring responsibilities. The staff survey indicated that in the last three years, 12 staff requested this, with 9 requests due to childcare.

Staff requiring more flexibility are required to formally request **flexible working**. These arrangements follow a formal procedure and an agreement at School level. The decisions are made on a case-by-case basis in discussion with the HoS and (if appropriate) a HR representative. Information is fed forward to the relevant Institute Director and others. The staff survey shows 5% of staff have held formal flexible working arrangements in the last three years, none of whom were dissatisfied with the process of making such arrangements.

Bronze action FCB5 has been successful, in that a handbook for new staff members has been developed covering flexible working and family initiatives and information on flexible work arrangements has been included on the Maths intranet. As a result, the proportion of staff not aware of flexible working arrangements decreased from 30% to 13% between the 2014 and 2017 surveys.

I FCB5 Review induction pack for new members of staff

A F4 Raise staff awareness of flexible working options including clear, well-managed and well publicised policy on staff constraints

Overall, 77% of survey respondents answered affirmatively to the question 'do you feel that working flexibly is an option open to you?' (28% 'yes', 49% 'possibly'), a significant increase compared to 61% in the 2014 Survey (8% 'yes', 53% 'possibly').

(vii) **Transition from part-time back to full-time work after career breaks**

Outline what policy and practice exists to support and enable staff who work part-time after a career break to transition back to full-time roles.

Currently the School does not have a formal policy but aims to provide a **supportive environment** and to be receptive to case-by-case necessities. Given the limited number of staff working part-time (only three respondents), few such transitions have happened, with 1 out of 3 changing to full-time. This was facilitated by a Returning Carer award, which allowed for dedicated research time upon return.

5.6. Organisation and culture

Summary

- School events for female staff include the Women in Mathematics PhD conference, welcome events and weekly lunches.
- Initiatives have been introduced to tackle committee overload.
- Female seminar speakers have increased from 14% to 22%.

(i) **Culture**

Demonstrate how the department actively considers gender equality and inclusivity. Provide details of how the Athena SWAN Charter principles have been, and will continue to be, embedded into the culture and workings of the department.

Lunches for Women and Non-Binary people in Mathematics are held every week during term-time for all eligible staff and postgraduate students. They started in 2002 under the title of *Women in Maths Lunches*, to offer opportunities for women to meet other female staff, and to exchange ideas and experiences. Successive Heads of School have endorsed and supported the group, including the provision of funding since its inauguration. In 2017 the group changed its name to Women and Non-Binary People in Mathematics to become clearer about its inclusivity.

Each year new female students are invited to an **undergraduate welcome lunch** which is hosted by the DEDI and attended by female staff and postgraduate students. The School actively participates in gender equality events including hosting public talks on **Ada Lovelace Day**.



Undergraduate Welcome Lunch

The School has been a supporter of the **LMS Good Practice Scheme** since 2013. In 2016, Dr Julia Wolf was awarded an LMS Anne Bennett Prize 'in recognition of her outstanding contributions to additive number theory, combinatorics and harmonic analysis and to the mathematical community'. Achievements for staff and students are celebrated through the website, newsletter, posters, email, social media and events.



*Dr Julia Wolf
Heilbronn Reader
LMS Anne Bennett Prize (2016)*



*Sophie Stevens, MSci/PhD student
Co-authored Conference paper as
an undergraduate (2015)*



*Zainab Kwaw-Swanzy, MSci student
Students Union Student
Leader Award (2016)*

Staff can take part in university-wide groups and the Maths staff common rooms, kitchens and garden are valued as places to spend time with colleagues. These activities are non-gender specific, allowing for a culture of inclusivity both within the School and University. The **sense of community** among postgraduate researchers is strengthened by social events including the annual student-organised Mingle research conference.



Macmillan Coffee Morning

In the 2015 University-wide staff survey, 90% of Mathematics academic respondents agreed that 'there is a friendly working atmosphere within my team'. Staff surveys in 2014 and 2017 included questions on School culture. The academic survey has been compared between both years and results to the culture questions are shown in Table 24, with responses for 'strongly agree', 'agree' and 'neutral' grouped

together. Professional services staff were asked the same questions, though there is no comparison is made as a survey was not required for the 2014 Bronze application.

Table 24: Responses to staff surveys

	Professional Services 2017	Academics 2017	Academics 2014	Academics Difference
The School supports me in striking a positive balance between work and home	100%	81%	80%	+1%
The School has a supportive working environment	100%	97%	93%	+4%
I am treated fairly in the School	100%	97%	93%	+4%
The culture in the School respects the diversity of its staff	100%	97%	85%	+12%
Achievements are adequately recognised and celebrated within the School	92%	94%	80%	+14%
Decision-making in the School is sufficiently transparent	92%	81%	64%	+17%

For academic staff, there has been an **increase in satisfaction** in each category. We believe this is due to the change in culture caused by Bronze actions:

I G3 All staff to be informed of School’s EDI strategy
OC4 Friendly and inclusive culture celebrating achievements

The percentage gap between academic and professional services staff ‘striking a positive balance between work and home’, highlights further work is to be done. Although we recognise that some academic staff choose to facilitate caring responsibilities by doing so, we believe that a **healthier work-life balance** will be achieved by an explicit School policy stating that nobody is expected to answer emails outside working hours.

A O1 Introduce a policy of ‘no email requests outside working hours’ as default behaviour.

(ii) **HR policies**

Describe how the department monitors the consistency in application of HR policies for equality, dignity at work, bullying, harassment, grievance and disciplinary processes. Describe actions taken to address any identified differences between policy and practice. Comment on how the department ensures staff with management responsibilities are kept informed and updated on HR polices.

The School has **robust and well-defined processes** in place for handling the HR issues defined above. Normally a case would be reviewed initially at School level with guidance from the local HR team. For Professional Services staff, the Professional Behaviours from Staff Reviews are discussed with their line manager.

All University policies are communicated through a variety of ways including websites, newsletters and some structured training for managers. The HoS and School Manager meet the Science HR Manager monthly to discuss any changes to policies in addition to any individual staff cases, for example if a member of staff has been on extended leave due to ill health.

Unconscious bias and micro-aggression training was recently included in a School Assembly to raise awareness of the expectations and conduct of staff, as part of the ongoing implicit bias training. In February 2017, Performance Management Training was provided by the University to all School Managers and HoS. This will shortly be available to others across the University.

The University is committed to creating and sustaining a positive and mutually supportive working environment for our staff and an excellent teaching and learning experience for our students, where individuals are equally valued and respected. Bullying, harassment or victimisation of any individual will not be tolerated, and any allegations will be taken seriously and dealt with appropriately under the relevant procedure. The University will shortly introduce **web-based tools** to report any incidents of this kind, and ensure that such reports are followed up appropriately.

(iii) Representation of men and women on committees

Provide data for all department committees broken down by gender and staff type. Identify the most influential committees. Explain how potential committee members are identified and comment on any consideration given to gender equality in the selection of representatives and what the department is doing to address any gender imbalances. Comment on how the issue of 'committee overload' is addressed where there are small numbers of women or men.

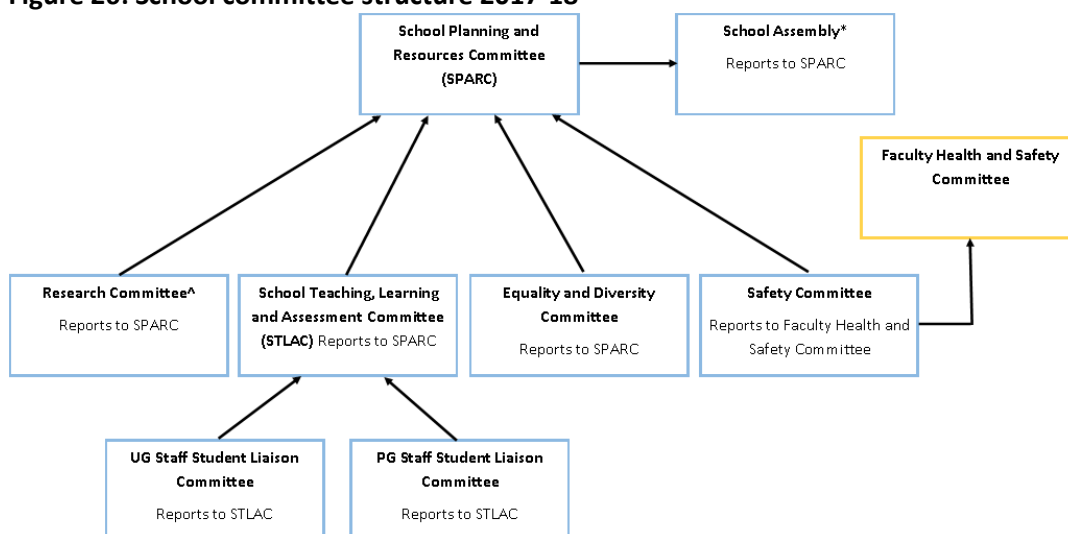
Committee members are usually designated by role, however, this can now be overruled to ensure female representation in the decision-making process while managing 'committee overload'.

I OC1 Ensure women have access to and insight into decision making processes

For example, one of our female members of staff sits on the School Planning and Resources Committee instead of the (male) DEDI, with the agreement to attend and participate in decision-making but not be asked to complete any committee work.

A O2 Expand and formalise policy to co-opt academic women onto all committees in an 'attend and contribute, but no work' capacity

Figure 26: School committee structure 2017-18



* The School Assembly is led by the HoS and all academic staff are invited

^The Research Committee started in 2016/17 consisting of the Research Institute Directors

Table 25 shows fluctuations of female representation across committees and years, partly due to the total low numbers but also due to the change of the DUS role from a female member of staff to a male.

Table 25: Committee members by gender and staff type

Committee	Staff Type	2013/14		2014/15		2015/16	
		Female	Male	Female	Male	Female	Male
School Planning and Resources Committee	Total	4	4	3	5	2	8
		50%	50%	38%	62%	20%	80%
	Academics	2	4	2	5	1	8
	Professional Services	2	0	1	0	1	0
School Teaching Learning and Assessment Committee#	Total	3	10	3	8	2	9
		23%	77%	27%	73%	18%	82%
	Academics	2	10	1	8	0	9
	Professional Services	1	0	2	0	2	0
Undergraduate Student Staff Liaison Committee †	Total	2	2	3	2	2	4
		50%	50%	60%	40%	33%	67%
	Academics	1	2	1	2	0	4
	Professional Services	1	0	2	0	2	0
Postgraduate Student Staff Liaison Committee	Total	5	4	5	4	3	5
		56%	44%	56%	44%	37%	63%
	Academics	0	1	0	1	0	1
	Professional Services	1	0	1	0	1	0
	Students	4	3	4	3	2	4
Postgraduate Teaching Learning and Assessment Committee	Total	2	3	Combined with Postgraduate Student Staff Liaison Committee			
		40%	60%				
	Academics	0	3				
	Professional Services	2	0				
Safety Committee	Total	4	6	3	6	2	7
		40%	60%	33%	67%	22%	78%
	Academics	0	3	0	3	0	4
	Professional Services	4	3	3	3	2	3
Equality, Diversity and Inclusion Committee	Total	-	-	4	4	6	5
				50%	50%	55%	45%
	Academics			4	4	4	5
	Professional Services			0	0	2	0

Student Representatives select one member to attend

† All undergraduate Student Representatives are invited to attend

(iv) Participation on influential external committees

How are staff encouraged to participate in other influential external committees and what procedures are in place to encourage women (or men if they are underrepresented) to participate in these committees?

Some staff membership on external committees is due to roles: for example, the HoS is a member of the Faculty of Science Planning and Resource Committee and Faculty of Science Senate, and the DUS is a member of the Faculty Undergraduate Studies Committee. In the case where these roles are performed by male staff, female members are co-opted to ensure balance. For example, one female staff member was given a Deputy Research Director role so that she could participate in research-focused meetings. There are also situations where committee attendance does not rely on roles, for example promotion and progression committees in faculties and hiring committees outside our School, where again a balance is obtained between decision-making and committee overload.

(v) Workload model

Describe any workload allocation model in place and what it includes. Comment on ways in which the model is monitored for gender bias and whether it is taken into account at appraisal/development review and in promotion criteria. Comment on the rotation of responsibilities and if staff consider the model to be transparent and fair.

School workload allocation is based on three principles: equal access to opportunities, fairness and transparency. **Equal access** is achieved through

- (a) an annual online questionnaire for every staff member to express teaching preferences, apply for sabbatical and highlight special circumstances;
- (b) School-wide advertising of vacant administrative roles.

To minimize lecture preparation time, previous years' lecturers have priority to teach the same unit again (for up to 4 years). Major School administrative roles rotate after 3 years (with the exception of HoS, which is 4 years), and no staff member is required to teach the same unit for more than 4 consecutive years. Successfully performing administrative roles and good citizenship are explicit criteria for Promotion.

Teaching is jointly allocated by the HoS and School Education Director to ensure **fairness and consistency** across the School. Institute Directors and mentors are independent of this process, and can therefore provide staff with **support and advice** (our survey showed 84% of staff felt they were treated fairly). The School recognises that female staff members are more likely to be called to internal and external committees, and this is taken into account in the workload allocation. Staff on parental leave of 6-12 months automatically accrue sabbatical credit equivalent to a 6 week lecture course, and half of that for parental leave of 3-6 months. This supplements the ability to arrange teaching cover using funds from the University's Returning Carers scheme, and is a special measure to support female staff in the School.

Transparency of workload allocation is achieved by having a standard workload and explicit workload tariffs for administrative roles measured in fractions of a lecture course. Newly appointed lecturers receive a reduction in their teaching load of about 30% in their first two years, and have no significant administrative responsibilities. Staff may choose to temporarily exceed the standard workload to build up credit towards a sabbatical, and can request their teaching to be concentrated in one teaching block to attend long-term research programs. From 2017/18 the workload of all staff members will be published internally to all staff. We will continue to update this workload model based on feedback from staff and changing operational priorities.

(vi) Timing of departmental meetings and social gatherings

Describe the consideration given to those with caring responsibilities and part-time staff around the timing of departmental meetings and social gatherings.

All School meetings take place between 10 and 5 following the introduction of **core hours** from our Bronze action, and the 2017 staff survey shows no staff are dissatisfied with this policy, though some argued for further reduction.

I OC3 Make 10-5 Core Hours to support staff with caring responsibilities

Part-time staff working hours are factored into these meetings; School Assembly always takes place on a Wednesday when all current part-time staff are working. Committee meetings are planned at the beginning of the academic year.

A O3 Reduce core meeting hours to 10-4

Key social gatherings are **planned well in advance** to allow staff to make arrangements to attend, and most take place during core hours. The exception is some public talks, the timing of which is necessitated by the target audience including schoolchildren and working people. These talks will be recorded using existing lecture-capture technology.

A O4 Ensure any out-of-hours talks are recorded and made available to all staff

The Winter Social is designed to be **family-friendly**; for example, a magician was part of the entertainment in 2016, and the 2017 event will allow staff and their families to visit Bristol Zoo. Arrangements are in place for part-time staff to attend annual meals and children and other dependents are invited. Doodle Polls are sometimes used to allow staff to have a say in the scheduling of social events.



Magician at the Winter Social

(vii) Visibility of role models

Describe how the institution builds gender equality into organisation of events. Comment on the gender balance of speakers and chairpersons in seminars, workshops and other relevant activities. Comment on publicity materials, including the department's website and images used.

Our Bronze application explicitly set a target of at least **20% female speakers** at seminars and workshops, averaged across all seminar series to reflect the varying demographics of different sub-disciplines. By periodically reminding seminar organisers about this target and requiring them to report progress, we have **succeeded** in increasing the female representation for academic seminar speakers from 14% to 22% over three years, with similar increases for workshops.

I PG9 Provide female role models and networking opportunities by increasing female speakers to at least 20%

To build on this, we now propose a target of at least 25%. The School Colloquia are currently meeting their own target of 50% female speakers (with this higher figure reflecting the need to provide role models to female undergraduates who attend).

A 05 Create and distribute Equality, Diversity and Inclusion guidelines to seminar organisers including how they can increase the number of female speakers to at least 25%

Bronze Action OC4 has to a large extent been successfully carried out; we have reviewed and raised the visibility of female staff and students in visual displays and promotional films, and celebrate individual successes using the website and staff newsletter. In the last year, 28 tweets were sent from @BristolUniMaths with references to women in Maths, including hashtags #womeninmaths #womeninSTEM #internationalwomensday, which represented about 15% of the overall tweets. Care is taken to ensure gender-specific titles are not included in publicity material.

I OC4 Create new visual material to celebrate successes.

On review, it has been noted that the previous students featured on postgraduate recruitment pages are predominately male so further work is needed to ensure website content is systematically audited.

A 06 Set up a regular audit procedure to monitor the content of School websites and prospectus entries

(viii) Outreach activities

Provide data on the staff and students from the department involved in outreach and engagement activities by gender and grade. How is staff and student contribution to outreach and engagement activities formally recognised? Comment on the participant uptake of these activities by gender.

The School has a **Director of Public Engagement** responsible for leading activities to promote mathematics to the public, with a focus on Widening Participation and activities to promote gender equality (such as Ada Lovelace Day events). These are organised in a way that is mindful of the need to balance **visibility of female role models** with the issue of committee overload for female staff. For example, there were two major public lectures given in 2016-17 by external female lecturers, with 191 and 161 attendees.

I UG4 Outreach activities to systematically address women in maths.

In 2016/17 7 PhD students (3 female and 4 male) and 7 staff (1 female and 6 male) either participated in training events or performed outreach for schools and the public, all on a voluntary basis.

Major outreach activities, such as acting as Director of Public Engagement, receive explicit workload credit. Staff participation in more occasional outreach activities is a formal assessment criterion in promotion cases. For PhD students, we believe that outreach training provides **transferable skills** which will help in future research presentations and job applications, though we ensure that excessive time commitments are not required.



Big Bang Bristol Science Fair, 2017

Words: 6175

6. CASE STUDIES: IMPACT ON INDIVIDUALS

Two individuals working in the department should describe how the department's activities have benefitted them. The subject of one of these case studies should be a member of the self-assessment team. The second case study should be related to someone else in the department. More information on case studies is available in the awards handbook.

[redacted]

Words: 992

7. FURTHER INFORMATION

Please comment here on any other elements that are relevant to the application.

In 2018 the School of Mathematics will move to the **new Fry Building** following an investment of £33m. The current Grade II listed building is being refurbished to become a world-class facility for mathematics, attracting and retaining staff and students. Currently the School of Mathematics is divided between two non-adjacent buildings so the move will bring an increased **sense of community** to staff and students.



Artist's impression of the Fry Building

A School Move Manager coordinates the transition and is involved in the Fry Building Committee alongside a Lead Academic, Deputy Lead, Head of School, and School Manager. They have been providing updates to other School committees and a webpage has been set up for information and updates. The **EDI Committee have been engaged** in the redesign and renovation of the Fry building as a new home for the School of Mathematics. The architects have worked closely with staff to optimise the accessibility of the building, for example in the design of a series of accessible lifts (although there are some areas that are unavoidably restricted given the historic nature of the building). We have begun and will continue to demonstrate thoughtful representation of genders in artworks, visual displays and marketing materials.

The current lecture theatres are not big enough to host all students across all units, meaning that most lectures are held in neighbouring buildings. The new Fry Building will increase lecture theatres from two to four and tutorial rooms from ten to thirteen. There will also be more study areas with an increase of one room to four. Some lectures will continue to be held in other buildings due to our large cohort of students however this will be less than our current arrangement. An important part of the current staff community is the staff common areas which encourage **interaction across the School**. This has been factored into the design of the new building with inclusion of carefully designed staff social spaces.

The Fry Building is in the centre of the main university campus, which will improve interaction with other departments and faculties. The landscape design includes retaining some of the heritage features, creating a new entrance to connect the building to the university precinct, and adding external chalkboards to outdoor areas to encourage outdoor teaching and social interaction. There will also be integral art features including a 'Voronoi diagram' screen to the façade of the new atrium, design of paving based on the work of Bristol-born mathematician Paul Dirac, and public art within the building.

The move to the Fry Building will create a **sense of identity** for the School and promote **integration and interaction**, and the EDI Committee has ensured that the **Athena SWAN principles** will be at its heart.

Words: 454

8. ACTION PLAN

The action plan should present prioritised actions to address the issues identified in this application.

Please present the action plan in the form of a table. For each action define an appropriate success/outcome measure, identify the person/position(s) responsible for the action, and timescales for completion.

The plan should cover current initiatives and your aspirations for the next four years. Actions, and their measures of success, should be Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

See the awards handbook for an example template for an action plan.

Student Data							
Ref	Action	Rationale	Completion	Responsibility	Goal	Deliverable	Priority
S1	Ensure prospective female applicants are not isolated in small subgroups used during visit day	Gender imbalance in small groups may deter female students accepting offers.	October to May annually	Undergraduate Admissions Tutor	Increase acceptance rates from female offer holders	No isolated female applicants in groups.	Medium
S2	Use gender positive imagery in the open spaces in the new School of Mathematics building, including Athena SWAN and references to successful current and former female students.	Using a balance of images/posters from gender/ethnic background will encourage applications from those under-represented groups.	July to December 2018	Student Administration Manager / Move Manager	Increase applications and entry from female students and minority ethnic backgrounds	50% of images/posters to include female/BME students or staff	Medium
S3	Ensure the continued offer of Heilbronn Institute PhD funding scheme for female students	Provides extra support to female applicants	January to July annually	Heilbronn Institute	Recruit more high-quality female students onto PhDs	To offer one studentship per year	High
S4	Organise the Women in Mathematics conference yearly	Female students need more encouragement to apply for PhD positions.	June to November annually	DEDI	Raise awareness of further study opportunities	Conference organised annually, 80% positive survey feedback	High
S5	Ensure personal tutors are consistently identifying female students for PhD funding, summer research bursary applications and Women in Maths conference	Female students need more encouragement to apply for PhD positions.	October annually	Personal Tutors	Percentage of female bursary and PhD students to match UG population	DEDI to remind Personal Tutors to contact students	High

Academic and Research Staff Data							
Ref	Action	Rationale	Completion	Responsibility	Goal	Deliverable	Priority
A1	Chairs of all appointment panels must ensure they are up-to-date with University guidelines and policies	Greater awareness should reduce unconscious bias in the recruitment process	Each recruitment cycle	DEDI, School Manager	To reduce unconscious bias	Chair of each panel to explicitly confirm to DEDI or School Manager they are familiar with this material.	High
A2	Unconscious bias information to be sent to all staff involved in recruitment and the shortlisting process	Greater awareness should reduce unconscious bias in the recruitment process.	Each recruitment cycle	Head of School, DEDI	To reduce unconscious bias	DEDI to send out information to 100% of hiring managers.	Medium
A3	Use Exceptional Talent to identify more female appointees at Professor level	No female candidates who were offered a position accepted it	July 2022	Head of School	More diverse professorship	Increase of Exceptional Talent appointments	High
A4	Annual review of staff CVs to identify those ready for promotion	Survey indicated that 26% of respondents would like a critical appraisal of their CV	May to October annually	Staff reviewer, reporting to Head of School	Increase of female staff at Professor level	100% of staff reviews to include discussions on promotion and CVs, outcome reported to Head of School	High
A5	Expand the Equality, Diversity and Inclusion Committee to represent a broader range of intersectionality	Current EDI Committee does not have explicit LGBT+ or BME representation	October 2018	DEDI	To ensure fair representation	EDI Committee which represents all protected characteristics.	Low

Key Career Transition Points and Career Development

Ref	Action	Rationale	Completion	Responsibility	Goal	Deliverable	Priority
C1	Systematically record approaches and outcomes when encouraging candidates to apply for jobs	Female applicants are more likely to apply if approached	Each recruitment cycle	Chairs of recruitment panels	50% of individual approaches to be made to female candidates	Chairs to email all staff and register approaches and outcomes	High
C2	Pilot gender-separated long- and short-lists to improve gender balance	Recruitment panels to incorporate equality and diversity in their selections to increase the number of female appointments	July 2021	Chairs of recruitment panels	To analyse the possible benefits of gender shortlists	Half of panels use separated shortlist. Report to be delivered to EDI committee to consider benefits	Medium
C3	Screen shortlisted applications and references for equality issues, for both academic and Professional Services staff	References could display unconscious bias or use gendered language. Panels can overlook career breaks	July 2021	Chair of EDI (academic posts) and School Manager (professional services posts)	To ensure the shortlisting process is fair	At least 90% of recruitment panels informed of the outcome	High
C4	Offer further feedback on promotion applications to candidates and mentors	Survey indicated more feedback would be beneficial	July 2022	Head of School	To further support staff to improve their promotion applications	100% of staff offered further feedback	Medium
C5	HR to report annually to the EDI Committee and HoS on promotion outcomes; EDI Committee ensure that recent successes are maintained, and act if necessary	Lack of annual data means trends are hard to detect	December annually	HR	Ensure promotion process is fair	Report produced annually	Low
C6	Offer mentorship to all academic staff who request it	Survey shows that some staff without mentors would like one	May to October annually	Head of School	Improved support to academic staff evidenced by staff survey results	100% of staff requesting a mentor being assigned one	Medium

Flexible Working and Managing Career Breaks							
Ref	Action	Rationale	Completion	Responsibility	Goal	Deliverable	Priority
F1	Advertise the Maths parental leave factsheet and update to include further details on adoption leave, useful advice for PDRAs and Returner Carer Scheme funds	Survey shows low awareness of Maths parental leave factsheet	September 2018	EDI Committee	Provide clear information on career breaks	90% of awareness in Staff Survey through promotion.	High
F2	Ensure that the parental leave planning meeting and mentoring happen promptly, are embedded in the procedures and follow the Maths parental leave factsheet	Implementation needs to be more streamlined	October 2019	School Manager	Provide individual advice and support from recent leave takers	Survey shows every eligible individual has received this support	High
F3	Design a teaching replacement scheme so men take short paternity leave when eligible	Teaching replacement for paternity leave is often organised by the leave taker	October 2020	EDI Committee, Head of School	Streamlined paternity leave planning	New policy agreed, implemented and communicated	Medium
F4	Raise staff awareness of flexible working options including clear, well-managed and well publicised policy on staff constraints	Not all staff are aware of recent changes in the policy	March annually	School Manager, Head of School	Provide clear information on flexible working	Increased awareness rate to 95% in staff survey	Low

Organisation and Culture							
Ref	Action	Rationale	Completion	Responsibility	Goal	Deliverable	Priority
O1	Introduce a policy of 'no email requests outside working hours' as default behaviour	To address the survey responses of academics who are not happy with their work-life balance	July 2018	EDI Committee	To improve work-life balance	80% of staff to be aware of the email policy	Low
O2	Expand and formalise policy to co-opt academic women onto all committees in an 'attend and contribute, but no work' capacity	Committee membership is based on departmental roles	September 2019	Head of School	Ensure a balance of genders on committees and reduce committee overload	Proportional representation of genders on committees	High
O3	Reduce core meeting hours to 10-4	To allow flexibility for staff with caring responsibilities	July 2019	Head of School, Head of Institutes, School Manager	To reduce the pressure on staff with caring responsibilities	Core meeting hours changed	Low
O4	Ensure any out-of-hours talks are recorded and made available to all staff	Some staff with flexible working arrangements cannot attend events outside of core hours	July 2018	Conference Coordinator	To increase accessibility of events	All out-of-hours talks recorded	Low
O5	Create and distribute Equality, Diversity and Inclusion guidelines to seminar organisers including how they can increase the number of female speakers to at least 25%	Although female seminar speakers have increased, they are still underrepresented	April to July annually	EDI Committee	Increased representation of prominent female mathematicians	Increase the number of female speakers at seminars to at least 25%	Medium
O6	Set up a regular audit procedure to monitor the content of School websites and prospectus entries	Some webpages do not have balanced gender images	July 2018	School Manager, Student Administration Manager	To achieve a gender-balance of images	Procedure set up	Low

Action Plan Gantt Chart

Reference	2017/18							2018/19							2019/20							2020/21							2021/22																							
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July									
Student Data																																																				
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