## "AdvanceHE

Athena SWAN: Bronze and Silver department applications

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| Name of institution | University of Sheffield |
| :--- | :--- |
| Department | Information School |
| Focus of department | AHSSBL |
| Date of application | Bronze |
| Award Level | Date: May $2019 \quad$ Level: Silver |
| Institution Athena SWAN award |  |
| Contact for application | e.zamani@ D. Zamani |
| Must be based in the department | $(0) 114$ 222 6331 |
| Email | https://www.sheffield.ac.uk/is |
| Telephone |  |
| Departmental website |  |

## 1. Letter of endorsement from the head of department



Advance HE
First Floor, Napier House
24 High Holburn
London WC1V 6AZ

## Information School.

Head of School
Professor Val Gillet
Regent Court
211 Portobello Street
Sheffield
S1 4DP
Telephone: +44 (0) 1142222630
Fax: +44 (0) 1142780300
Email: dis@sheffield.ac.uk
Website: www.sheffield.ac.uk/is

I am delighted to endorse the Information School's application for an Athena SWAN Bronze Departmental Award. The information presented (including qualitative and quantitative data) is an honest, accurate and true representation of the School. We are strongly committed to the Athena SWAN Charter's principles and are supported in this application by the Faculty and University, which holds an Institutional Silver Award.

In the School, we believe in equality and fairness, and supporting staff regardless of their role, gender or personal circumstances. The process of engaging with Athena SWAN has helped to identify some long established cultural and organisational challenges relating to gender equality. This application, and the associated Action Plan, is of strategic priority for creating an environment where all staff and students are treated equitably and supported to achieve their maximum potential.

Following our previous unsuccessful application (November 2018), we have updated and re-analysed the data, reflected more deeply on issues identified previously, and updated and strengthened our Action Plan. We have also started to work on some previously identified actions. For example, we have improved gender balance across our committees, with our Strategy Group now having equal representation of males/females. The Director of EDI is a member of the Strategy Group and EDI is a standing item on both Strategy

Group and Staff Meetings. We have increased the uptake of EDI (from 15\% to $31 \%$ ) and unconscious bias training (from 15\% to 40\%).

Although we have made progress, there are still issues that require urgent action to prevent unintended inequalities impacting on our staff and student body. For example, although we follow University policies for family leave and flexible working, we need to communicate these more clearly to staff. We have improved selection processes in recruitment; however, applications remain male dominated, despite recent efforts to target advertising towards women (e.g., Women in Academia Support Network). Importantly, the significant gender imbalance at Professorial level is unchanged despite interviewing female candidates in 2019. We will continue to target recruitment of senior female academics and we have tightened action points aimed at supporting female career progression. These actions are embedded throughout the Action Plan and focus on recruitment processes, role allocation, targeted research support, including networking opportunities and role models from across the University, and increasing understanding of the promotion process. Our recruitment of BAME and students with declared disabilities is low compared to HESA data and we must improve on this to achieve our goals of fairness and equality across all areas of activity.

In preparing for resubmission, our efforts were severely disrupted following the pandemic, which led to increased workload and additional challenges arising from home working. The continued engagement of the SAT during this time is testament to the School's commitment to the principles of the Charter and I am extremely grateful to the members of our SAT for their time and efforts during these challenging times.

Your sincerely
Professor Val Gillet
Head of School

## [487 words]

## List of abbreviations

AHSSBL Arts, Humanities, Social Sciences, Business and Law
ACP Academic Career Pathway
AS Athena SWAN
BAME Black, Asian and Minority Ethnic
BCS British Computer Society
BME Black and Minority Ethnic
CERN Conseil Européen pour la Recherche Nucléaire; European Organization for Nuclear Research
CILIP Chartered Institute of Library and Information Professionals
CILT Certificate in Learning and Teaching
DDLTi Deputy Director of Learning and Teaching Innovation
DEDI Director of EDI
DGG Data Governance Group
DHoS Deputy Head of School
DL Distance Learning
DLT Director of Learning and Teaching
DM Departmental Manager
DoR Director of Research
DDoR Deputy Director of Research
DPGR Director of Postgraduate Recruitment
DPGTR Director of Postgraduate Taught Recruitment
DS Data Science
DSS Department of Sociological Studies
ED Equality and Diversity
EBI European Bioinformatics Institute
ECR Early Career Researcher
EDI Equality, Diversity and Inclusion
EDIC Equality, Diversity and Inclusion Committee
FAH Faculty of Arts and Humanities
FDEDI Faculty (co)Director of EDI
FDLT Faculty Director of Learning and Teaching
FDoR Faculty Director of Research
FLTC Faculty Learning and Teaching Committee
FSS Faculty of Social Sciences
FT Full Time
FVP Faculty Vice President
HE Higher Education
HESA Higher Education Statistics Agency
HoS Head of School
HR Human Resources
ICT4D Information and Communication Technologies for Development
IFLA International Federation of Library Associations
IGES iSchool Gender Equality Survey
IM Information Management
IS Information Systems
ISM Information Systems Management
KIT Keep In Touch (days)
KT Knowledge Transfer
LGBT+ Lesbian, Gay, Bisexual, Trans +
LIS Library and Information Science
LISM Library and Information Services Management
LTC Learning and Teaching Committee

| LTM | Learning and Teaching Manager |
| :--- | :--- |
| MIM | Multimedia Information Management |
| NB | Non-Binary |
| OAAG | Open Access Advisory Group |
| PC | Programme Co-ordinator |
| PGCertTLHE | Postgraduate Certificate in Teaching for Learning in Higher Education |
| PGR | Postgraduate Research |
| PGT | Postgraduate Taught |
| PI | Principal Investigator |
| PS | Professional Services |
| PT | Part Time |
| PVC | Pro Vice-Chancellor |
| REC | Research Ethics Committee |
| REF | Research Excellence Framework |
| RG | Research Group |
| RM | Research Manager |
| RSDC | Research Staff Development Committee |
| RSS | Research Seminar Series |
| SAT | Self-Assessment Team |
| ScHARR | School of Health and Related Research |
| SDG | Sustainable Development Goals |
| SG | Strategy Group |
| SPL | Shared Parental Leave |
| SPLIT | Shared Parental Leave In Touch |
| SRDS | Staff Review and Development Scheme |
| STEM | Science, Technology, Engineering, and Mathematics |
| STEMM | Science, Technology, Engineering, Medicine and Mathematics |
| TEL | Technology Enhanced Learning |
| TNA | Training Needs Analysis |
| ToR | Terms of Reference |
| UCS | University Careers Service |
| UGEC | University Gender Equality Committee |
| UIMG | University Information Management Group |
| UKRC | UK Resource Centre |
| UN | United Nations |
| UoS | University of Sheffield |
| UREC | University Research Ethics Committee |
| USS | University Staff Survey |
| WAM | Workload Allocation Model |
| WARP | Women Academic Returners' Programme |
|  |  |

## 2. Description of the department

Information Science is a multidisciplinary and interdisciplinary subject, and our staff backgrounds and research reflect influences from across the Social Sciences, Computing, Health, Chemistry and the Arts and Humanities, as well as bringing experience of information roles from professional practice. Our professional focus is reflected in the successful accreditation of our programmes by CILIP.

The UoS achieved Silver award in 2016 and its award was revalidated in 2019. Significant progress has been made towards gender equality across the University's STEMM departments and today 19 UoS departments hold an award. Of these, to date just one nonSTEMM department has achieved an AS award (Archaeology in the FAH in 2014 and revalidated in 2018), and no other Social Sciences department. The FSS has established an EDI Committee, and gender equality is one of its main priorities. We are proud that a member of our own staff is a Co-Director of this committee, which shows our engagement with and commitment to gender equality. We are also proud to be resubmitting our application for the Bronze Award. Irrespective of the outcome, we will continue to support other departments within the Faculty in preparing theirs and follow through with the Action Plan, even if we are not awarded the Award.

The Information School at the UoS is a leading department for Library and Information Management in the QS World University Rankings by Subject 2020 (2nd in the world, 1st in Europe), and 100\% of our research environment and research impact were judged as world-leading or internationally excellent in REF2014. In 2013 we became the first School in the UK to join the global consortium of iSchools which now has 116 members.

For this application, our census date was in February 2020 and Table 1 shows the picture of the School on that date.

Table 1. Picture of the School (February 2020).

|  | Total | Female | Male |
| :--- | :---: | :---: | :---: |
|  |  | $\mathbf{N}(\%)$ | $\mathbf{N}(\%)$ |
| Research and Teaching | 30 | $14(47 \%)$ | $16(53 \%)$ |
| Teaching only | 3 | $1(33 \%)$ | $2(67 \%)$ |
| Research Only | 5 | $4(80 \%)$ | $1(20 \%)$ |
| Total Academic Staff (all pathways) | 33 | $15(45 \%)$ | $18(55 \%)$ |
| Professional Services | 12 | $7(58 \%)$ | $5(42 \%)$ |

Since 2000, of our eight Heads of School, five have been female, including Professor Micheline Beaulieu, who later became the first female PVC in the University's history. Our current Head of School is female, and she is our only female professor.

In 2019-20, the School had 487 registered PGT students (265 female, 54.41\%) and 51 PGR students ( 26 female, $50.98 \%$ ). Our student profile is varied, with some programmes consistently attracting far more Home than Overseas students (MA LIB and MA LISM), and some entirely the converse (MSc IM and MSc IS). Some programmes consistently attract more female students, and others more male, although our overall student profile is more female than male.

From 2019-20, we offer seven taught postgraduate programmes, including one distance learning programme (MA LISM), and three offered jointly with other University departments (MSc IS, MA ISM and MA MIM). The two most recent additions have been MSc Data Science, introduced in 2014-15, and MA Library and Information Services Management (distance learning), introduced in 2015-16. The MSc Health Informatics (distance learning) programme has been paused from 2019-20.

## [477 words]

## 3. The self-assessment process

(i) a description of the self-assessment team

The membership of the SAT was carefully considered in order to make sure that any and all interested colleagues and students would feel welcome to participate and contribute, and that the SAT would be representative enough of the School while conducting the self-assessment and working on the action plan. All academics, professional services and research staff, PGT and PGR students were invited to express an interest and selfnominate with calls being made during two staff meetings and via emails. Next, we purposefully approached individuals who had participated in the previous SAT (2018), and/or who could make a particularly strong contribution because of their role in the School/Faculty.
The SAT consists of academic and professional services staff, and students, with a wide variety of circumstances, interests and backgrounds (Table 2):

- They are representative of different career stages: 4 are probationary staff, 4 are established academic staff;
- 5 have experience with the shortisting and recruitment process, 2 with the promotion process. All the academics have a leadership role (except for one who has just joined the School and a role has not become available yet);
- 9 are working FT, 2 PT, of whom one is working flexibly;
- Several are balancing childcare responsibilities, and 2 have taken parental leave in the past while working at the School;


## 

Table 2. Members of the SAT

| Member | Position | Background | SAT role |
| :---: | :---: | :---: | :---: |
| Zamani, Efpraxia (F) | DEDI, SG member Senior Lecturer | FT, Open ended contract, | - AS lead <br> - overall responsibility for SAT <br> - data collection and analysis <br> - application and action plan <br> - half-away day, break out group and action plan (HR policies) |
| Mazumdar, Suvodeep (M) | Employability Officer Lecturer | FT, Open ended contract, | - AS co-lead <br> - data collection and analysis <br> - half-away day, break out group and action plan (culture) |
| Spencer, Richard (M) | Marketing and <br> Admissions <br> Assistant <br> Professional <br> Services | FT, Open ended contract, | - half-away day, break out group and action plan (students) |
| GodfreyHolmes, Harriet (F) | DM, SG member Professional Services | FT, Open ended contract, | - data collection and analysis <br> - action plan (culture) and feedback <br> - overall support with the application |
| Sbaffi, Laura (F) | Head of Health Informatics RG, Unfair Means | FT, Open ended contrac | - half-away day, break out group and action plan (career progression) |


|  | Officer, PT Student Advisor Lecturer | $X \times X X$ | - review and feedback |
| :---: | :---: | :---: | :---: |
| de la Vega de León, Antonio (M) | Researcher and PGR Development, Head of Chemoinformatics RG Lecturer | FT, Open ended contract, $\times \times$ | - half-away day, break out group and action plan (career progression) <br> - review and feedback |
| Jimenez, <br> Andrea (F) | Internationalisation Lead Lecturer | FT, Open ended contract, <br> XXXXX | - half-away day, break out group and action plan (culture) <br> - focus group with students on BAME representation |
| Abbott, Pamela (F) | Staff rep, SG elected member, Head of RG Senior Lecturer | FT, Open ended contract, $\square$ | - half-away day, break out group and action plan (culture) |
| Birdi, Briony (F) | Faculty Co-director of EDI <br> Senior Lecturer | PT, Open ended contract, | - half-away day contributor <br> - critical friend <br> - support with the application and the action plan throughout |
| McKennaAspell, Jo (F) | PGR student (1st year, remote location) | previously PGT student at the Information School, | - half-away day, break out group and action plan (students) <br> - review and feedback |
| Vannini, Sara (F) | New member of staff Lecturer | FT, Open ended contract, $\square$ | - half-away day, break out group and action plan (career progression) <br> - review and feedback |
| Job, Abigail (F) | Operations Assistant Professional Services | FT, Open ended contract, | - co-ordination of half-away day <br> - half-away day, break out group and action plan (HR policies) <br> - data collection |

The SAT currently comprises of 9 women ( $75 \%$ ) and 3 men ( $25 \%$ ). The gender balance has worsened since the previous self-assessment in 2018, when the SAT comprised of 8 women (38.46\%) and 5 men ( $61.54 \%$ ). With the exception of the DEDI and the DM, no Directors/Chairs of the different committees (Section 5d(iii)) participated in the SAT due to increased workload.

## $\Rightarrow$ Achieve a gender balance on the School's SAT/EDI committee that better reflects the School. [Action SAT1] <br> $\Rightarrow$ Increase the participation of Directors/Chairs in the SAT/EDI committee to futureproof the implementation of the action plan. [Action SAT2]

In 2019-20, the academic staff members of the SAT are receiving a workload allocation for their role. The AS application lead receives an additional allocation as part of her wider role as the DEDI within the School. The AS application co-lead has also received an allocation for his contribution. Regarding PS, their work is not accounted for in the same way as academics'. PS SAT members take on the added responsibility of working as a SAT member alongside their other duties, making space in their workload to accommodate SAT work when necessary. However, without their continuous support,
both in data collection, analysis and interpretation, this application would not have been possible and we would like to thank them for their support and committing time and effort.
(ii) an account of the self-assessment process;

In November 2018, we submitted an unsuccessful application for a Bronze award. On the basis of the feedback we received, we began working on our new application, while implementing several of the action points included in our previous action plan.

- We first identified the areas we were commended for (e.g., EDI being a standing item during Staff Meetings and SAT reporting to SG), and further built on this (e.g., the DEDI is a full member of the SG, as well as being a member of the FSS EDI Committee).
- From then on, we focused on areas that required improvement, and primarily the cultural challenges within the School.

Table 3. Major events during the self-assessment process (July 2019 - October 2020)

| Event | Date | Purpose |
| :--- | :--- | :--- |
| iSchool Gender Equality Survey <br> (IGES) Launch | December <br> $2019-$ <br> January <br> 2020 | To academic, professional services, research <br> staff, PGR students, for School-wide <br> consultation. |
| Data pack for 2018-2019 made <br> available (students and staff) | January <br> 2020 | Data analysis began: data was requested and <br> collated from disparate sources and paper <br> records. |
| FSS AS support network | February, <br> 2020 | Exchange of best practices, consultation with <br> other departments. |
| First SAT meeting | March, 2020 | Review of comments from the first submission <br> and in depth discussion <br> Cancelled due to Covid-19 (UoS started remote <br> working). |
| IGES Survey results to SG <br> meeting | April 2020 | Preliminary results from the survey <br> (anonymous) presented to the SG group |
| SG meeting | May 2020 | Draft application shared with SG <br> Key points raised |
| Application is put on hold | May 2020 | Due to Covid-19, and increased workload <br> (move to online delivery and working-from- <br> home) |
| Work on the application resumed | July 2020 | SAT members reaffirmed commitment and <br> support |
| Focus Group with PGT/PGR <br> students | August 2020 | To gauge students' opinions in relation to <br> teaching material, representation of BAME. |
| SAT half away day | September <br> Application shared in advance <br> Focus on specific parts of the application: <br> identification of rationale for draft action points. |  |
| SAT subgroups | October | Refinement of draft action points, working on <br> the implementation timeframes and identifying <br> key success measures. |
| Strategy meeting exclusively for the AS application: <br> DEDI presented the action plan point by point, <br> SG members approving |  |  |
| special meeting) | 2020 |  |


| Document shared with the School | October <br> 2020 | responsible/accountable roles for each action <br> and affirmed their commitment for next steps. |
| :--- | :--- | :--- |
| The final document (application and action <br> plan) was shared with all staff members to <br> receive comments |  |  |

Note: all meetings and collaborations after March 2020 were facilitated online due to Covid-19.
In preparing our application, we had the support of the FSS Co-Director of the EDI committee, who had been involved previously in the Silver institutional application, and has been supporting other Departmental applications. In addition, we have been supported through the FSS Athena SWAN Support Network, where we could tap into other Departments' best practices and receive feedback.
During the self-assessment process, we organised two surveys: one for staff (research, academic and professional services) and one for PGR students, focused on Gender Equality (December 2019 - January 2020, IGES 2019). We compared this with data from the University Staff Survey (USS 2018). Respondents to the survey are shown in Table 4. Despite reminders and leaving the survey open for approximately 2 months, participation was lower than we would have liked and there is female overrepresentation.

Table 4. Staff and Student participation in the IGES 2019 survey.

|  | Staff | PGR |  |
| :---: | :---: | :---: | :---: |
| Female | 13 |  |  |
| Male |  |  |  |

$\Rightarrow$ Increase participation in the IGES survey: promote it amongst PGR students through reminders sent out by the PGR director, and the Research Group Directors; and amongst staff, through reminders during Staff Meetings [Action SAT3]

Throughout the process, the DEDI has been presenting different aspects of the AS application to the SG meetings. These included the findings of the IGES 2019 (compared to 2017), preliminary drafts of the application, and drafts of the action plan.
(iii) plans for the future of the self-assessment team.

Since our previous submission, the role of the DEDI has been established across departments within the Faculty, with an agreed workload allocation, a clear job description, and the DEDI is a full member of the SG.
The combined impact of strike actions and Covid-19 has meant that the SAT has not managed to meet as often as they would like but we have pivoted to work successfully online. Moving forward, the SAT group will transition into the School's EDI committee. The EDI committee will meet every 2 months, to discuss EDI within the School, and to monitor the implementation of the AS action plan, undertaking a formal review every 6 months. The EDI committee will also be responsible for conducting the IGES survey
(annually) and will raise the main points for the consideration of the SG, and discussion during Staff meetings.
The School's EDI committee will report to the SG via the DEDI and will continue being informed on EDI via the FSS EDI committee.
EDI will remain a standing item for every Staff and SG Meeting with the implementation of the AS Action Plan an additional standing item for every SG meeting.
Participation on the School's EDI committee will receive a workload allocation.
$\Rightarrow$ SAT to transition into the EDI committee, to meet every 2 months and receive a workload allocation for all members. [Action SAT4]. The DEDI, upon completing her 3 -year term [Action CULTURE10], will be replaced following the new process described in this Action Plan [Action CULTURE14]
$\Rightarrow$ EDI committee to formally review the AS action plan every 6 months, and report to the SG [Action SAT5]
$\Rightarrow$ EDI to remain a standing item for every Staff meeting and every SG meeting [Action SAT6]
$\Rightarrow$ The EDI committee will conduct the IGES survey and analyse the results on an annual basis. The findings will be brought to the SG for their consideration and action and discussed at Staff meetings [Action SAT7]

## [896 words]

## 4. A picture of the department

## A. Student data

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

## N/A

(ii) Numbers of undergraduate students by gender.

The School has no undergraduate programmes, but staff contribute to the BA Digital Media and Society run by the DSS within FSS. Staff were contributing to Chemistry undergraduate degrees until 2018. These students are not registered in the School, so do not contribute to our overall student profile but we report their figures below.

Table 5. Gender split in the BA Digital Media and Society Programme (2015-16 to 2019-20).

|  | Digital Media and Society UG |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $2015-16$ | $2016-17$ | $2017-18$ | $2018-19$ | $2019-20$ |
| Female | 0 | 0 | 12 | 50 | 49 |
| Male | 0 | 0 | 5 | 9 | 9 |
| Total | 0 | 0 | 17 | 59 | 58 |

Table 6. Gender split in the relevant Chemistry Programmes (2015-16 to 2018-19).

| Relevant Chemistry Programmes UG |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $2015-16$ | $2016-17$ | $2017-18$ | $2018-19$ | $2019-20$ |
| Female | 18 | 20 | 11 | 11 | 10 |
| Male | 39 | 28 | 30 | 13 | 3 |
|  |  |  |  |  |  |
| Total | 57 | 48 | 41 |  | 13 |

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

Postgraduate taught student numbers have increased from 365 in 2015-16 to 606 in 2018-19, primarily due to the success of the MSc IM and the introduction of the two new programmes (MSc DS and MA LISM). In 2019-20, there were 471 students (planned reduction in admissions).
In 2015-16, female students were 54.79\%. Until 2017-18, their percentage had been increasing, reaching $64.01 \%$ in 2017-18, and has been since falling. Across the past five years, female students have averaged at $57.86 \%$ across all programmes (Figure 1). This is higher than the latest HESA data ${ }^{1}$ which shows that PGT female students in the UK within the relevant subject codes (I2,I5 and P1) have averaged at $49.27 \%$ over the past 5 years.

[^0]

Figure 1. Proportion of male to female registered students on all Information School PGT programmes (2015-16 to 2019-20). Number in brackets correspond to actual numbers.

On average, for 2015-20, slightly more women than men applied for our postgraduate programmes ( $52.49 \%$ ), and slightly more offers were made to ( $52.95 \%$ ) and were accepted by female applicants (52.76\%). These figures resemble those across the wider information profession in the UK, whereby $78.10 \%$ of the workforce is female (CILIP/ARA, 2015²).
Recruitment over the past five years across the programmes varies:

- The MSc IS (F: 41.30\%; M: 58.70\%), MSc HI (F: 46.47\%; M:53.53\%) and MSc DS ( $\mathrm{F}: 48.50 \%$, $\mathrm{M}: 51.50 \%$ ) have recruited more male than female students.
- The MSc IM (F: 53.27\%, M: 46.73\%) has recruited more female and in 2017-18 there were almost twice as many female students (F: 64.86\%; M: 35.14\%).
- The MA LISM distance learning programme recruits far more female students ( $F$ : 79.64\%; M: 20.36\%), as does the MA Librarianship programme (F: 79.20\%; M: 20.80\%).

The application to offer conversion rate has traditionally been slightly higher for female applicants across the last five years, with the exception of last year. For 2019-20, male students had a $66 \%$ application to offer conversion rate, whereas female students had a $61 \%$ rate. The offer to acceptance conversion rate shows no clear pattern. In 2019-20, $62 \%$ of female applicants with offers accepted them, compared to $69 \%$ of male applicants.

[^1]Female students are more likely than male students to complete their degrees, comprising 56.50\% of completions over the last five years (2014-15 to 2018-19) (Figure 2). Between 2014-2015 and 2018-19 more female students were awarded distinctions (75.27\%) and merits (58.79\%) (Figure 3, Table 7).


Figure 2. PGT completion rate split by gender (2014-15 to 2018-19). Number in brackets correspond to actual numbers. Note: the 2019-20 Degree Conferment Board convened too close to the submission deadline (4/11/2020) to incorporate data from 2019-20 graduation.

Table 7. Degree classification for all completing PGT students split by gender between 2014-2015 to 20182019 in numbers (\% calculated per degree classification).

|  | 2014-15 |  | 2015-16 |  | 2016-17 |  | 2017-18 |  | 2018-19 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | F | M | F | M | F | M | F | M |
| $\begin{aligned} & \mathscr{\infty} \\ & \underset{\sim}{2} \end{aligned}$ | $\begin{gathered} 30 \\ 42.86 \% \end{gathered}$ | 40 <br> 57.14\% | $\begin{gathered} 77 \\ 50.99 \% \end{gathered}$ | $\begin{gathered} 74 \\ 49.01 \% \end{gathered}$ | 50 $44.64 \%$ | $62$ <br> 55.36\% | $\begin{gathered} 24 \\ 43.64 \% \end{gathered}$ |  | $\begin{gathered} 62 \\ 57.94 \% \\ \hline \end{gathered}$ | $\begin{gathered} 45 \\ 42.06 \% \end{gathered}$ |
|  | $\begin{gathered} 26 \\ 57.78 \% \end{gathered}$ | $\begin{gathered} 19 \\ 42.44 \% \end{gathered}$ | $\begin{gathered} 37 \\ 67.27 \% \end{gathered}$ | $\begin{gathered} 18 \\ 32.73 \% \end{gathered}$ | $\begin{gathered} 54 \\ 56.25 \% \end{gathered}$ | $\begin{gathered} 42 \\ 43.75 \% \end{gathered}$ | $\begin{gathered} 50 \\ 55.56 \% \end{gathered}$ | $\begin{gathered} 40 \\ 44.44 \% \end{gathered}$ | $\begin{gathered} 67 \\ 59.82 \% \end{gathered}$ | $\begin{gathered} 45 \\ 40.18 \% \end{gathered}$ |
|  | $\begin{gathered} 15 \\ 71.43 \% \end{gathered}$ | $\begin{gathered} 6 \\ 28.57 \% \end{gathered}$ | $\begin{gathered} 15 \\ 78.95 \% \end{gathered}$ | $\begin{gathered} 4 \\ 21.05 \% \end{gathered}$ | $\begin{gathered} 28 \\ 71.79 \% \end{gathered}$ | $\begin{gathered} 11 \\ 28.21 \% \end{gathered}$ | $\begin{gathered} \hline 34 \\ 68 \% \end{gathered}$ | $\begin{gathered} 16 \\ 32 \% \end{gathered}$ | $\begin{gathered} 48 \\ 84.21 \% \end{gathered}$ | $\begin{gathered} 9 \\ 15.79 \% \end{gathered}$ |
| total | 71 | 65 | 129 | 96 | 132 | 115 | 108 | 87 | 177 | 99 |



Figure 3. Degree classification for all completing PGT students split by gender (2014-2015 to 2018-2019). Number in brackets correspond to actual numbers.

Over the past 5 years, more female than male BAME PGT students have enrolled in the School (F: 54, 12\% of all female students; M: 35, 18\% of all male students. These numbers are only relevant for Home and EU students for whom the BAME flag is used). This is lower than the HESA data for the same period, for which $22 \%$ of PGT students in the UK were of an ethnic minority. However, it is noted that specific PGT programmes (e.g., MSc IM and IS) regularly recruit a majority of Southeast Asian students, whereas others attract mainly UK and EU students (e.g., MA LISM).
The proportion of PGT students with a declared disability is low. The data indicate that the proportion of female to male students with a disability is balanced, with an average over the past five academic years of $2 \%$ ( $\mathrm{F}: 22 ; \mathrm{M}$ : 13 across the past 5 years). Again, this percentage is lower than the percentage reported by HESA for the same period, which is at $8 \%$ on average.
The University's Widening Participation programmes have recently grown significantly [https://www.sheffield.ac.uk/apse/wp]. The School now offers entry and exit level PG Certificate and PG Diploma options on four out of the seven programmes (MSc DS, MSc ISM and MA MIM do not offer such options). For MA Librarianship, MA LISM and MSc IS programmes we also consider work experience and non-standard qualifications for admission, sending a case to central Admissions supporting applicants with particularly strong and directly relevant professional experience which we feel compensates for lower academic profile. In 15 such cases for the LISM programme 2018-19, 11 have been female.
During the focus group with PGT and PGR students, one of the key points raised was that a more balanced representation of guest speakers in modules from BAME, women and disabled groups is needed to ensure and support diversity.
$\Rightarrow$ We will re-establish the role of WP Lead in the School, and we will develop procedures to identify WP students and monitor their progression. [Action STU1]
$\Rightarrow$ We will ensure that our prospectus and marketing images remain gender (and diversity) balanced, avoiding the use of heteronormative imagery, whilst remaining authentic to the experience students will have in the School. [Action STU2]
$\Rightarrow$ We will improve the representation of women, BAME and disabled groups within the pool of the invited/guest speakers in the School's modules and the respective reading lists. [Action STU3]
(iv) Numbers of men and women on postgraduate research degrees.

In 2015-16, the proportion of female PhD students registered at the School was 68\% (17) and has since dropped to $50 \%$ (but increased in numbers to 20) in 2019-20 (Figure 4).


Figure 4. Gender split of PhD students registered with the School across 2015-16 - 2019-20.

With regards to applications, the split between genders seems reasonably balanced, averaging at $47 \%(F)$ and $53 \%(M)$ across the last five years, with the exception of 201718, when there were more male applicants (64\%). However, applications for a PhD have been increasing, and with them applications from female candidates (42 in 2015-16 to 55 in 2019-20). Relatedly, for the last five years (with the exception 2019-20) female applicants have been slightly more likely to be made offers for the PhD programme: on average $52 \%$ of offers were made to female applicants, with an average conversion rate of application to offers at $20 \%$ for female applicants compared to $15 \%$ for male applicants. Female applicants are also more likely to accept an offer ( $67 \%$ F, $33 \%$ M). A higher proportion of female than male students completed within their allotted registration period ( Y ) in four of the last five years (Table 8, Figure 5).

Table 8. Gender Split of 'completion in time' for PGR students (2014-15 to 2018-19).

|  | $2014-15$ |  | $2015-16$ |  | $2016-17$ |  | $2017-18$ |  | $2018-19$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Completed | F | M | F | M | F | M | F | M | F | M |


| in time | 1 <br> $(50 \%)$ | 3 <br> $(33 \%)$ | 3 <br> $(33 \%)$ | 4 <br> $(67 \%)$ | 4 <br> $(67 \%)$ | 1 <br> $(50 \%)$ | 5 <br> $(71 \%)$ | 2 <br> $(100 \%)$ | 2 <br> $(40 \%)$ | 0 <br> $(0 \%)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| took longer | 1 <br> $(50 \%)$ | 6 <br> $(67 \%)$ | 6 <br> $(67 \%)$ | 2 <br> $(33 \%)$ | 2 <br> $(33 \%)$ | 1 <br> $(50 \%)$ | 2 <br> $(29 \%)$ | 0 <br> $(0 \%)$ | 3 <br> $(60 \%)$ | 0 |
| total | $\mathbf{2}$ | $\mathbf{9}$ | $\mathbf{9}$ | $\mathbf{6}$ | $\mathbf{6}$ | $\mathbf{2}$ | $\mathbf{7}$ | $\mathbf{2}$ | $\mathbf{5}$ | $\mathbf{0})$ |



Note - Y: completed within the allotted registration period; N : completed outside the allotted registration period; Exit: student graduated with a lower qualification (MPhil or similar). For each column: the first number corresponds to actual numbers.

Figure 5. Gender Split of 'completion in time' for PGR students (2014-15 to 2018-19).
(v) Progression pipeline between undergraduate and postgraduate student levels.

We currently have no UG programmes within the School. Regarding the progression pipeline between our PGT to our PGR programmes, we do not hold consistent data within the School.

[^2]
## B. Academic and research staff data

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

For the subsequent analysis, G6 grade corresponds to research-only posts, G7 includes research-only and teaching-only posts, G8 and G9 include teaching-only, and research and teaching posts. Professorial posts are all 'research and teaching' posts. We do not have any research specialist staff above G8.


Figure 6. Academic posts (all pathways, grades and contract types) split by gender (2014-2019). Number in brackets correspond to actual numbers.

The number of female academics in the department has been lower on average over the past five years (Figure 6). Female numbers at G8 and G9 have been generally increasing compared to male numbers (Table 9), and in 2016-17 more female than male staff were appointed at G7 and G8 (Figure 7). The relative decrease of male numbers at Grades 8 and 9 for 2016-17 and 2017-18 is due to staff turnover in the previous years (Section 4b(iii)).

Table 9. Academic staff by gender on all pathways and contract types (2014/15-20118/19)

|  | 2014/15 |  | 2015/16 |  | 2016/17 |  | 2017/18 |  | 2018/19 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | F | M | F | M | F | M | F | M |
| G6 | 0 | 0 | 1 (fixed) | 0 | $\begin{gathered} 1 \\ \text { (fixed) } \end{gathered}$ | 0 | 0 | 0 | 0 | 0 |
| G7 | $\begin{gathered} 3 \\ \text { (fixed) } \end{gathered}$ | $\begin{gathered} 3 \\ \text { (fixed) } \end{gathered}$ | $\begin{gathered} 4 \\ (\text { fixed } \end{gathered}$ | $\begin{gathered} 3 \\ \text { (fixed) } \end{gathered}$ | $\begin{gathered} 5 \\ (\text { fixed }) \end{gathered}$ | $\begin{gathered} 3 \\ (2 \text { fixed }) \end{gathered}$ | $\begin{gathered} 4 \\ (\text { fixed) } \end{gathered}$ | $\begin{gathered} 5 \\ (4 \text { fixed }) \end{gathered}$ | $\begin{gathered} 1 \\ (\text { fixed) } \end{gathered}$ | $\begin{gathered} 1 \\ \text { (fixed) } \end{gathered}$ |
| G8 | 5 | 6 | 6 | 4 | $\begin{gathered} 7 \\ (1 \text { fixed) } \end{gathered}$ | 3 | $\begin{gathered} 5 \\ (1 \text { fixed) } \end{gathered}$ | 5 | $\begin{gathered} 7 \\ (2 \text { fixed }) \end{gathered}$ | 9 |
| G9 | 3 | 4 | 2 | 6 | 4 | 4 | 5 | 4 | 6 | 4 |
| P\&E | 2 | 3 | 1 | 4 | 1 | 4 | 1 | 4 | 1 | 4 |
| Marie Curie | 0 | 0 | $\begin{gathered} 1 \\ \text { (fixed) } \end{gathered}$ | 0 | 0 | $\begin{gathered} 1 \\ \text { (fixed) } \end{gathered}$ | 0 | $\begin{gathered} 1 \\ \text { (fixed) } \end{gathered}$ | 0 | 0 |
| Total | 13 | 16 | 15 | 17 | 18 | 15 | 15 | 19 | 15 | 18 |

Note: fixed denotes a post on a fixed term contract; P\&E: Professorial and Equivalent


Figure 7. Picture of the School, split by grade (all pathways) and by gender (2014-2019).


Figure 8. Academic posts (all pathways) on a PART-TIME contract, split by gender (2014-2019). Number in brackets correspond to actual numbers.

Over the past five years, part time contracts have been generally held by female staff (Figure 8).

The number of female Professors has declined. For the last four years, the ratio is 1:4 women to men, which is a decrease since 2014-15 when it was $2: 3$. Our current ratio is close to the 2018-2019 HESA data, which indicates that only $26.40 \%$ of Professors are female and resembles the picture of most other UK CILIP-accredited departments, where there are more male than female Professors, with some Departments having exclusively male Professors (4 out of 10) (Table 10). The gender imbalance arises from three female professors leaving (one to take up PVC post, one move to a new institution overseas, and one moving to a different department internally), and one male Senior Lecturer having been promoted internally to Professor.

Table 10. Number of Professors split by gender across UK CILIP accredited departments.

| UK CILIP-accredited department | Number of Profs |  |
| :--- | :---: | :---: |
|  | $\mathbf{M}$ | F |
| Aberystwyth, iMLA | 1 | 0 |
| City UoL, Dept of Information Science | 1 | 0 |
| King's, Dept of Digital Humanities | 5 | 0 |
| MMU, Dept of Information and Communications | 0 | 0 |
| Northumbria, Dept of Computer and Information Sciences, | 3 | 1 |
| Aberdeen, School of Creative and Cultural Business | 2 | 2 |
| Ulster, School of Education | 2 | 1 |
| UCL, Dept of Information Studies | 2 | 2 |
| UWE, Dept of Computer Science and Creative Technologies | 6 | 0 |

Note: The list of UK CILIP-accredited departments was sourced from
https://www.cilip.org.uk/page/Qualifications. All departments with a list of their academic staff have been considered, with the exception of Cranfield (one accredited programme but the host School/Department is not clearly indicated).

Recruiting at professorial level has proved difficult with the three most recent rounds not being successful in making any appointment. For the first of these, 2F and 1 M were interviewed but no offers made; for the second round no candidates were shortlisted. In 2019, 2 F and 2 M candidates were interviewed, and offers were made to 1 F and 1 M candidates. Both declined the appointments. Promotion or appointment to a Professorial post in the UoS is equally challenging for both male and female academics. The Readership post has been eliminated across UoS, further widening perceptions of the requirements to progress from G9 to Professor. Over the past 5 years, only one application for a promotion to Professorship has been submitted in the School (by a male, and successful).

$\Rightarrow$ The gender imbalance at Professorial level is something the School needs to address and is hoped to be resolvable by identifying any instances of biases [Action CAREER10], implementing appropriate recruitment approaches [Actions CAREER1, CAREER2] and offering stronger support towards female academics considering or preparing for promotion [Actions CAREER8, CAREER9, CAREER26, CAREER27].
(ii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender.

Most teaching and research academic staff are on open-ended contracts (Table 9). Research-only staff are mostly on fixed-term contracts (Table 11, Figure 9). Fixed term contracts are generally held by female staff, and such posts within the School can be categorised (at least) as 'Specialist expertise or experience in the short-term to support a specific task or project'.

Table 11. Research-only staff by gender and contract type (2014-2019).

|  | 2014-15 |  | 2015-16 |  | 2016-17 |  | 2017-18 |  | 2018-19 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | F | M | F | M | F | M | F | M |
| Research staff (fixed-term) |  |  |  |  |  |  |  |  |  |  |
| G6 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| G7 | 3 | 2 | 2 | 2 | 4 | 2 | 3 | 4 | 1 | 1 |
| G8 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| Marie Curie | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| Research staff (open-ended) |  |  |  |  |  |  |  |  |  |  |
| G8 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| G9 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |



Figure 9. Academic posts (all pathways) on a FIXED term contract, split by gender (2014-2019). Number in brackets correspond to actual numbers.

## $\Rightarrow$ Establish a "Future Plans" meeting 6 months before the end of contract with all staff on a fixed term contract. [Action STAFF1]

The University has a Redeployment Procedure: staff on a fixed-term contract or at risk of redundancy (available to all staff with 6 months or more continuous service) are added to the redeployment pool three months before their contract ends. Staff are listed even if their fixed-term contract was externally funded, and count as 'redeployed' if moving from fixed-term to open-ended contract. All posts, except Professorships, are first advertised to the redeployment pool exclusively for two days (five days since Covid-19). If a redeployee meets essential criteria, an interview is guaranteed. Redeployment data for the School from 2014-15 to 2018-2019 is given in Table 12. The School has benefited from this scheme, with both research and PS staff joining from other departments, and School staff have been offered new posts internally. To date, five of nine (55.6\%) such redeployments have been to female staff.

Table 12. Staff redeployment between 2014-2019.

| Academic <br> year | Previous position | New position | New contract <br> type | Gender |
| :--- | :--- | :--- | :--- | :---: |
| $2014-15$ |  | Fixed-term | F |  |
| $2015-16$ |  | Fixed-term | F |  |
| $2015-16$ |  | Fixed-term | F |  |
| $2016-17$ |  |  | Fixed-term |  |


| $2016-17$ | Open-ended | M |  |
| :--- | :--- | :--- | :---: |
| $2017-18$ | Open-ended | F |  |
| $2017-18$ |  | Open-ended | M |
| $2018-19$ |  | M |  |

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

The number of leavers is highest among G7 research roles, usually where staff have fixed-term, externally funded contracts (Table 13). While generally there is a policy of naming research staff on grant applications, so as to keep them within the Department, grant applications are not always successful, and therefore, these staff generally leave because funding ends or they take up a position elsewhere. One female Professor left the School in 2014-15, having been appointed on a fixed contract.

Table 13. Distribution of Fixed term Academic Staff Leavers by gender and grade between 2014-2015 and 2018-2019.

|  | 2014-15 |  | 2015-16 |  | 2016-17 |  | 2017-18 |  | 2018-19 |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | F | M | F | M | F | M | F | M |  |
| G6 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| G7 | 0 | 1 | 4 | 3 | 2 | 1 | 4 | 0 | 6 | 4 | 25 |
| G8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Marie Curie | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Professorial \& Equivalent | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| total | 3 | 1 | 4 | 3 | 3 | 1 | 5 | 0 | 6 | 4 | 30 |

13 academics with open-ended contracts left the School between 2014-15 and 2018-19 (4F, 9M) (Table 14). Most moved to other universities: three to more senior positions, the rest to same-level positions. One (G8, M) moved to industry, another (Professor, M) has reduced hours (2018) to split time between academia and industry. In 2018-19 one male Professor reduced his working hours to 0.6 as the first stage of retirement and in 201920, another male Professor had his appointment split between the School and ScHARR. Two moved to other UoS departments (female Professor 2015, male G8 2018).

Table 14. Distribution of Open Ended Academic Staff Leavers by gender and grade between 2014-2015 and 2018-2019.

|  | $\mathbf{2 0 1 4 - 1 5}$ |  | $\mathbf{2 0 1 5 - 1 6}$ |  | $\mathbf{2 0 1 6 - 1 7}$ |  | $\mathbf{2 0 1 7 - 1 8}$ |  | $\mathbf{2 0 1 8 - 1 9}$ |  | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{F}$ | $\mathbf{M}$ | $\mathbf{F}$ | $\mathbf{M}$ | $\mathbf{F}$ | $\mathbf{M}$ | $\mathbf{F}$ | $\mathbf{M}$ | $\mathbf{F}$ | $\mathbf{M}$ |  |
| G7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $\mathbf{0}$ |
| G8 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | $\mathbf{6}$ |
| G9 | 0 | 0 | 2 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | $\mathbf{7}$ |
| Professorial $\&$ <br> Equivalent | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $\mathbf{2}$ |


| total | 1 | 0 | 3 | 4 | 0 | 5 | 1 | 0 | 0 | 0 | 15 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

From those with an open-ended contract, more male than female members of staff have left the School. At G8 and G9, where most leavers are located, only 3 out of the total 13 were females (23\%). At Professorial level, two leavers were female. Between 2014-15 and 2018-19, more female staff have been appointed (Figure 10), bringing the School closer to gender balance (15F; 18M).


Figure 10. Number of appointments for academic posts split by gender and by grade (2014-2019). Number in brackets correspond to actual numbers. The percentage reflects the proportion of total appointment by gender for the respective grade).

While all staff are invited to an exit interview with their line manager, the School does not have a consistent, reliable mechanism for collecting data on reasons for leaving. However, insights from the occasional formal 'end of contract meetings' suggest that contributing factors to staff members' decision to leave the School included workload allocation, organisational culture, and promotion opportunities.
$\Rightarrow$ Ensure that 'end of contract' meetings are always carried out with staff on a fixed term contract and that the standard 6-monthly appraisal includes career support.

## [Action STAFF2]

$\Rightarrow$ To monitor staff turnover by gender (Professional Services, academic, research staff). We will create a questionnaire to collect information directly from the leaver (split by gender/grade), which may be a better alternative to the face-to-face interview. [Action STAFF3]

## [1987 words]

# 5. Supporting and advancing women's careers 

## A. Key career transition points: academic staff

(i) Recruitment

School vacancies are advertised through UoS (https://www.sheffield.ac.uk/jobs), www.jobs.ac.uk, the iSchools network (http://ischools.org), Where Women Work (https://www.wherewomenwork.com/) (UoS is listed as a prime employer for women) and EURAXESS (https://euraxess.ec.europa.eu/) where appropriate.
Job vacancies state that the School invites "applications from currently underrepresented groups within the department, including candidates who are women, LGBT+, disabled and from Black, Asian and other Minority Ethnic backgrounds". We use 'Textio' (https://www.sheffield.ac.uk/hr/recruitment/textio), which flags where advertisement wording may appeal to one gender over another. Application forms do not require indication of gender.
Panel members shortlist candidates based on the Person Specification criteria, and then agree who to interview. All panel Chairs must undertake the University's 'Mandatory Recruitment and Selection Training for Chairs of Interview Panels'.
$\Rightarrow$ All departmental recruiting panel members to be required to take Unconscious Bias
training, to be renewed every 3 years. [Action CAREER1]

The School uses EDI-related questions in interviews in order to consider EDI matters during their decision-making.
Since 2015, there have been 43 recruitment panels. Each panel, on average, comprises 3.5 members ( $\mathrm{F}: 1.7,48 \%$; M: 1.8, $52 \%$ ) (all appointments). Academic posts panels on average comprise 4.5 members ( 32 recruitment panels, F: 1.5, $41 \%$; $\mathrm{M}: 2.2,59 \%$ ). PS posts panels on average comprise 3 members ( 11 recruitment panels, $\mathrm{F}: 2.3,76 \%$; M : 0.8, 27\%).

Panels follow HR policy: https://www.sheffield.ac.uk/hr/recruitment/selection/establishing-a-selection-panel HR policy states: "When composing an interview panel consider the diversity of your panel, particularly - but not limited to - gender diversity". Panels comprise the FDoR/FDLT, a HoS (Cognate department), the School's HoS, DoR/DLT and one member (internal/external) in the subject area of the post. Professorial posts include a panel member external to the University, and the panel is chaired by the FVP.
$\Rightarrow$ We will create a list of staff, including ECRs, who will meet the HR criteria for sitting on a panel, and who will be grouped per the Research Themes of the School (subject specialists). We will draw panel members from this list, according to the advertised post (subject area), and the chosen subject specialist will rotate, so that more staff have the opportunity to participate in recruiting panels. [Action CAREER2]

Research Assistants/Associates (G6/7) appointments are made in relation to funded projects. Thus panels comprise the Pl and the Co-Is of the said project.
The breakdown of recruitment to academic posts is shown in Table 15. More female than male academics have been appointed since 2014-15 (6F; 5M, 2 appointments with gender listed as 'unknown'). However, male academics have been mostly appointed at G9 (3M, 60\% of total male appointments), whereas female academics at G8 (5F, 83\% of total female appointments).

Table 15. Total annual appointments of academic posts split by gender for all academic posts (2014-2019).

| Grade | 2014-15 |  |  | 2015-16 |  |  | 2016-17 |  |  | 2017-18 |  |  | 2018-19 |  |  | total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | U | F | M | U | F | M | U | F | M | U | F | M | U |  |
| G8 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0 | 0 | 12 |
| G9 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Professorial \& Equivalent | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| total | 1 | 1 | 0 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 3 | 0 | 0 | 16 |

Note: U: indicates that at the time of application, the gender of the applicant was not captures.

On average more men than women apply for a post in the School, especially during the past 3 years (Figure 11). However, this has not created an imbalance in interviews and appointments percentage-wise: female applicants are more likely to be shortlisted for an interview (except 2017-18), and more likely to be appointed (except 2014-15) (Figure 12). In raw numbers, however, more male candidates are invited for an interview (G8, G9, Figure 13) and more men have been appointed at G9 (Table 15). Taken together, our analysis shows that there are fewer problems with shortlisting, and more with the applications received.

2014-15


2016-17


2015-16


2017-18


2018-19


Figure 11. Number of Applications for academic posts split by gender and by grade (2014-15 to 2018-19).


Note: U indicates that at the time of application, the gender of the applicant was not captured.
Figure 12. Conversion rate for Application-to-Interview and Interview-to-Appointment for all academic posts split by gender (2014-15 to 2018-19). Number in brackets correspond to actual numbers.


Figure 13. Number of Interviews for academic posts split by gender and by grade (2014-2019). Note: the percentage indicates the conversion rate of application to interview. Number in brackets correspond to actual numbers.


Figure 14. Number of applications for PS posts split by gender and per Grade (2014-2019). Number in brackets correspond to actual numbers. Years with no values had no open vacancies.

PS recruitment is shown in Table 16. Over the past 5 years, significantly more female staff have been appointed (15F, 75\%; 5M, 25\%). More women have been applying, across all grades, except for Grade 3 (Figure 14). Female applicants are somewhat more likely (but not by much) than men to be shortlisted for an interview (Figure 15).
Exceptions to this are the years 2014-15 and 2018-19 where female candidates were
more likely to be shortlisted. With regards to conversion from interview to appointment, there is no discernible pattern.

Table 16. Total annual appointments at Professional Services posts split by gender and grade (2014-2019).

| Grade | 2014-15 |  |  | 2015-16 |  |  | 2016-17 |  |  | 2017-18 |  |  | 2018-19 |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | U | F | M | U | F | M | U | F | M | U | F | M | U |  |
| G3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| G4 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 7 |
| G5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| G6 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| G7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| G8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 3 | 0 | 0 | 4 | 3 | 0 | 3 | 1 | 1 | 4 | 0 | 0 | 1 | 1 | 0 | 21 |

Note: U: at the time of application, the gender of the applicant was not captured.


Note: U indicates that at the time of application, the gender of the applicant was not captured.

Figure 15. Conversion rates (Y axis) for Application-to-Interview and Interview-to-Appointment for all PS posts split by gender (2014-15 to 2018-19). Number in brackets correspond to actual numbers.

In the 2018 USS, 53\% agreed that the School "consciously recruits for diversity and difference", which is a $3 \%$ increase since 2016. IGES2019 showed that $40.91 \%$ agreed that the School positively encourages women to apply for posts in under-represented areas. This percentage falls to $30.77 \%$ when controlling for female respondents. However, this is a major improvement since 2017 (Table 17) and very likely thanks to the targeted advertising of the job adverts in women's spaces (e.g.,
www.wherewomenwork.com/).

Table 17. Gender-related recruitment questions in IGES and USS.

| IGES 2017 | Strongly Agree | Agree | Neutral | Disagree | Strongly disagree | Don't know |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 'My school takes positive action to encourage women to apply for posts in areas where they are under-represented' ( $\mathrm{n}=19$ ) | $\begin{aligned} & 0 \% \\ & \left(0 \% F^{*}\right) \end{aligned}$ | $\begin{aligned} & 5.3 \% \\ & (9 \% F) \end{aligned}$ | $\begin{aligned} & 21.1 \% \\ & (27 \% \mathrm{~F}) \end{aligned}$ | $\begin{aligned} & 42.1 \% \\ & (55 \% \mathrm{~F}) \end{aligned}$ | $\begin{aligned} & 5.3 \% \\ & (9 \% \mathrm{~F}) \end{aligned}$ | $\begin{aligned} & 26.3 \% \\ & \text { (0\% F) } \end{aligned}$ |
| USS 2018 <br> 'I feel that I work in a department that consciously recruits for diversity and difference' $(\mathrm{n}=32)$ | Agree $14 \%$ | Tend to agree $39 \%$ | N/A | Tend to disagree $32 \%$ | Disagree $14 \%$ | N/A |
| IGES 2019 | Strongly Agree | Agree | Neutral | Disagree | Strongly disagree | Don't know |
| 'My school takes positive action to encourage women to apply for posts in areas where they are under-represented' ( $\mathrm{n}=22$ ) | $\begin{aligned} & 0.00 \% \\ & (0.00 \% \mathrm{~F}) \end{aligned}$ | $\begin{aligned} & 40.91 \% \\ & (30.77 \% \\ & \text { F) } \\ & \hline \end{aligned}$ | $\begin{aligned} & 27.27 \% \\ & (0.00 \% \text { F) } \end{aligned}$ | $\begin{aligned} & 18.18 \% \\ & (15.38 \% \\ & \text { F) } \end{aligned}$ | $\begin{aligned} & 0.00 \% \\ & (0.00 \% \mathrm{~F}) \end{aligned}$ | $\begin{aligned} & 13.64 \% \\ & (7.69 \% \text { F) } \end{aligned}$ |

* Female responses shown in brackets (for IGES only, USS does not provide the results split by gender).
$\Rightarrow$ Academic job advertisements will be shared among the members of the relevant Research Group (subject area) before they are submitted and the members will be encouraged to submit suggestions and amendments. We will include both a male and female member of staff listed for people to approach to ask about the role prior to application or interview. [Action CAREER3]
$\Rightarrow$ We will continue identifying and targeting even more online/offline communities of minority and female oriented communities (e.g., Women in Academia Support Network, Association of Information Systems Women Network) to purposefully communicate such advertisements to prospective applicants with the explicit message that we welcome applications from female, BAME and minority groups. [Action CAREER4]
(ii) Induction

New staff go through induction. Pre-arrival activities include contracting and administrative preparation and an informal welcome from HoS. On Day 1, new staff meet their Induction Lead, visit relevant University sites, and receive IT and Health and Safety support. The process is documented in the School Staff Handbook, which includes an Induction Checklist (https://sites.google.com/a/sheffield.ac.uk/information-school-staff-intranet/staffing-matters/induction). Week 1 activities include meetings with key individuals in the department (e.g. HoS, Research Hub, DM, DLT, DoR, RG Head). All new G8 Lecturers undergo a three-year probation, and are assigned a senior academic as Probation Adviser to set performance objectives together.
The School has a Buddy Scheme for all new appointees. The Buddy is a colleague from the School who helps the new staff member understand the culture of the School and become socially integrated. It works on a voluntary basis and has been useful for all new
members appointed during Covid-19 (5 academics, $1 \mathrm{PS}^{3}$ ), as the School has moved to working-from-home arrangements.
$\Rightarrow$ We will include in the induction checklist EDI-related information: explanation of EDI at Department and Faculty levels (flexible working, disability support, etc.), continue signposting to Faculty and University networks and groups (e.g., LGBTQ+, BAME network), to the relevant Trade Union, to the University mentoring scheme, including a meeting with the DEDI. We will test whether the induction process is fit for purpose through a yearly questionnaire for all new starters (split by gender). [Action CAREER5]
(iii) Promotion

Promotions for academic staff go through the Annual Reward and Recognition Review process. Information is disseminated via HR. Promotion cases are initially considered by a School panel; membership follows University guidelines. If the panel supports the case, it goes to a Faculty panel.
Since 2014-15 there have been 8 successful promotion applications out of 17 (47\% success rate). There have been more promotion applications by male (12, 70.6\%) than female academics ( $5,29.4 \%$ ) across grades. 5 males and 3 females were promoted (Table 18). This indicates that male academics are more likely to apply for promotion, and perhaps that female staff are more cautious or insufficiently encouraged to do so, but when they do, they are more likely to be promoted. There have been only 1 application for promotion to Professorial level, by a male staff member (successful). When the Readership grade was last available (2018-19), a female member staff applied for it unsuccessfully. 2 female academics have been promoted (3 applications, 66.67\% success rate) to G9 compared to 2 male academics (8 applications, $25 \%$ success rate). The majority of applicants were FT with only one PT applicant (G8 to G9, female, application successful).

Table 18. Promotion applications and outcomes for all grades split by gender (2014-15 to 2019-20).

|  | Female academics | Male academics |
| :--- | :---: | :---: |
| Applications | $5(29.4 \%)$ | $12(70.6 \%)$ |
| Successful Applications | 3 | 5 |
| Success Rate | $60 \%$ | $41.67 \%$ |

Staff are encouraged to discuss readiness for promotion within the annual SRDS. Since 2016, following Faculty guidance, academic SRDS reviews have generally been undertaken by the HoS (teaching-only staff have their SRDS with the DLT, PS and RA staff with the Line Manager); thus, the opportunity to discuss promotion options with someone other than their Line Manager is no longer available through the SRDS.
In 2018, UoS introduced the ACP framework to clarify expectations of academic, teaching, and research staff across grades, to be systematically used during appraisals

[^3]and promotion cases and to be used during the academics SRDS meetings for setting objectives.
The IGES2019 showed that only $36.36 \%$ ( $\mathrm{n}=11$ ) of female academic staff ( $\mathrm{M}: 80 \%, \mathrm{n}=5$ ) felt that they understood the promotion process and the promotion criteria. With respect to PS, $50 \%(n=2)$ of female staff (M: 0\%, $n=2$ ) agree they understand the promotion process and the promotion criteria. Qualitative data indicate that the SRDS is not useful for discussing promotion, as it is not always linked well to the ACP and staff are unsure "how to achieve the necessary steps in order to be able to progress." These results suggest that, while information may exist, it is not always adequately distributed.
$\Rightarrow$ We will develop detailed guidance for promotion at each grade and the departmental panel will provide feedback to support the application for the current or a future promotion round as appropriate. [Action CAREER6]
$\Rightarrow$ We will improve the SRDS reviewers' guidelines so that it is clear that objectivesetting should follow the ACP and that promotion should be actively considered for all staff. We will incorporate a checklist which will require the SRDS reviewer to confirm that they have discussed promotion with the reviewee, and a summary of the discussion will be recorded in reviewer feedback. [Action CAREER7]
$\Rightarrow$ We will set up annual workshops to explain the career progression and career assessment criteria. We will include signposting in the Staff Handbook to promotionrelated training and support across the University e.g. Women@TUoS NETwork events, CV+ scheme. [Action CAREER8]
$\Rightarrow$ We will redesign the Staff Mentoring Scheme to incorporate mentoring for any staff preparing for promotion. [Action CAREER9]
$\Rightarrow$ We will consistently monitor promotion applications and outcomes split by gender and grade within the School. [Action CAREER10]

IGES2019 showed that only $33.33 \%(n=6)$ of academics felt that they were encouraged by more senior members of staff. The percentage for PS staff was higher at $60 \%(n=3)$.
Only $9.09 \%(n=2)$ of staff felt that PT staff are offered the same career development opportunities as those who work FT, with this percentage improving slightly to $18.18 \%$ ( $\mathrm{n}=4$ ) for staff working flexibly, when compared to those who work standard hours. When controlling for staff who actually do work PT and/or flexibly, $0 \% ~(n=0)$ and $20 \% ~(n=1)$ believe that staff who work PT or flexibly, respectively, are offered the same opportunities. Those who work PT or flexibly are mostly female (Figure 8), so this is a gendered issue and those who are missing out on career development opportunities are mainly female staff.
$\Rightarrow$ We will communicate to staff and Line Managers that part time and flexible contracts do not preclude staff on such contracts from influential committees and roles. [Action CAREER11]
$\Rightarrow$ We will amend the School's policy to state that all seminars, workshops, staff and committee meetings will take place within a restricted set of hours (10:00-15:00 where possible); Staff meetings and Committee meeting minutes will made available online within 3 weeks (confidential information will be redacted); Workshops and seminars will continue being recorded and made available online. Research Groups will negotiate the timing of their meetings (minutes, recordings available based on membership) [Action CAREER12].
(iv) Department submissions to the Research Excellence Framework (REF)


#### Abstract

 REF 2021 will be non-selective, so all research-active staff must be returned, and staff and outputs decoupled. The REF coordinator has received EDI training as mandated in the UoS code of conduct for the REF. We want to ensure that the total number of publications submitted is broadly similar for male and female staff, and will monitor by gender the number of publications considered as likely submissions. The School's REF Management Group, which consists of the HoS, DoR, REF Coordinator, DM and Hub Manager, has responsibility for ensuring that the School meets equality and diversity requirements. The latest stocktake analysis on eligible staff illustrates a perfect gender balance (16F, 16M), whereas for the outputs themselves, the latest internal stocktake exercise comprises slightly more outputs attributed to female members of staff ( 30 outputs by female versus 28 outputs by male). Qualitative data from IGES2019 indicate that staff perceive "a lack of diversity especially at top level within the department" with respect to impact case studies, and that all impact case studies had been prepared by male academics. However, this is not entirely accurate: one impact case (out of 2 ) is being prepared jointly by a female and a male academic (both Professors).


$\Rightarrow$ We will continue monitoring all staff submissions for the REF by gender and FTE, and continue providing individual support to increase staff publication quality and impact. [Action CAREER13]

## b. Career development: academic staff

(i) Training

84\% of 2018 USS respondents agreed/tended to agree that that they were happy with opportunities available to improve their skills and performance at work, and 76\% agreed/tended to agree that these opportunities are "easy to access". However, 30\% of respondents disagreed/tended to disagree that they had "the opportunity to develop [their] career". This suggests that although opportunities are available, some find it difficult to develop their career, perhaps because of other conflicting workload demands and/or the general culture of encouragement. It is telling that $56 \%$ of staff disagreed/tended to disagree that "the University rewards and recognises people for excellent performance"4.
The Sheffield Leader programme is a leadership development initiative that operates at four different levels depending on role and seniority. 13 staff have completed the programme (Table 19, F: 4, 30.77\%; M: 9, 69.23\%). More male than female academics have completed the programme (F: 28.57\%, M:71.43\%). The overall feedback has not been positive, and the programme is currently on hold.

[^4]Table 19. Completions of the Sheffield Leader Programme split by Gender.

| Level | Role type | Gender | Cohort |
| :--- | :--- | :---: | :---: |
| Sheffield Leader 1 | Professional Services G4 | F | 2014 |
| Sheffield Leader 2 | Professional Services G7 | M | 2012 |
| Sheffield Leader 2 | Professional Services G6 | M | 2015 |
| Sheffield Leader 2 | Professional Services G7 | M | 2016 |
| Sheffield Leader 3 | G9 | M | 2013 |
| Sheffield Leader 3 | G9 | M | 2013 |
| Sheffield Leader 3 | G9 | F | 2015 |
| Sheffield Leader 3 | G8 | M | 2015 |
| Sheffield Leader 4 | Professor | F | 2012 |
| Sheffield Leader 4 | Professor | M | 2014 |
| Sheffield Leader: Impact | Professor | M | 2019 |
| Sheffield Leader: Essentials | Professional Services G7 | M | 2019 |
| Sheffield Leader: Essentials | Professional Services G6 | F | 2019 |

Three staff members have been nominated for the Faculty Future Leaders Forum (1F academic G8, 1M academic G9, 1F PS G8). The feedback for the programme as a whole highlighted that while the programme observed gender equality, there was no diversity with regards to race equality and intersectional matters across nominated participants. The programme has now been discontinued.
$\Rightarrow$ We will ensure that staff identified for training initiatives (such as Sheffield Leader) are balanced by gender and grade. All staff will be encouraged to receive career development training during their SRDS and during induction in line with their needs. Such opportunities will be advertised to all eligible staff. [Action CAREER14]

Based on IGES2019, 31.82\% (F: 22.73\%; M:9.09\%) of staff have undertaken Gender Equality training and $40.91 \%$ Unconscious Bias training (F: 18.18\%; M: 18.18\%, U5: $4.55 \%$ ). All in all, the uptake of EDI training has improved since 2017, when it was $15 \%$ on average. An early 2020 enquiry revealed that several staff had undertaken Transgender Awareness online training, and had participated in LGBT+ Inclusion workshops, Disability Awareness training, or role-specific EDI training (e.g., EDI in relation to REF). Training on Race Equality by Advance HE has been made available to HoSs, DEDIs, REF coordinators, DLTs, Marketing Officers and DoRs, many of whom attended it. The uptake of training is captured through the SRDS process, although not consistently.
$\Rightarrow$ EDI training will be made compulsory for all those sitting on the more significant committees, SRDS reviewers and Probation Advisers - to be refreshed every 3 years. [Action CAREER15]
$\Rightarrow$ We will monitor EDI training across the School. Staff members who undertake EDI training will be asked to fill in a form. Data will be split by grade and by gender, with

[^5](ii) Appraisal/development review

SRDS reviewers undertake an online training sessions on SRDS conversations, communication skills, and the responsibilities of the reviewer. They are required to give fair feedback and help staff set achievable objectives in line with the objectives of the School, UoS strategy, and informed by the ACP. Staff members are encouraged to identify possible Professional Learning and Development opportunities.
The probationary period for academic staff normally lasts three years and requires an annual probationary report to be completed by the academic in consultation with the Probation Adviser. Staff on probation can benefit from a number of arrangements: mentoring, observation of lectures, shadowing of senior colleagues, training including ring fenced time etc.
Considerably more male than female staff agree/strongly agree that the annual appraisal and SRDS are helpful ( $\mathrm{F}: 30 \%$; M: 86\%) and useful for career development ( $\mathrm{F}: 23 \%$; M: 85\%) (Table 20).

Table 20. Staff member perceptions in relation to the usefulness of SRDS and other similar processes for career development (IGES 2019).

|  | Strongly agree |  | Agree |  | Neither agree nor disagree |  | Disagree |  | Strongly disagree |  | Don't know |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F | M | F | M | F | M | F | M | F | M | F | M |
| My school provides me with a helpful annual appraisal/SRDS/ probationary review | 15\% | 0\% | 15\% | 86\% | 36\% | 14\% | 23\% | 0\% | 0\% | 0\% | 8\% | 0\% |
| These opportunities and annual appraisals provided are useful for my career development | 0\% | 14\% | 23\% | 71\% | 39\% | 14\% | 23\% | 0\% | 8\% | 0\% | 8\% | 0\% |

Some respondents described the SRDS/annual review process as a "box-ticking" exercise, and the mid-year SRDS as a missed opportunity to reflect on what has been achieved and what one should be aiming for. One participant said that what is needed is "more support around career development and promotion, particularly in relation to the ACP. I don't feel that the SRDS in its current form is very well linked to the ACP, and how to achieve the necessary steps in order to be able to progress". This exacerbates uncertainty and inability to progress and/or proceed with a promotion application (Section 5a(iii)).
$70.00 \%$ of female academics ( $40 \%$ male academics) disagree/strongly disagree that their full range of skills including pastoral work, outreach work and teaching and administration are rewarded through the SRDS review, performance appraisals, and the probation review. $50 \%$ of female academics disagree ( $20 \%$ male academics) that such skills are rewarded when considering promotion (Table 21). When asked what would be the one
thing that could help, a staff member said: "Less teaching, or more reward for good teaching in terms of the ACP and promotion".

Table 21. Staff member perceptions in relation to skills being rewarded through SRDS, probation and promotion processes (IGES 2019).

|  | My school values and rewards the full range of skills and experience including pastoral work, outreach work, teaching and administration: |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Strongly agree |  | Agree |  | Neither agree nor disagree |  | Disagree |  | Strongly disagree |  | Don't know |  |
|  | F | M | F | M | F | M | F | M | F | M | F | M |
| in performance appraisals, SRDS, probation review | 0\% | 20\% | 0\% | 40\% | 20\% | 0\% | 60\% | 40\% | 10\% | 0\% | 10\% | 0\% |
| in considering promotion | 0\% | 0\% | 0\% | 20\% | 30\% | 20\% | 50\% | 20\% | 0\% | 0\% | 20\% | 40\% |

$\Rightarrow$ We will update the SRDS reviewer/Probation Adviser guidance to emphasise contextualising the staff members' objectives in relation to their career progression ambitions and provide guidance on how best to achieve those ambitions. We will hold more in depth conversations during the SRDS reviewers meeting before SRDS.

## [Action CAREER17].

$\Rightarrow$ We will increase the use of the Reward \& Recognition scheme to promote excellence and achievement for all staff. All staff will be encouraged to propose other staff members for awards. [Action CAREER18]
(iii) Support given to academic staff for career progression

The DoR and the DLT have developed a School-specific Academic Staff Mentoring Scheme for academics and post-doctoral/ECRs to be undertaken with consideration of the ACP. It is mentee-led and staff are asked to develop research plans for the next 3-5 years.
All (academic/research) staff and PGR students are invited to join one of the seven RGs in the School as their 'intellectual home'; each group is allocated a small budget to spend on activities supporting members, on the basis of student numbers and funded projects.
A programme of regular research seminars is organised by the RSS group throughout the year. Internal speakers (staff, PhDs) are encouraged to present and promote their work and receive feedback. These events are advertised internally and externally and are a networking and public engagement opportunity for those who wish it. External speakers are invited with the view of creating collaboration and networking opportunities for staff and PhDs (cf. Section 5d(vii)).
$\Rightarrow$ Monitor and if needed increase staff awareness of the training support and development opportunities for career progression currently on offer by the School, the Faculty and the University through their regular dissemination during staff meetings, by adding them as a standing item in the Staff Meeting Agenda and creating a dynamic list (in the Staff Handbook). [Action CAREER19]
(iv) Support given to students (at any level) for academic career progression

## PGR students

The TNA process requires that PhD students assess their current and future skills development needs in collaboration with their supervisors, at the beginning of their PhD and on an annual basis. These skills range from subject knowledge to softer skills, such as personal effectiveness, influencing and impacting others. PGR students also have a Personal Tutor for further support and guidance.

The doctoral training programme runs sessions that cover areas such as applying for funding and fellowships, publication planning, reviewing for journals and conferences, on top of the provision offered by the FSS. PhD students are encouraged to use the RSS to showcase their work at School level, and participate in workshops with invited speakers to network (cf. 5.6(vii)).
$\Rightarrow$ We will continue offering developmental and funding opportunities to PhD students (student mentoring for research, thesis writing, career progression) and will monitor and review the provision of resources for PGR (e.g., equipment, funding for travel to conferences, space to carry out research interviews). We will develop a newsletter, specifically formulated for PGR students, circulated every 3 months. [Action CAREER20]

We offer training opportunities regarding teaching skills through the GTA training programme. PGR students can apply to participate in conferences, workshops and research bootcamps across TUoS, to build up their skillset and networks.

However, support for academic career progression has been more challenging for remotely located PGR students: "The school is very accommodating to remote students but I often have to ask for access to things [...], i.e., remote students aren't always proactively considered." Some of these issues have already started being addressed e.g., through the Virtual Interdisciplinary Research Environment (VIRE), by recording lectures and seminars (e.g., RSS) and making them available online.
$\Rightarrow$ We will be making all material from training sessions, seminars and workshops available online for remote location PGRs. [ACTION CAREER21]

## PGT Students

We promote PhD studies to PGT students through workshops, and support proposal writing. This enables those unfamiliar with the UK system to understand its requirements and benefits.
Two central University schemes are promoted to Information School students:

- The Postgraduate Advantage Scheme (PAS) for paid internships with a range of organisations (charities, public sector organisations and SMEs).
- The University's eMentoring scheme where students (including DL) are paired with alumni who are professionals in their target field for 7-10 weeks of mentoring via phone/Skype/email.

Participation in the PAS has not been gender balanced for the years 2015-17 (F: 10, $41.67 \%$; M: 14, $58.33 \%$ ). However, considerably more female students have participated in the eMentoring scheme in the previous years (Table 22). Similarly, more female students have participated in the Careers Diagnostic Questionnaire between 2017-18 and 2019-20; however, during Semester 1, 2019-20, the difference seems to have decreased (Table 23). The results from this survey are used to discuss career planning. It can thus be suggested that female students are more interested in exploring their options, following graduation.

Table 22. Student participation in the eMentoring Scheme (2016-2019).

| Year | F | M | Total |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016-18$ | $31(64.58 \%)$ | $17(35.42 \%)$ | $\mathbf{4 8}$ |  |  |  |  |
| 2019 (Semester 1 only) | $17(68 \%)$ | $8(32 \%)$ | $\mathbf{2 5}$ |  |  |  |  |
| Total |  |  |  |  | $\mathbf{4 8}(\mathbf{6 5 . 7 5 \%})$ | $\mathbf{2 5 ( 3 4 . 2 5 \% )}$ | $\mathbf{7 3}$ |

Note: The \% is calculated on the basis of the population participating in the scheme, not the overall student population of that year.

Table 23. Student participation in the Careers Diagnostic Questionnaire (2017-18 to 2019-20).

| Semester | F | M | Unspecified | Total |
| :---: | ---: | ---: | ---: | ---: |
| 2017-18 Semester 2 | $89(61.81 \%)$ | $55(38.19 \%)$ |  | 144 |
| $2018-19$ Semester 1 | $134(62.62 \%)$ | $80(37.38 \%)$ |  | 214 |
| $2018-19$ Semester 2 | $114(65.90 \%)$ | $59(34.10 \%)$ |  | 173 |
| $2019-20$ Semester 1 | $126(58.06 \%)$ | $90(41.47 \%)$ | $1(0.46 \%)$ | 217 |
|  | $\mathbf{4 6 3 ( 6 1 . 9 0 \%})$ | $\mathbf{2 8 4 ( 3 7 . 9 7 \% )}$ | $\mathbf{1 ( 0 . 1 3 \% )}$ | $\mathbf{7 4 8}$ |

Note: The \% is calculated on the basis of the population participating in the survey, not the overall student population of that year.

Our Employability Leads work with the Employability Hub (Faculty-level) to promote events, employer networking sessions and career support. However, the School hasn't always captured gender information in relation to employability events, while data capture changes from time to time, making identification of trends difficult.
$\Rightarrow \quad$ We will ensure longitudinally consistent data capture (split by gender and by programme) on employability-related actions and initiatives. We will report the results to the EDI committee. [Action CAREER22]
$\Rightarrow \quad$ We will improve the communication between the School and the Faculty's Employability Hub with regards to the employability initiatives by establishing regular meetings (every 3 months) between the Faculty's Employability Hub, the School Employability Officer and DPGR. [Action CAREER23]
(v) Support offered to those applying for research grant applications.

The DoR and Research Hub Manager meet staff individually to discuss grant application needs (Annual Research Review). Workshops are organised to improve grant capture, the Research Hub offers support with costing and all proposals are internally reviewed before submission. Papers can be sent to senior colleagues for in-depth comments prior to submission for review. All permanent staff (open ended contracts) have an individual research fund to spend on research related activities, such as conference attendance, transcription services etc.
The School operates a funding scheme (seed corn funding) for research activities such as pilot work, networking etc.
Over the past 5 years, staff have submitted 154 unique grant proposals for external funding ( 26 successful, $16.88 \%$ success rate). A total of $39.15 \%$ grants were submitted by female staff, whereas male staff submitted $60.85 \%$. Female staff have been the Principal Investigator (PI) in $34.68 \%$ of these. Of the successful (funded) projects, only 8 projects (30.76\%) had a female Pl out of the total of 26 funded projects. This is on par with national data for 2018-19, whereby $70 \%$ of UKRI funding for projects was awarded to male PIs ${ }^{6}$.
Developing a grant proposal as PI requires time and the teaching load that increased over the recent years (Section 4a(iii)) has impacted female staff somewhat disproportionately (Table 29). All academics are eligible for study leave after they have accrued 7 semesters in service and this can help secure some time to develop grant proposals and/or undertake research work that could lead to a grant proposal. Currently, there are 10 members of staff eligible to apply, however, not all of them would be able to take it immediately due to operational reasons.
Over the past year, the DoR has been offering support to all members of staff in order to promote the more aspirational and innovative ideas, in order to build capacity for larger, externally funded grant applications.
$\Rightarrow$ We will establish a 2 member internal panel to offer feedback to individual staff whose proposals have been rejected by funding bodies. [Action CAREER24]
$\Rightarrow$ We will continue profiling research-active staff interests and expertise to allow staff to match up easily and encourage the preparation of collaborative grant applications.
[Action CAREER25]
$\Rightarrow$ We will support female academics in applying for research grants as Pls by identifying and promoting internal and external female role models. We will create and share model/sample applications for study leave, FAQs, and guidance notes. [Action CAREER26]
$\Rightarrow$ We will monitor study leave, to identify eligible staff and have proactive discussions during the one-to-one Annual Research Review. [Action CAREER27]

[^6]$\Rightarrow$ We will identify and communicate sources of funding which specifically encourage female applicants. [Action CAREER28]

## c. Flexible working and managing career breaks

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

The School follows UoS policy on maternity leave, which reflects relevant legislation. The 'Maternity Leave Toolkit' guides staff and managers around eligibility criteria, notification procedures, planning checklists. When they feel comfortable discussing their pregnancy, staff are encouraged to meet their line manager to agree the appropriate communication of their pregnancy with colleagues, role and workload cover, and handover arrangements.
Interviews with staff who have taken family leave (maternity, paternity, shared parental) in recent years positive experiences overall, but it was felt that staff were not fully informed of options, and that managers were sometimes unaware of how to handle requests for KIT days (Section 5c(ii)) or phased returns. Staff agreed information could be more accessible. The University HR web pages on Family Leave have developed significantly in recent years, including dedicated sections on Shared Parental Leave, Adoption/Surrogacy Leave and the WARP programme in particular, which supports financially the return of women academics to research activities. However, no School member has been eligible for the WARP programme as it was previously available to STEMM departments only.
Maternity leave is also available to PGT and PGR students. Guidance has been improved and added to Student Handbooks, and the DEDI helps pregnant students to understand their rights, work through their Maternity Support Plan, and prepare for return (if/when appropriate). However, there is evidence that some staff are not fully aware that this support exists for students.
$\Rightarrow$ We will offer refresher training to Line Managers in relation to Family Leave and what is available for staff members. We will include clear guidance and signposting within the School's Staff Handbook to HR resources with explicit references to KIT and SPLIT days. [Action FLEX1]
$\Rightarrow$ We will communicate clearly to all staff that support is available for pregnant students and those considering parental leave. We have already included relevant information in the PGT Personal Tutoring Pack and we will do the same for the PGR Personal Tutoring pack and the Staff Handbook [Action FLEX2]
(ii) Cover and support for maternity and adoption leave: during leave.

Staff on parental leave can work for 10 KIT days or 20 SPLIT days in addition to the KIT days. These days are meant for handover meetings, departmental away days etc., including training, but have to have been agreed during the planning for the period of
leave. Just one staff member has formally utilised KIT days and their experience suggests the need for greater clarity on expectations.
$\Rightarrow$ The refresher training for Line Managers and the guide in the Staff Handbook [Action FLEX1] will make explicit reference to the KIT/SPLIT days, highlighting the requirement to agree these during the planning stage of the leave and not later, and what contact is reasonable.
$\Rightarrow$ To consolidate, and signpost in the Staff Handbook information on WARP funding and similar support networks and buddy schemes available to parents and carers (a single access point). [Action FLEX3]
(iii) Cover and support for maternity and adoption leave: returning to work.

UoS policy includes phased return from long-term leave, and the possibility of flexible working hours upon return. Staff and postgraduate students are encouraged to engage with schemes and networks (e.g., Parents@TUoS Network, Parent2Parent). Regular meetings with line managers are encouraged to ensure returnees complete a reinduction programme, agree new SRDS objectives and receive any required training or process updates. The School has a dedicated space for the purposes of breastfeeding/nursing/expressing (bookable on request by PGT/PGR and staff). Interviews with staff indicated that support for return from maternity leave was inconsistent. They felt that there were unrealistic expectations, with an assumption that they would immediately "carry on where they left off". While University schemes were seen as helpful, some women felt the School could do more to support development, and that the implementation of some processes (e.g., SRDS and promotion pathways) lacked flexibility.

[^7](iv) Maternity return rate


Table 24. Maternity Leaves between 2014-15 - 2018-19 across all staff (Academics and PS).

| Grade | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G4 |  |  |  |  |  |  |
| G6 |  |  |  |  |  |  |
| G8 |  |  |  |  |  |  |
| Total | 0 | 2 | 2 | 1 | 0 | 5 |

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

Five staff members have taken paternity leave in the past five years: Line managers are encouraged to make staff aware of options, and to draw attention to existing University support, e.g., Paternity/Partner Leave Policy and Procedure and FAQ of Family Leave.
The SPL policy applies to pregnant staff members and their partners for babies due or children matched/placed for adoption on or after 5 April 2015. One staff member Xhas taken SPL with a partner employed in another department, and reported that the School was supportive. $X$ has just submitted another SPL request.

## (vi) Flexible working

Flexible working arrangements may be informal or formal, temporary or permanent. Requests are assessed on the needs of both employee and department, the latter in relation to potential business implications. Effort is made to meet the needs of staff with caring responsibilities.
PS and academics have formally changed their working hours, with examples including a move to a condensed working week ( 5 days in 4 days, $\triangle$ ), a reduction from 35 to 28 hours per week $\times$ and changes to hours to support childcare
Staff are fairly happy with flexible working arrangements, but only $45.45 \%$ of respondents agreed/strongly agreed that their line manager is supportive of requests for flexible working, (F: 38.46\%; M: 54.55\%). Those working on flexible contracts feel they do not have the same development opportunities as others, and those on such contracts are mostly women, indicating a gendered problem (Section 5a(iii)).
Prior interviews with staff who requested flexible working arrangements revealed inconsistencies in how the policy has been applied. Some reported positive experiences, while others expressed dissatisfaction regarding a perceived lack of transparency of the approval process (final decision making and criteria against which trial periods were assessed). Some also noted inconsistencies in the requirement that a request be made via a formal process, which was not required for all staff. A working group for the FSS EDIC surveyed all HoSs and DMs in the Faculty, and found that the approach to managing and supporting requests was similarly inconsistent, despite clear HR policy.
$\Rightarrow$ We will create and circulate clear and transparent information on flexible working arrangements, which will be included in the Staff Handbook with signposting to the HR policy, and shared with all Line Managers [Action FLEX5].
$\Rightarrow$ This action, combined with [Actions CAREER10] and [CAREER11], will also address perceptions in relation to development opportunities being less accessible/available to staff on flexible contracts.

UoS does not have a policy regarding transition back to FT working, but if a business need for the School and Faculty justifies a change in contract, this is put forward by the HoS for Faculty consideration.

Two members of the SAT team conducted interviews with four staff returned to PT positions
who began on - and returned to - a PT contract, $\times x+1$ Each has subsequently sought to increase their hours. A fourth $\times \times$ colleague requested condensed hours. The interviewees highlighted a lack of guidance regarding transitioning to increased hours, lack of clarity around the requirement for a business case to be made to Faculty to obtain approval, and lack of transparency of the process. However, eventually they were all successful in their request.
$\Rightarrow$ To update Staff Handbook regarding procedures for transitioning from
condensed/reduced hours to full time, including preparation of the business case with
the Line Manager, and links to HR guidance. [Action FLEX6]

## d. Organisation and culture

(i) Culture

We have engaged with Athena SWAN since 2013 via the FSS EDIC and the UGEC. The School's formal engagement with AS began in 2015, with EDI being a standing item at School Staff Meetings and SG meetings (and since 2018 the DEDI is a member of the SG), and the AS application is discussed fairly regularly in both.
The IGES2019 confirms that most staff understand the School's "reasons for engaging with gender equality", but it has also demonstrated some differences in perception between genders ( $84.62 \%$ F; 100.00\% M) (Table 25). According to the data, in 2017, male colleagues perceived little gender-based differences in how work was being allocated in the School, how staff were treated, and whether their contributions and opinions were respected. This has now changed as male colleagues consider that staff are not treated on their merits irrespective of gender ( $42.86 \%$ disagreement). Female staff perceptions have improved somewhat with regards to how work is allocated and how their knowledge and opinions are received by the School and their colleagues ( $6.54 \%$ and $25.54 \%$ drop in disagreement, respectively). Yet, little improvement has been
achieved in female staff perceptions in relation to how staff are treated on their merits irrespective of gender.

Table 25. Perceptions re: Gender equality on work allocation - \% denote disagreement (IGES 2019).

|  | work is allocated/delegated on a fair basis irrespective of gender |  | staff are treated on their merits irrespective of gender |  | individuals believe their knowledge and opinions on matters of departmental importance are respected by all colleagues |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | F | M | F | M | F | M |
| IGES2017 | 45\% | 0\% | 54\% | 13\% | 64\% | 13\% |
| IGES2019 | 38.46\% | 14.29\% | 53.85\% | 42.86\% | 38.46\% | 14.29\% |

We posit that the noted improvements have been achieved by a combination of things: the staff's greater engagement with the AS principles and the increased transparency (SG meetings minutes shared through a shared folder, workload allocation, once complete, is visible by all) may have revealed discrepancies and increased everyone's awareness.
$\Rightarrow$ In our action plan we incorporate a number of points in order to address perceived and real inequalities we have identified that influence the way the work is allocated, and how leadership and other admin academic roles are assigned with the view to both support gender equality as well as address the underlying culture challenges: [Actions CULTURE8, 9, 10, 12 and 14], all of which are discussed in detail in the next sections.

In 2019, we appointed an Internationalisation Lead (F) whose role contributes towards the ongoing work to decolonise the curriculum within the School and who has been collaborating with the DEDI on race equality, diversity and BAME representation.

Regarding LGBT+ inclusion, a previous initiative in the School (re-labelling of disabled toilets as gender neutral) resulted in mixed results. While it was a welcome development towards trans inclusion, LGBT+ staff and students were not consulted in the process, and felt marginalised and excluded. To date, four staff members have undertaken EDI training in relation to LGBT+ inclusion (e.g., Sexual Orientation, Transgender Awareness), and at least two are Open@TUoS Allies.
$\Rightarrow$ We will make 'Gender Issues' training and 'Unconscious Bias Training' compulsory for all those sitting on the more significant committees (Table 28). [Action CAREER15]
$\Rightarrow$ To continue running the IGES survey on an annual basis to monitor perceptions, issues and gendered problems, as well as the effectiveness of the action points and staff awareness on EDI. [Action CULTURE1]
$\Rightarrow$ To continue communicating to incoming staff and students the location of genderneutral toilets as part of the induction process, and include the information in the Staff and Student Handbooks. [Action CULTURE2]
$\Rightarrow$ Signpost staff members to LGBTQ+ inclusion related training (e.g., transgender awareness, sexual orientation) as part of the EDI training available. [Action CULTURE3]
$\Rightarrow$ To ensure that EDI events, activities and communications, where possible, are developed in consultation with relevant communities of staff and/or students (i.e., LGBT+, BAME, disabled). [Action CULTURE4]
(ii) HR policies

The School follows UoS policy regarding equality, dignity at work, bullying, harassment, grievance and disciplinary processes. HR provides guidance regarding behaviour that may contravene these, and a 'Dignity at Work' toolkit. These and similar resources are highlighted during Staff Meetings (e.g., "Report + Support" tool, available to students and staff).
IGES2019 questions regarding HR policies around fairness, language and behaviour in the School had more positive than negative responses (Table 26). Staff believe the School has effective policies regarding fairness, inappropriate or sexist language and behaviour, bullying/harassment, and those who disagree are significantly fewer than in the past, with the exception of male respondents in relation to sexist language and behaviour. We note that UoS is determined to prevent, record and respond to sexual violence and harassment within its community, which is why there is now a Sexual Violence \& Harassment Operational Group within each Faculty.

Table 26. Perceptions about policies regarding fairness, language and behaviour in the School - \% denote disagreement.

| Statement | \% of all <br> respondents <br> disagreed | \% of female <br> respondents <br> disagreed | \% of male <br> respondents <br> disagreed |
| :--- | :---: | :---: | :---: |
| I am treated with fairness and respect (USS 2018) | $26 \%$ | $\mathrm{~N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| I would know where to find support if I did not feel I <br> was being treated with fairness and respect (USS <br> 2018) | $26 \%$ | $\mathrm{~N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| I am confident that my line manager would deal <br> effectively with any complaints about harassment, <br> bullying or offensive behaviour (IGES 2019) | $5 \%$ | $0 \%$ | $0 \%$ |
| My department/school makes it clear that <br> unsupportive language and behaviour are not <br> acceptable (IGES 2019) | $9 \%$ | $0 \%$ | $14 \%$ |
| My department/school makes it clear that sexist <br> language and behaviour are not acceptable (IGES <br> 2019) | $9 \%$ | $0 \%$ | $29 \%$ |

$\Rightarrow$ Communicate through Staff Meetings the policies in place and the tools available for reporting unacceptable behaviour. We will update the Staff Handbook with the HR policies on bullying, harassment, grievance and disciplinary procedures, and signpost to the Report+Support tool [Action CULTURE5].
$\Rightarrow$ To create an open door policy for staff members to discuss EDI matters with the DEDI in a confidential manner [Action CULTURE6].
$\Rightarrow$ These actions coupled with [Action CAREER5] will communicate clearly that the School remains committed to EDI, and that unsupportive and/or sexist language and behaviour are unacceptable.
$\Rightarrow$ We will continue being informed and in collaboration with the FSS EDIC and disseminate initiatives, actions, and policy updates regarding EDI, further embedding such policies in future planning. [Action CULTURE7]
(iii) Representation of men and women on committees

The School's most significant committees are the SG, the Research Committee and Teaching Committee (Figure 16). Each committee has its own ToR and SG's meetings' minutes are shared with staff through a shared folder. One position on SG is held by an elected academic staff representative at G8 or G9.
The School has an Executive Group which provides support for the HoD through informal discussion. The external Advisory Panel also has some influence over the direction of the School (Section 5d(vii)).


Figure 16. Organogram of the Information School. (Note - Grey: strategic; White with square edges: operational; White with rounded edges: external membership. The dashed line indicates that the Executive Group is not a formal group).

Gender composition of committees is not formally evaluated and membership is influenced primarily by ToR, distribution of administrative roles and seniority. The only committee with a consistent female over-representation is the Marketing Committee. ToR can have a significant impact; changes to SG's ToR in 201617 reduced elected members from two to one, and removed the (previously female) DPGTR role from the Group. These decisions resulted in a shift in gender composition of the SG during 2016-17. Today, the balanced profile is accounted for by the female HoS, a female elected staff representative and a female DEDI.
The survey shows that only $13.64 \%$ of respondents disagree that women are fairly represented on School committees ( $38.46 \%$ F; $14.29 \% \mathrm{M}$ ). Over the past 6 years, there are regularly more male staff on all committees apart from SG and Marketing Committee. In 2019-20 there is a gender-balance in 3 out of the 7 committees, while there are 2 with stronger female participation (Table 27). There is a gender imbalance at Professorial level (1F; 4M), and ToR for some committees result in a heavy load for Professorial staff. There is a further risk of increasing 'committee overload' for female senior academics (G9, Prof.), in a move to reflect the School's composition in the committees.

Table 27. Composition of Committees in relation to Gender over the past 5 years.

| Year | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Exec Group (HoS; DM; DLT, DoR, DDLTi) | N/A | N/A | 1F; 3M | 2F; 3M | 2F; 3M | 2F; 3M |
| Strategy Group (HoS; DM; DLT; DoR; Professors; elected staff rep, DEDI (since 2018)) | 5F; 5M | 5F; 5M | 1F; 5M | 3F; 5M | 6F; 7M | 4F; 4M |
| Research Committee (DoR, DDoR, REF coordinator, DPGR, HoS, Research Hub, Heads of RGs, ECR rep.) | 3F; 5M (Chair: F) | 3F; 4M <br> (Chair: M) | 2F; 7M (Chair: M) | 5F; 4M <br> (Chair: M) | 9F; 4M <br> (chair: M) | 8F; 4M (chair: M) |
| Teaching Committee (all teaching active staff, LTM) | 7F; 8M (Chair: F) | 7F; 10M (Chair: M) | 8F; 14M (Chair: M) | 11F; 8M (Chair: M) | 11F; 12M (Chair: F/M) | 9F; 7M (Chair: M/M) |
| Student-Staff Committee (HoS; DLT; PCs; Library rep; TEL rep.) | 4F; 6M | 4F; 11M | 3F; 9M | 6F; 6M | 7F; 8M | 6F; 6M |
| Marketing Committee (DPGTR; DPGR; <br> Marketing team) | 4F; 2M | 4F; 0M | 4F; 2M | 4F; 2M | 4F; 3M | 3F; 3M |
| Advisory Panel (external panel, cf. 5.6 (vii)). | 1F; 9M | 3F; 2M <br> (attendees only) | 2F; 8M | 4F; 8M | 8F; 10M | 8F; 10M |
| Staff Meeting | All staff members |  |  |  |  |  |
| Note: For all years, figures are taken from attendance/apologies records from the minutes of the November (or nearest) meeting; N/A = data unavailable). Grey denotes male overrepresentation. |  |  |  |  |  |  |

[^8]$\Rightarrow$ EDI training will be made compulsory for all those sitting on a significant committee, with a mandatory 3-year refresher [Action CAREER14], and this includes the SG and the Executive Group.
$\Rightarrow$ We will monitor membership within and across committees based on intersectionality to identify any persistent inequalities. We will amend ToR if required to diversify the membership. If admin academic posts have a lead and a deputy role, we will avoid where possible teams of the same gender (particularly for Programme Coordination).
[Action CULTURE9]
$\Rightarrow$ We will rotate admin academic roles every 3 years or sooner to prevent 'committee overload' for the single female Professor and allow staff more opportunities for influential admin academic roles and lead to a succession plan in place. [Action CULTURE10]
(iv) Participation on influential external committees.

Staff may be encouraged by the HoS or colleagues in other departments to apply for posts on influential committees. In the past five years, many staff have held positions on Faculty-level committees: FSS EDIC (G8/G9 F) and FLTC (G9 M), and at University level, the Discipline Committee (Prof. M), the UREC (G8/G9 F; Prof M), the UIMG, OAAG, and DGG (Prof. M). There is no particular gender imbalance in staff holding such roles, although the number involved is relatively small. Relatively few staff are involved in external committees, but those who are tend to be involved in several.
In IGES2019, only $30.77 \%$ of female staff (M: 57.14\%) indicated that they are "encouraged and given opportunities by senior staff' to represent the School within the University or externally.
$\Rightarrow$ We will encourage staff to participate in influential committees both within the University, representing the School, as well as externally. The University-based roles will be advertised within the School and a point on this will be included in the SRDS review. [Action CULTURE11]

## (v) Workload model

Our workload model allows us to forward plan each staff member's workload (for Teaching, Research and Administration), taking into account their FTE and any buy-out, in line with FSS guidelines. All staff members can view each other's workload once allocations are complete.
IGES2019 revealed that, while "things have improved somewhat in relation to gender issues in recent times (...) [i]t does seem there is a gender inequality in the effort given to certain leadership/admin roles in the School", and that the School must "not allocate women on admin related roles, give them more space and time for research, because they often end up doing more pastoral care work." Quantitatively, staff perceptions show
that $38.46 \%$ of female staff ( $14.29 \%$ male) disagree that "work is allocated and/or delegated on a clear and fair basis irrespective of gender".
We analysed the distribution of administrative roles for 2013-14-2019-20 (Table 28), and of teaching and admin tasks for years 2016-17 to 2018-19 (Table 29). There is a gendering of administrative and leadership roles, particularly during 2016-17 and 201718, when most senior administrative roles were held by male staff, and for some roles (Examinations, Unfair Means Officers), which have always been held by male staff. Female staff contribute slightly more to teaching in 2017-18 (3.3\%) and 2018-19 (5\%) and have less PGR supervision (especially in 2016-17 but has been improving), which is conducive to research activities. They also seem to have lower admin burden, where their load relates more to pastoral work, outreach etc. and less to influential admin roles.

Table 28. Administrative positions for academic staff (including teaching pathway). The order corresponds to the School 'Roles and Responsibilities' document 2017-18 - more influential leadership roles are higher in the table.

| School Role | 2015-16 ${ }^{1}$ | D | 2016-17 | D | 2017-18 | D | 2018-19 | D | 2019-20 | D |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HoS | F | M | M | M | M | M | M | M | F | M |
| DoR | M | M | M | M | M | F | M | M | M | M |
| DLT | M |  | M | F | M | F | F-M | F-M | M | M |
| Dir. External Relations |  |  | M |  | M | F |  |  |  |  |
| DEDI |  |  |  |  |  |  | F |  | F |  |
| REF Coordinator |  |  | M | M | F | M | M |  | F-M |  |
| DPGR | F | M | M | M | M | M | F-M |  | F |  |
| DPGR recr. | F |  | F | F | F | F | F | F | M |  |
| Unfair Means Officer | M | M | M | M | M | M | M | M | M | F |
| Exams Officer | M | M | M | M | M | M | M | M | M |  |
| $\mathrm{PC}^{2}$ MA LIB | M | F | M | F | F-M | F | M | F | M | F |
| PC MA LISM | M | F | M | F | F | F | F | F | F | F |
| PC MSc DLM | M | M | M | M | M | M |  |  |  |  |
| PC MSc DS | M | M | M | M | M | F | F | M | M | F |
| PC MSc IM | M | F | M | M | M | M | M | M | M | M |
| PC MSc MIM ${ }^{3}$ | M |  |  | M |  | M |  | M |  | M |
| PC MSc HI ${ }^{3}$ |  | M | F |  | F |  | F |  |  |  |
| PC MSc IS | M | M | F-M | F | F | M | F | M | F | F |
| PC MSc ISM ${ }^{3}$ | M | M | M | M | M |  | F |  | F |  |
| Chair, Student Staff C'tee. | M |  | F | F | F | F | F | F | F | F |
| Library Coordinator | M |  | F |  | F |  | F |  | F |  |
| Disability Liaison Officer | M |  | F |  | F |  | F |  | F |  |
| Int'I Student Advisor | M |  | F |  | F |  | F |  | F |  |
| Employability Officer | F-M |  | F |  | F |  | M |  | M-M |  |
| Alumni Officer | F |  | F |  | F |  |  |  |  |  |
| Erasmus Coordinator | M |  | M |  | M |  |  |  |  |  |
| Ethics Coordinator | F | F | F | F | F |  | M | F | M | F |
| Student Soc. Coordinator | M |  | F |  | F | F | F |  |  |  |
| EDI officer (transitioned to DEDI) | F |  | F |  | F |  | F |  |  |  |
| SIC Coordinator | F |  | F |  | F |  | F |  |  |  |
| Part-time Student Advisor | M |  | M |  | F |  | F |  |  |  |
| WP Officer | F |  |  |  | M |  |  |  |  |  |

[^9]$70 \%$ of female respondents ( $40 \%$ male) disagree that pastoral work, outreach work, teaching and administration are considered in staff appraisals. 50\% female staff ( $20 \%$ male) disagree that these are considered in promotions. Qualitative data indicate that women often end up being allocated more admin-related roles, and "doing more pastoral care work", resulting in "less space and time for research". If this is true, progressing within the School is bound to be harder for women academics (Section 5a(iii)), who, as evidence shows, have fewer opportunities to occupy significant admin academic roles and/or sit in significant committees.

Table 29. Comparison of Teaching, PGR supervision and Administrative workload, split by gender across 2016-17, 2017-18 and 2018-19.

|  | Gender | 2016-17 | Diff (hrs) | Diff (\%) | 2017-18 | Diff (hrs) | Diff (\%) | 2018-19 | Diff (hrs) | Diff (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teaching (all) | F | 474.81 | -2.22 | -0.2\% | 627.57 | 39.62 | 3.3\% | 559.13 | 53.48 | 5\% |
|  | M | 477.03 |  |  | 587.95 |  |  | 505.64 |  |  |
| PGR supervision | F | 108.33 | -85.84 | -28.4\% | 130.13 | -33.93 | -11.5\% | 113.32 | -16.67 | -6.9\% |
|  | M | 194.17 |  |  | 164.06 |  |  | 129.99 |  |  |
| Admin Duties | F | 145.14 | -135.42 | -31.8\% | 272.68 | -35.29 | -6.1\% | 165.37 | -37.62 | -10.2\% |
|  | M | 280.56 |  |  | 307.97 |  |  | 202.99 |  |  |

Note: negative values/percentages indicate female staff contributing more. To enable comparison, we used a multiplier to report on the workload of PT staff. For example, the workload of a PT member of staff on a 0.2 FTE contract was multiplied $x 5$.
$\Rightarrow$ We will institute the role of the Deputy consistently for all significant roles, which will also rotate as per [Action CULTURE10]. This will support staff in receiving training and mentorship, and to progress from the role of the Deputy to the main role and develop their career. It will also ease the workload of those with more admin duties as responsibilities will be shared and decentralised. [Action CULTURE12]
$\Rightarrow$ We will develop descriptions of all Admin/Leadership Academic Roles (including workload allocation and duties), include these in the Staff Handbook, signpost to them in the Induction checklist, and use during SRDS reviews/appraisals. [Action CULTURE13]
$\Rightarrow$ We will engage more substantively with the allocation of admin/leadership academic roles and invite expression of interest from staff during SRDS and induction for the types of roles they would be interested in and believe they have the skills to undertake. This will be logged and captured in their SRDS to be considered for future allocations. [Action CULTURE14]
(vi) Timing of departmental meetings and social gatherings

Standard hours in the School are 9-5pm. Staff Meetings are generally timetabled 10am3pm (core hours), to be more inclusive for those with caring responsibilities, PT or flexible working. The RSS and the meetings of the RGs and various Committees are normally scheduled on specific pre-allocated hours, so as not to overlap and allow staff members to attend, should they wish or need to do so.

Many social events are held during standard hours but some may take place after standard hours. For each of these, relevant staff are invited, but are free to refuse if they have other commitments. The majority of the IGES respondents agreed that such activities were 'welcoming to both women and men' (84.62\% F, 100\% M).
$\Rightarrow$ [Action CAREER10] will ensure that Staff Meetings, seminars and workshops will continue taking place within the restricted core hours and that those who cannot attend will be able to access the relevant minutes or recording of the event - access to these recordings will be based on membership. Research Groups will negotiate the timing of their meetings among their members and recordings will be made available based on membership.
(vii) Visibility of role models

The School has not historically built gender equality into event organisation, but the RSS shows a reasonable balance ( $\mathrm{F}: 47 \%$; M: 53\%, Table 30). Between 2015-16 and 201617, there were noticeably more male speakers. Thus an effort was made from 2017-18 onwards to target female speakers. In 2018-19, this extended to BAME (11 out of 30) and ECRs (19 out of 30), too.

Table 30. Gender Balance of Invited Speakers (External and Internal) presenting at the School's Research Seminar Series (2014/15-2018/19).

|  | $\mathbf{2 0 1 4 - 1 5}$ | $\mathbf{2 0 1 5 - 1 6}$ | $\mathbf{2 0 1 6 - 1 7}$ | $\mathbf{2 0 1 7 - 1 8}$ | $\mathbf{2 0 1 8 - 1 9}$ | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male speakers | 5 | 11 | 13 | 11 | 11 | 54 |
| Female speakers | 5 | 6 | 8 | 10 | 19 | 51 |
| Female percentage | $\mathbf{5 0} \%$ | $\mathbf{3 5 \%}$ | $\mathbf{3 8 \%}$ | $\mathbf{4 7} \%$ | $\mathbf{6 3 \%}$ | $\mathbf{4 7 \%}$ |

Publicity materials on the School's website, social media and print materials tend to reflect the School's diversity. We seek to showcase our diversity in our presentations for our Open Days and Induction Weeks, too. However, only $46.15 \%$ ( $n=6$ ) female staff (M: $57.14 \%, n=4$ ) agree that the School use "senior women as well as senior men as visible role models".
From 2018-19 onwards, we have focused a lot on intersectionality, targeting BAME external contributors, and collaborating with Global South researchers, aligning with University-level approaches to decolonise the curriculum, and engage with UN's SDGs. The School's Internationalisation Lead (G8, F) is a member of Faculty's working group on decolonisation, and together with the School's GCRF Lead (G9, F) (both from minority groups, Figure 17) have been making a significant impact, e.g., in October 2020, they hosted a Seminar (RSS) on "Decolonizing ICT4D" attracting more than 150 attendees.


Figure 17. Co-organisers of the "Decolonizing Information \& Communication Technologies for Development (ICT4D)" Research Seminars, October 2020.
$\Rightarrow$ We will continue to monitor gender balance in event organisation, aiming for equal numbers of male and female contributors, and making space for ECRs, while promoting intersectionality. [Action CULTURE15]
(viii) Outreach activities

Many staff engage in outreach and engagement activities, including student recruitment, professional or public engagement in research. We have an annual presence at the CILIP Conference, where we recruit from non-typical education backgrounds and mature students. The School runs virtual open days for those unable to visit Sheffield. Most PGT programmes involve external sessions with professional organisations, for knowledge exchange and networking opportunities. A growing area of School research relates to gender bias in Information Retrieval systems, and colleagues are speaking about their work to data scientists, BCS and CERN. An international Marie Curie FP7 project (1 M) looking at diagnostic and therapeutic methods against Alzheimer's disease involved engaging with female pupils from Italian schools (Figure 18). In 2019, a GCRF funded project engaged with informal caregivers in Malawi (2 F), a typically gendered role (Figure 19).


Figure 18. D3i4AD project activity in Bari, Italy, June 2018.


Figure 19. Research England GCRF focus group in Malawi, June 2019.

It is noted that for promotion purposes, outreach activities are considered at Faculty level as part of administrative work, and as shown, female staff mostly disagree that such activities are rewarded in appraisals or promotion (Section 5b(ii)).
$\Rightarrow$ We will update the SRDS reviewers' guidelines to include a discussion on outreach activities in the SRDS/appraisal review to acknowledge the contribution of staff members [Action CULTURE16].
[5997 words]

## 6. Further information

We finished our data collection in early February 2020, before the Covid-19 outbreak. This meant that much of the consultation work around the collated data had to be conducted online following the introduction of social distancing measures, which was more challenging as we got used to new ways of working.

It is clear that the pandemic has impacted the School and its staff: for example, working from home has resulted in difficulties in planning, which in turn resulted in increased workloads and stress. However the impacts are still emerging and we believe we will have a clearer picture once the first semester of 2020-21 finishes. We expect that the Covid-19 impacts will be long term and that they will extend beyond the next couple of years, impacting women disproportionately, as evidenced already in the literature in relation to publication activities ${ }^{7}$. We expect disproportionate impacts for minority groups and early career academics.

We will capture insights and staff perceptions through IGES2020, which we will run during December 2020. We will use our usual questionnaire but we will augment the instrument to contain relevant items, which will allow us to consider the consequences of Covid-19 on the School and its staff (academics and PS, including PGRs and Research Fellows).

On the basis of the results, we will revise and update our Action Plan, and build in additional future actions accordingly, in order to address these consequences. This will be necessary to achieve the overarching objectives of the Action Plan in relation to gender equality and intersectionality. In the first instance, we have scheduled a wellbeing session with a qualified Work Coach, Counsellor and Psychotherapist on "Protecting and Building Mental Fitness", organised by HR, to talk about the impact that current changes are having on mental and psychological wellbeing. This session has already been delivered in other Departments within UoS and where it has received positive feedback. We will also run a short survey to collect wellbeing concerns and identify work-related stressors staff and PGRs have been experiencing over the recent months/weeks. This will form the basis of a discussion within the School as to what we could be doing towards supporting staff and PGRs.

We will be implementing the Action Plan irrespective of the outcome of our Application, and on the basis of the results from IGES2020 and our wellbeing short survey, our EDI committee (previously the SAT group) will be making adjustments in order to address the identified Covid-19-related impacts.

## [452 words]

[^10]| †ZOZ 」əqшәлоN Kq とפd Бuoue uo！̣ə｜dmoo \％GL＜ <br> Hels buoue uol！əjdmoo \％06＜ |  | $10 \exists 1$ | －रəлuns әs！̣əəре oł IOヨa ‘s．opoon！ dnoxo पглеәsəy ＇WO＇SOH <br>  | ＇Səэuə！ıədxə <br>  Ч！！М Бu！puełsıәрun роо6 е бu！！doןəләр sఛ！！！чи！чэ！чм ‘мо Кıəл иәәq seч ‘sұuәpпıs yפd 6uoue Киејпэ！ued łnq＇yets buour <br>  | 1s6uome ！！әłoword <br> II！M әM＇słuәpnıs <br>  <br>  Кәлйs әчъ би！чэипе „о Би！ш！！әңł әлолдш！ 아 рәәи әм ‘ाедәло <br>  uo！ped！！̣иed әseәлои | $\begin{array}{r} 46!H \\ (!!!) \\ \varepsilon \perp \forall S \end{array}$ |
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| งәәम！ишоэ ұиеэ！ии！！ <br>  <br>  <br> uo！！！sodmos <br>  ＇d！чsıəqшәш pəэue｜eg | IZOZ łsn6n $\forall$ <br> －IZOZ чコеN | SOH |  | ＇ueןd uo！̣oe <br>  foord－əuntnf IIIM pue ueld <br>  u！səәฉ！！шшоэ ұиәдәц！р әчł „о ұиәши！шшоэ әЧł әseə．ગu｜I！！S！Ч」 | әңеd！！̣иед <br>  s｜enp！n！pu！ <br> ग！！ －әә！ <br>  to uo！ped！！̣yed әч7 әзеәлэи | $\begin{array}{r} 46!H \\ (!\varepsilon) \\ \text { ZIVS } \end{array}$ |
| uo！！！soduos <br>  ＇d！чs．əәquәш pәэue｜eg | IZOZ łsn®n $\forall$ <br> －IZOZ पэлеN | SOH | IGヨa ‘soh |  Ol $\perp \forall S$ әЧł d｜ə૫ II！M S！ | suo！！et！！и！ ！！шшә е！＾Sd әреш pue sэ！шәреэе <br>  II！М әМ＇əәฆ！ IOヨ／LVS s，loouગs әцъ ио әэиејед <br>  | 4！！ $(!\varepsilon)$ LIVS |
|  |  |  |  |  |  |  |
| әшоэұกо／セ！ขə！！ | （sәłed puヨ－れバさS） әшецəш！！ | Kı！！！q¢ұunoov＊ | шеәə／uosıəd әq！suodsəy | ә¢иo！̣ey | uо！̣フヲ pauueld | al |


OIIVWYOANI
ue｜d uo！！

| －səŋnulu u <br> pəpnןэu！pue бu！！əәш ЭS Кıəлә pue sбu！̣әәш џels 9 łseə łe u！ pəssnos！p pue pəs！e» sənss！IGヨ |  | $10 \exists 0$ | ериәб $\forall$ әчд u！əpnjou！Ol $\forall O$ ЭS ‘IOヨロ ‘soh | －OS <br> ј0 ұиәшџ！шшоэ әsеәјэи！ <br>  ssoıəe IGヨ jo ssəuәлеме ә＾Oıdu！I！！S！SI | Би！！əәш ЭS Kıəлә pue бulpəәu щets <br>  е и！̣шәл 아 IDヨ | $\begin{array}{r} 46!H \\ (!!!\varepsilon) \\ 9 \perp \forall S \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ＇рәц！！nbәд <br>  <br>  아 ssə๗6oıd uo słodəл ןenuue！g | sчıuou 9 Кıəлә мə！ィәд дәみеәдәцц （みо צэ！у） IZOZ ！！．！$\downarrow$ | $10 \exists \mathrm{I}$ |  | suo！！ełさədxə pue әрqеңəш！ <br> of Бu！p．oכэe ueld uo！̣ว $\forall$ <br>  әЧł ІО！！uow dəə૫ ॥！М ио！̣эe s！ч」 | sцұиom <br> 9 Кıәлә рәмә！ләл ueld uo！̣эe S $\forall$ | $\begin{array}{r} 46!H \\ (!!!\varepsilon) \\ \text { S\&VS } \end{array}$ |
| ＇sıəqшәш э！ <br> ॥е лоł suо！！еэо॥е реоןчом <br> － Бu！ңәәш әәџ！ишшоэ Iロヨ К｜чłиош－！я |  | $10 \exists 0$ |  | ＇ueld uo！̣э૪ ə૫ł <br> ๖๐ ио！̣еłuәшәןdய！əપł પł！М <br>  <br> st！u！̣ł！M IOヨ Бu！ppəqшə <br> pue ‘оочэ्ड ә૫ł <br> и！ч！！м sıəŋеш Iロヨ ләр！м ј0 uo！ssnos！p ןewioł pue Бu！̣обuo әЧł ЧІ！М ןОочગ्S әЧł d｜ə૫ ו！！М ио！̣эe s！ч」 | әәท！шшоง Іดヨ ә૫Ұ оұu！uo！！！suent of $\perp \forall S$ | $\begin{array}{r} 4 ठ!\mathrm{H} \\ (!!!\varepsilon) \\ \nabla \perp \forall S \end{array}$ |
|  |  |  |  |  | －sбu！！əәW <br> щełs 6u！̣np sıәрu！ чбподчł＇щеңs ts6uoue ؛sıołృәл！ dnoג૭ Чગৰеәsәу әЧł pue ‘ఎоફ઼ə！！ イq ұno ұuәs sıəрu！шәл цচпоцчł słuəpnłs yod |  |


| （ьZоz лəqшәлок Кq）еłер <br>  （pə｜qes！p ‘ $\exists W \forall 8) ~ d M ~!o ~ \% ~$ |  | sə．nрәәoıd p！es әчł doəəләр 아 」əગ！HO dM әроь ә૫ъ 라라sui！리 여 SOH |  | －de6 <br> ұиәшиеше әчł ssәıрре dəəب pue sұuәрпıs <br>  <br>  <br> dM әлодdш！dəц II！М ио！̣юе s！чд səmшeגбond ano go ə！noય Odכ <br>  słuәpnłs әшos （sə！！！！！qes！p <br>  $\% 8$ of paxeduos \％乙 pue <br>  \％ZZ 아 paxeduos \％ เレ） ełep $\forall S \exists \mathrm{~F}$ ot pareduoo дәмо｜иәәq seч sə！！！！！qes！p рәлерәәр ч！！！м sұиәрпұs pue squepnis $\exists W \forall 8$ 아 <br>  | uo！ssen6̄oıd <br>  <br> pue słuəpnłs dM <br>  doןəләр оұ pue＇ןочэs <br>  <br>  | un！pəю <br> （！！！et） <br> Inls |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | uәpnıS |
| sənss！ 1 IGヨ uo słuәpnłs <br>  ןеuо！ssəృолd／sэ！шәреэе）әрелб <br>  |  | $10 \exists 0$ |  | suo！！oe <br>  әunnt pue bu！uotuuou ioj Injəsn əq II！М Кəлıns ə૫」 | sธธu！̣əәш <br> Hełs te passnosip pue uo！̣⿺辶 pue ио！̣едәр！ <br>  sбuppuy әчн Кәәлиs SヨコІ ә૫ł чбподчł suondәэләd деңя 6ии̣оְ̣иош әпи！̣uoว | чб! $\begin{gathered} (!!!\varepsilon) \\ \operatorname{LI}) \end{gathered}$ |


|  <br>  | uoissnos！p K！！！！！qeКо｜dшә ：LZOZ <br> イıenıqə」 | WO＇yOdO | әәџишшоэ <br> чэ．еәләу 아 <br> sənss！Kue मodə」 ‘！！pne op of yoda | पs！！｜qełsə of səmuen6oad」Эd әપł سощ <br>  G łSe｜ Ә૫ł dOł l！pne ue op of pəәu әм＇dәłs łsily e S $\forall$ | pue 1 〇d иəəмłə әu！！əd！̣ uo！ssəəదолd ә૫ъ әлолдш！ <br> ol səunseəu әуеł рәрәәи ！！pue＇！！pn $\forall$ | un！pəw <br> （лер） <br> tกS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| （леәК чэеә иел uо！̣епןелә әןnpou pue＇słuәpnıs <br>  <br>  <br>  u！uo！̣วełs！！es łuәpnłs \％GL＜ <br>  <br> ！！pne <br>  <br>  pue sno！̣！que ue łəs |  | 170 |  u！uo！̣วeృs！！̣es ґuәpпıs әృебомәәи！ K｜｜еכ！！！ уэеqрәә！әןnрош łdepe＇sıәyeәds əınłnı дəp！suoo ＇sıәуеәds lsed t！pne＇sts！！ бu！̣peəı мə！ィәд 여 ：Sıołpu！pıoos əl npow／əumeл6oad | əəィ！̣эədsıəd К！！！euo！̣әәsıəəu！ <br> ue рәqшә дәцдın」 pue <br> ＇uo！̣es！иоןоэәр wn！no！unэ әЧł uo dnoı6 Би！чиом SS」 <br> әЧł ృО suo！̣ериәшயоэә』 әчұ ‘Кбәәеня <br> K！！！enbョ әэеч әчł <br>  <br>  әјд әsıәл！р әлош pue sıəyeəds łsən6 反uoue <br>  | ＇słs！！ Бu！peaı <br>  рие ןəлә әррош ұе sıәуеәds рәџ！ıu！／／səən <br> әчъ биоше <br> sdnoı6 рәןqes！̣ <br> ‘ $\exists$ WVG ‘иәшом ！o uo！̣ełuəsəıdə」 әлоıdш！O1 | $\begin{gathered} \text { чб!! } \\ (!!!e t) \\ \varepsilon \cap \perp S \end{gathered}$ |
| －（әu！！uo pue ұи！̣d）səбеш！ би！ңәулеш ұsбиоше әэиеןеq К！！sıəл！̣ pue ıәриә6 әınsuヨ <br> ＇sə6еш！Би！！әулеш от рәдеןәл әэиер！̣n6 pue sәssəэoıd <br>  рие К！！sıəл！ | － bu！o6uo pue Кеміәрй Креәл৷ | $10 \exists 0$ ؛ W0 | ләэщ๐ <br>  pue bu！̣әyдеw <br> ＇fuetsiss $\forall$ suolssimp $\forall$ <br> 8 бu！̣әуиеш <br> ＇yפd pue <br> 19d fo s．доңэәдй | －sə！pmıs <br> yOd pue $\perp$ Нd IOf K｜ dde of sdnoı6 рәұиəsəлdəләрии <br>  słuəpnıs pue＇słuәpnıs ヨWVG әлош әБеュnоэиә p｜nous uo！̣ełuəsəıdə」 pəэueןeq əıо山 $\forall$ | ＇00पग्S әपł <br> u！əлеપ II！М słuәpnłs әЈuə！ıədxə әપł <br>  ІІ！чм ‘Кләбеш！ әл！ฺешлоиодәәу〕0 әsn әцł бu！p！̣оле ＇pəэиејеq（К！！sıəл！̣р рие）ләриәб и！ешәл sәбеш！би！！әулеш pue snıəədsoıd ıno ұечł రu！unsuə ənu！̣uoכ O＿ | un！̣әә <br> （！！！et） <br> ZกIS |

®

|  <br>  sцłłuou 9 Кıəлә әуеłdn мә！ләу | лоң！иош иәч7 pue ‘әепииоэ „o spuə ！！pne lZOZ Kıenuen | WO＇SOH | （sұиәшәбиелие <br> әуеш <br> оұ）дəquәш みеґs <br>  | ‘әәумәя｜ə ло ןоочग्S <br>  дәәлеэ би！рлебәл <br>  <br>  | шиә рәх！！e uo <br>  <br>  sцłиош 9 Би！！әәш ＂sue．｜d әınınt，पs！！qets |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Hets पगлeәsoy pue ग！məpeov |  |
|  |  |  | s．ıọn $\perp$ feuos．a． <br> งıәэแ） <br> イ！！！！qeイo｜dwヨ шод геиәдеш ә૫ł әsn ot <br> sıön」 leuosaəad s．oleuppooo ə npow／əmuen6ord <br> （ециәјеш әұеәл） dəłs pxəu ן！！！uәəod se वपд әңецбәџи！ 여 s．əગఘఘ イㄴ！！！qeイo｜duヨ | －（әршшә <br> pue әјеш）sұuәрпłs เฺ！̣！ <br>  <br>  <br>  아 $\perp$ פd mon uo！ssenbond <br>  <br>  | səıpnłs <br> yOd uo şuәpnłs <br> 19d lof suolissos ио！！ешлочи！！о иढ！！sәрәд әчъ рие sәшшелболd 19d IIE U！！！！！ рәңецбәңи！ио！ңешхоыи！ K！！！！qeरolduә pue <br>  |  |


| －Ки！u！ещ әчł иәуецәрй Биимеч деңь ॥е дпоч！！м реәче <br>  <br>  иәшом до \％ss－st jo әбиел <br>  <br>  | 6иообио ләџеәдәц －LZOZ אıenuer иo 反u！̣ойuou и！бәә | Wa＇SOH | －6uluex <br> se！g snolosuooun әłер－0¢－dn әлец Кәчъ！！səəиед 와 sıəquəə неұs ұu！odde Kıuo ot wa pue SOH | ＇би！мә！ィләұи！ pue bul！s！｜fous бu！unp sıəqшәш ｜əued Łо ио！̣әәృә」 <br> 反и！u！eй se！g sno！osuojun | sıеә人 £ Кıәлә <br>  se！g sno！osuosun <br>  әq ol sıəquәш <br>  Іеұиәшџедәр IIV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| s．әәлеэ s，uәшом бu！ |  |  |  |  |  |  |
| ЭS ұе рәрәәи <br> ！！pəssnos！p pue pəredəıd әq of（snomKuoue）भоdә』 К $\mu$ еәә人 <br> әц！еиио！̣sənb <br>  | sı！seq К $\mu$ еәス e uo pes久ןeue рие рәмә！ләл әq 아 라리 <br> s！seq spәәu e uo əә키dmoo әu！euuol！senb әЧł әлец of ：LZOZ yoxew | Wa＇SOH | IGヨa＇W0 ‘ $\forall$ O |  <br>  ләрәд е әq Кеш цэ！чм ‘（әрелб／дәриәб Кq ب！！｜ds） ґәлеә әЧł шоцィ Кџэәцр <br>  <br>  әМ＇pəssəıppe әq łouиeว sənss！ләриә6 ן！！！uәłod ə＇！＇рәұиәшпоор <br>  <br>  | рәрәәи <br> ！dnod Кбәұедя <br> प！！M әs！es <br> pue suosear әपł pue әреュб кq дәриә6 оł ןeuo！̣ıodoıd s！ләлоии！ дәцғәчм әи！шшәəәр <br>  ＇э！шәреэе ‘ऽd） <br>  Helt dotucum OI | un！̣pәw <br> （！！！qt） <br> عココVIS |
| （Кәлиns SヨロI әЧł Чбпоィч7 рәло！̣иош）suo！̣do дәәлеэ <br> би！̣ребәə рәшиоыи！ <br>  <br> － Би！̣әәш <br> дэедиот до риә，ие реч бииеци <br>  <br> ＇sцłuou 9 Кıəлә әуеłdn мə！ләу | ＇s！seq spəәu e uo әуетdn до！̣иош иәч7 <br>  јо spuə ！！pne ：IZOZ Kıenuer | Wa＇SOH | әәมฺшшоэ Іฮヨ <br> （sұиәшәбиедие әуеш <br> оұ）дәqшәш детя <br>  | şy૭ヨ poddns of lsəq моч puetsıəpun <br>  <br> tho рәшues sкемןе дои әде sбийәәш дэедиоэ до риә，әдер од | भoddns ıәәлеэ әрпןји！ osje oł Ies！eadde Kıчłuош <br>  <br>  ч！̣м ұпо рәицет sкемые әле sби！！әәш ؛эедииог јо риә，ұечł әлnsuヨ | un！̣pəw <br> （！！qゅ） <br> ZコJVIS |
| （Кәлиns SヨコI <br>  ләәлеэ Би！рлебәл рәшлоии <br>  | s！seq spəәu e uo əәyełdn |  | әәишшшоэ เロョ yoo | ¡uәшdoəəләр <br>  pue＇sџəセдииог рәриә uədo ol əлош 아 syつヨ <br>  | uolssnos！p <br>  әлец pue へכ әбед $乙$ е <br>  дәчю әиоәшоs ч！！̣М Бийәәш е ：поедиог |  |


| －マZOZ <br>  <br>  <br> †ZOZ 」əqயәлоN <br>  | ＇s！seq spәәu e uo pue＇әрко <br>  ¡хәи әЧł шол＝ | Wa＇SOH | чэеярәәд <br> pue suo！ әұе｜이 рие <br>  pe qo！əपł ssnos！p of s．oplooula <br>  פצ પitM pe qo！ әЧł әецப Of $\forall$ O |  әлош ןәәд Кәчł ґәqшәш <br>  of squev！！dde əм！pəədsord Bu！̣oddns pue＇yełs <br>  pue sәวиә！！әдхә әч7 <br>  <br>  <br>  Ки！̣эедие ло рооч！｜әу！！әч әรеәлии！ו！м ио！̣эе s！чц | II！М әM＇sұиәшриәшe <br> pue suo！！se66ns <br>  әq II！М Sıəquәш әчł pue pəझluqns әле Кәцł әәдәа （eәхе ן рә！qns）dnoג чэщеәsәу диеләәә」 ә૫ł ґо sıəquәш әчъ Биоше рәлеця <br>  qo！ग！шәреэヲ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| （әzәәц <br> Кии！ич әчł ґо ұпо әлош әм әәио <br>  әdоч әм）әЈио и！s of K！ әЧఛ реч әлец sıs！！｜e！ <br>  e uo st！s łs！｜e！ ；əued 6u！̣！unoәa <br>  | （əəued <br>  Кぇәлә дə！） s！seq spәәu e ио дәџеәлиц <br> －（әрко <br> ұиәшщ！ијәл <br> Кдəлә <br> ч！！М рәңерdn） Креәд әq of Sts！｜ן әл！̣วədsoud <br> ：LZOZ чэ．еN | Wa＇SOH |  |  （имор－doł）ןеэ！чэлелә！ч ssə ㄹ 아 peə 아 pəŋэədxə s！s！ $4 \perp$＇s｜əued мә！л৯әృи！Бu！sodmoo ı0」 ssəכoıd әл！snjou！ pue ұuәıedsueı әıои <br>  ‘spəued yons uo 6u！n！！ sұuәшәı！！nbəュ Kıessəэəu ә૫ł łәәш ло／рие әр૧џ！еле әле sıәqшәш dnoaб К！ әјешәృ иәчм К｜І！ ＇spaued pəreu！шop －әןеш 反u！sodmoo sр！оле ккןеләиәб ןО૦૫ગ્ડ әЧł Әા！ЧМ | spaued <br> 6и！！！！игәд u！әұеd！̣！̣ед <br> 아 K！！unuoddo әपł <br> әлец \＃еңь әош дечд <br>  <br> ฉə！！qns uәsoчว ә૫ъ pue＇（еәле џәә！gns） łsod pəs！̣әлре әपł 0 <br>  sıəquәш ןəued мелр IIIM әM（sts！！！e！oəds <br>  јо səшәЧц чЈләәэәу әЧł નəd pədno九б ‘əəued <br>  <br> уН әчł дәәш очм ‘syoヨ Ku！pnjou！‘มеңs <br>  －sisod jeluossəjord pue |  |
|  |  |  |  |  | sisod jeluossejord pue чэィеәรә» ‘эшәреэе доң әрелб рие ләриәб <br>  мәи ло！̣иош І！！М әМ <br>  е чбподчт рәоги！иош әq II！M әyetdn |  |


| 1s．i！）psodund not ly sseooud <br>  <br> Iロヨロ әчъ <br> ц！̣м Би！̣əәәш ио！̣эnpu！ue әлец <br>  <br> ！！рәәи КәЧъ ！！Hoddns puy 아 әдәчм моия ఘ民ㄴㄴ \％06＜ | әчㄱлец 아 sıəquәш \＃е노 ॥е ：sрлемио LZOZ łรnБnv <br> －Креәл әq оұ צэed uo！̣ənpu！ pəsnoof－laヨ ：ıZOZ Кпn | 1090 | uo！̣onpu！ pəsnวof－laヨ әЧł Əрnןアu！Oㄱ $\forall$ O <br> әп！euuousenb dоןәләр pue ио！̣ешиоыи！әч7 от uo！！！ppe pesnoot －Iロヨ әપІ әృеәл <br>  | 810ZSSก）әряе！！еле s！$\mu$ оddns ұечм ч！！м К Кеәә <br>  Hels Məu IO！Kluuntoddo <br> Кәу e sị ssəooud uo！̣эnpu！əપł łnq ‘Iロヨ pue K！！！enbə дәриә6 оұ ио！！еןə u！uo！！̣npu！punoıe sənss！ןeכ！！！ <br>  |  <br>  K！！！qes！p ‘би！чиом <br>  pue ұиәшдедәа łe $10 \exists$ to ио！̣еие｜dхә ：ио！̣ешиоыи！ рәнерә－Іаヨ <br>  <br>  | $\begin{array}{r} \text { un!̣pəw } \\ \text { (!!!eg) } \\ \mathbf{G} \\ \text { yヨココロ } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| sdno．f6 K Kıuoulu <br>  <br>  | －әүィ бии！̣！ијәд人дəлә <br> 6uunnp stəəן рə્ł！！！ə૫ł 아 spe qo！ $1 \mathrm{sog}_{\mathrm{d}}$ <br>  ：sułuou ع 久ıлョ <br> рә키dmoo IS！！К Кeu！u！｜əıd ：IZOZ Kew <br> ไร！！ə૫7 би！د．．nospмод u！̣әәq 여 ：LZOZ पכле | wa ‘igヨo | słəp！no ןensn ә나 아 иo！！！ppe u！＇so！！！unumos әรәЧł प！！М sนәлре qo！әeys of $\forall \mathrm{O}$ <br>  uo sə！！！unшшos fo ts！e e（sıəquəu Hełs ॥e wout әэхпоярмол <br>  | －К｜ŋэәцр <br> słueo！！dde əsə૫ł 6u！̣əБıеł Kq słueo！！dde dnoı6 K！！uou！u pue stueo！！dde <br>  <br>  <br> ＇sәғер！риет <br> әןеш سо» suo！！eo！｜dde <br>  os әлou łnq＇$\ddagger$ uәułu！odde 아 мә！лләџu！pue <br>  sәłeд uо！sıəлиos ıno प！！M سəןqoıd <br>  ұецł smous sisイןeue әчд | sdno．б א K！uou！u pue <br> ヨWVg ‘əршәд шоц suo！！eग！！dde әшоэəәм әм ұецң әбе <br>  słueo！！｜dde ə＾！！ 아 sұuәшәड！̣дәлре чэпs әъэ！！иишшоэ K｜nhesod．ınd <br> 아（ұномұә иәшом <br>  <br>  Hoddns e！шәрео $\forall$ и！иәшом＂ 6 ＇ә） รә！！！иишшоว рәұиә！ио әешәџ pue киииои！и до sә！！！unumos әи！！נо／әu！！uo әлош иәлә Би！̣әБцеұ pue 6u！ әnu！̣uoo ॥！！ əM |  |
|  |  |  | suoplye66ns әsкןеue pue 라씨이 아 IOヨO pue WO ＇SOH |  | Mə！ィəəృ！ ло uо！̣еэ！！ 1 dde 아 ıо！̣d әןол әчł łnoqe yse of पכeoudde of <br>  ю๐ ләqயәш әןешәృ pue әјеш е цъоq әрпји！ |  |


| әч7 pue ssəoord uoḷomord әчł puetsıəрии（so！шәреэе pue səo！＾ләs ןeuo！ssəjodd） <br> Hets əjeməŋ pue əleu fo \％sL＜ | әЧł әлеч 여） says mə！ィәл деә人－р！ш IZOZ KeW | WO＇sOH | әк！̣еұиәรəлдд yH＇WO＇soh ‘sıәмә！ләл Says | ‘ssəoord uo！pomord әपł риеңsıәрй sэ！шәреэе әјеш \％о乙 рие sэ！шәрете <br>  |  дечұ деәр sธ ！！ұечł оs səu！｜әр！nб ،sıәмә！＾ə <br>  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| squeэ！！dde <br>  <br>  <br> ・てZOZ 」əqயəлоN Кq \％0乙 Кq әłед ssəכગns ય！ə૫ł pue uo！！omord dof suo！ <br>  | －Kpead ssəoodd әчъ рие еиәәй әцд әлец <br> Ot ：ZZOZ KeW <br> ＇səиәлиод pəued uolpowodd әч әш！़！ чэгә ：Би！обио <br> suo！！eo！！dde uoloomod Бu！！！！əд ио әэиер！пб рә！⿺ㄹр ：К｜ә્є！рәшші |  | suoụev！！｜de әunņ 10！łuej！！dde әЧł 아 นәл！ s ！ уэеqрәәц моч pue prued uollomodd s，looy <br>  <br>  ә૫ł પS！｜｜qetsə Ol WO＇SOH | łұueэ！！｜dde әчł of pəp！лодd s！уэеqрәәц әфеио！̣эе јецł pue uo！！oword dof Ku！イ｜dde иәчм рәледәл ләџәq <br>  | әteudo．ddde se punod uoḷowodd ə．nın！ <br>  uol！ev！｜dde әul poddns оł уэеqрәәц әр！лодд II！м ןəиед ןеұиәшयедәр әчъ рие әрелб чэеә ұе uo！̣omoıd ıo！әэиер！nб рә！！еұәр doןəләр оц | $\text { цб! } \mathrm{H}$ <br> （！！！eg） 9 とヨヨษヤว |
|  ınq snou！！que ue дәp！suoo <br>  | －（ısod u！ıeə久 1 ә키룽 Hе1s мәи иәчм）s！seq spәәu e uo әน！еиuo！ রoldəa <br> －Креәд ә！！euuo！！seno ：LZOZ deqoㄲㅇ <br> ＇ssəooud uо！̣эпри！мәи |  |  | －səว！̣วexd ә｜qеu！elelsns әлош <br>  와 ə｜doəd + OIg97 pue <br>  pue（Кипејип рәңеәд иәчм みoddns pu！о оұ әәумм моия Кәчъ дечъ әәцбез！ \％9Z дечң рәмочя | （дәриә6 <br>  <br>  КиеәК е чбполчт әsod．und tot lit s！ ssəэoıd uo！̣эnpu！ә૫ł ләчғәчм ұรәғ І！М әМ <br>  е би！̣nןэи！‘әшәчэs <br>  ә૫ъ оұ ‘suo！un <br>  ヨWVa ‘＋O sdno．бб рие sұдомәи K！！s．iə！！un pue |  |


| ＇е！ әчł pue ssəวoıd uo！̣omoıd әчł puelssəәрй（so！uәреэе pue səכ！＾ләs ןeuo！ssəəoдd） <br>  <br> ＇sıeә久 <br>  pue uoloomond dof suoneouldde ј๐ дəqunи ә૫ъ әsеәлэи | －K｜｜enuue ләџеәләць －LZOZ әun！ uo pləy əq ot dousyı0 lis！」 | ${ }^{\text {SOH}}$ |  | －Kəunno！uoḷomord pue uo！ssanбoud ц！әчł u！s．әриә6 чłOq Hoddns II！M S！ $4 \perp$ <br> ＇рәлә！чэе <br> әq ueo uo！pomond моч u！injdəəч łou s！ Says әЧł łецł ұйчł pue ‘ssəэoıd uo！̣omoıd әЧł риеңsıəрй sэ！шәреэе әреш \％0Z pue sэ！шәреэе <br>  | ‘әшәуэs <br>  SOח」®иәшом＇б•ə <br>  дoddns pue 6u！u！eд рәңеןәд uо！̣ошол 아 yooqpuen Hels əપł u！Бu！̣soduб！s <br>  ио！̣ошодд әчł рие ио！ssәュБолd ләәлеэ u！e｜dxə ol sdoчsчıом ןenuue dn $\ddagger$ 〇S |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SGYS 6uunn uo！̣omoıd pəssnos！p әлеч Hels to \％001 <br> †てOZ <br>  | ＇Мəા＾əય says ıeә人 јо риә әчъ pue леә人－р！ш әч7 <br>  әอ！мұ рәəә66！ии ләџеләчц <br> （Креәл səu！｜әр！nб |  |  | ＇рәлә！чэе әq ueo uolomosd моч u！｜nıdəəy łou s！ Says ә૫ł łe૫ł צu！чł pue | чэеqрәә！ <br> дәмә！ләл и！рәрıоэәл <br> әq II！M uo！ssnos！p ә૫Ұ ґо Кıешшиs e pue ‘әәмə！ィәд әЧҚ Ч！！М uo！̣omord pəssnos！p әлеч Кәцł ґец <br>  SUYS әપł ә！！！nbәд <br>  е әృеıодıоэи！І！М әМ <br>  Кןəи！эe әq pinous uо！̣ошолд ұечұ рие dЭヲ Ә૫ł MO॥IOł p｜nous | 4б！${ }^{\text {d }}$ |


| әш！！－－ІІІ ұлом очм әлочł se sə！！！unłoddo ұuәudoןəләр дәәле әшеs әЧł рәәдо әл <br>  Łеપł әлә！｜әq очм झеңડ \％0L＜ | sə！！！！！！！！ pue səod <br>  әчъ Бuи̣nр леәК Кдәлә мә！ләд ‘גәџеәдәц। 시라！！рәшш｜ |  | WO＇SOH | s．noч pıepuełs би！уном әSOYł प！！M se！punuoddo ъиәшdоןəләр дәәлеэ әшеs әчҰ рәдәみо әде Кәчұ ןәә！К｜q！хәן Би！улом <br>  <br>  | ләри！шәл рәңәбдең е әq <br>  <br>  <br>  <br>  op sұэедұиоэ әq！хәи pue әш！！дед ұечд s．əə6euew әu！pue Hets of әleગ！unumos |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ＇Iロヨ uo pesnooł ‘suoḷomond uo podəд ןenuu甘 <br> səmoэəno pue suoupeo！！dde <br>  |  | К॥｜lenuue 〇S oł <br>  | －Kilenuue s！şjeue ue und Ot lOGO р．оэәд әЧł 6иии！éииеш лоы ə｜q！suodsə $\forall O$ | uolipomod оұ uoḷe｜ər u！sənss！ K！！！｜enbəu！ләриәб Кие <br>  | jouys <br>  әрелб рие ләриәб イq $\downarrow$ ！！ds səmoэŋno pue suo！！eo！！dde <br>  <br>  | $46!\mathrm{H}$ （！！！eg） 01 $y \exists \exists y \forall 0$ |
| неея до！uәs <br>  <br>  <br> ＇иәәиг иоп̣ошод әчІ pue ssəәoıd uo！̣omoıd әЧъ риеңs．əәри（sэ！шәреэе pue səכ！＾ләs ןeuo！ssəృoıd） <br>  <br>  pue uol！omodd doł suo！eo！！dde <br>  | 6и！обиo ләџеәәәц <br> ＇sәәұиәш 오 s．．ołuәu биччэеш u！̣əəq：ІटOZ лəquəłdəS <br>  јo uo！sseıdxə әэunouue ：lZOZ Kпn <br> －Креәд әq 아 әயәчગ <br>  uo！pomodd mәи ：IZOZ әuñ | IOヨ®＇צ00 | sэәәұиәш 여 s．oㄱuәш чગұеш 아 yoa pue Iaヨa <br>  <br>  £0 suo！ssəddxə ๒ว્॥૦๐ <br>  | ＇дәәлеэ л！әцұ <br> 6uidoןəләр u！\＃еłs лo！uәs Кq рәб́елпоэиә әле Кәч7 <br>  Łечł рәмочs 6LOZSヨコI sıәриәб ssoљəe бu！̣ииә｜ецч К｜｜епиə s！ fodd of 7 IS moij uolpoword е би！ңәб криәдиว <br>  <br>  （ләбuо s．еәК $乙$ әбеләле uo）uo！̣omoıd лəБиоן әуе！деңs әешә」 | uolpowodd dot <br>  бии̣оұиәш әџе．одıоэи！ <br>  <br>  |  |


|  <br>  d！̣sıәреә u！uo！̣ed！！！иех | иоџедәи кдәлә ио дәџеәәәч －К｜әㅏ！！рәшш｜ | WO＇SOH |  <br> SIYS ‘sıəదъuew әu！ 7 ‘WO ‘SOH | иәуецәрии Кпиәэәл әлец Кәчъ әsпегәq ріемло <br>  |  <br>  IOf pəy！？üp！Hets | $(!99)$ $t l$ $y \exists \exists y \forall 0$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br>  әң7 Бu！！ounum ‘suo！ss！uqns <br>  <br>  э！шәреэе әчъ „о ио！！！！sodшог <br>  ョヨУ и！әэиеןеq ләриәэ | 6u！̣6иo pue к｜әృе！рәшші | лоұеи！рио -०כ 土ヨヨ |  | seseo ફ．edu！ ә૫ł Бu！pıeбәぇ uo！ss！uqqs <br>  <br>  <br>  рәмочs イəл．ns 6LOZSヨコا әңъ шощ еұер әл！！ее！！！епо | †כedu！̣ pue Kı！！enb uolpeग！！gnd Hełs әsеәəəu！Ot Hoddns ןenp！！！pu！ бu！p！ıo．d әnu！̣uoo $0 \perp$ ㅋㅋㅋ pue <br>  suo！ss！uqns \＃ełs ॥e <br>  | un！̣pәw <br> （！！！eg） <br> $\varepsilon$ <br> צヨヨyヤつ |
|  se sə！！̣unuoddo ұuәudoןəләр ләәдеэ әшеs әй рәдәџо әле sıәулом әq！хәઇ। pue әш！！－цед Łецł әлә！｜әд очм деңь \％0L＜ | －6и！о反ио иәч」 －LZoz אıenuer イq イреәı әq ○○ | WO <br> ‘sıəsıuebıo дeu ！шәऽ／doчs\％10M ‘sиеч әәиוишоэ ‘s．oppojula soy | әqе！иеле səŋnu！̣ sбu！̣әәu Helf әyem 아 $\forall \mathrm{O}$ sıəsiuebıo дe u！ งиечэ әәи！шшол <br>  | łno 6ulss！um <br> әq łou ॥！М se！！！！！q！suodsəય <br>  <br>  6u！yem кq＇seท！！unuoddo ұиәшयоןәләр рие sұиәлә диедоди！이 ssəээе әлолдш！！！！ио！̣эе s！чュ <br> s．noч pıepuets бичулом әsoчł Ч！̣M se！！！unuoddo łиәшдоןәләр дәәлел әшеs әчң рәдәџо әд <br>  <br>  <br>  | （d！ysiəguәच uo pəseq әqц！！！ле sб́upıоэәı＇sәұnu！u） sбu！̣əәш ц！əपł <br>  <br>  әи！！ио әае！！еле әреш рие рәрıоэәд би！әа әпи！̣uoo s．eu！uәes pue sdoчsчлом ！（рәңэерәд әq ІІм ио！！ешиоыи！ Іе！！иәр！чиоо）syәәм $\varepsilon$ иبч！！мМ ә્વ尺！！еле әреш ІІ！М sәұпи！！u би！̣әәш әәд！ишшоэ pue sbuntoəu みets ！（әq！ әәчм 00：яレ－00：01） <br>  <br>  sби！！əәш әәи！ pue Hets＇sdoysyıом ‘s．eu！uәs ॥е дечł <br>  |  |
|  |  |  |  |  |  |  |



| uoplomodd <br> 6uunn ıo／pue ןes！exdde／says бu！ипр рәрıемәл／рәпןел S！sा！！ys fo əбue， <br>  щеңь әןешәґ \％0t＞아 әэnpәу | －6uobuo pue К｜әృє！рәшші |  | sәдер！риет әsodoıd ol ЭS рлеме ио！！иибоэә． рие рлема． 10t sәәu！uou 101（леәК е sәш！ әәдчџ）К Кнеппбә」 Hels yse of WC | IIn！әчұ рлемәд оұ Кем <br>  <br>  рәр！эәр Łои s！uo！̣omoגd <br> （ （ $\% 0$ ）uolnomoud Su！unp 10／pue jes！endde／says бии！ир рәрлемәлрәпןел <br>  деч әәибеs！р Кן ло әәњбем！р неңя әешә」 | ＇sрлеме лод sıәqшәш <br>  아 pə6eınoouə <br>  ॥е дод ұиәшәлә！чэе puе әэиәןәэхә әұошолd 아 әшәчэs ио！！！uरогәу в рлемәу <br>  | $\begin{array}{r} 46!H \\ (!!99) \\ 81 \\ \text { ygコy } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| － Кəлuns SヨコI <br>  se ‘ұиәшdоןәләр дәәлеэ <br>  res！eudde ןenuue／says <br>  | －мә！ләд Says леәК „о риә әч pue леә人－р！ <br>  дәџеәләц। <br> says ıеәर －р！ш әчł toł u о！̣еұиәшәədय！ tsily：ZZOZ Kew <br> әवе！！еле әวиер！n6 <br> ：IzOz Kew | （9S Of Hoda」 <br>  여）IOヨO |  |  says бu！yem Kq s！ч ssajppe dןə૫ II！М ио！̣эе <br> s！पд＇рәләр！suoo ұои әле suo！̣en！dse ןeuos．ad <br>  pəss！u ло＇әs！Јләхә би！уэ！xoq e se әшоs Kq uәәs s！says ə૫ц ఛиәudo｜əләр <br>  әле səssəэoud ןes！eudde јеnuue／says әчł ұечł <br>  <br>  әЧł и！рәңеd！！̣ие очм <br>  |  лләмә！ィә SOyS әЧ <br> 6uunn suo！̣еsıәлиоэ чıdәр u！әлош рІон ‘suo！！！que әsoчł әлә！чэ尺 о $\ddagger$ łәә моч ио әэиер！！n6 әр！＾одd pue suo！！！que uo！ssanoud <br>  <br>  <br>  әчъ Ки！м！ןепұхәұиог әs！seyduə <br>  uо！！eqoıd／גәмә！ләл says әчł әાepdn | $\begin{array}{r} 46!4 \\ \text { (!!99) } \\ 4 \\ \text { 4 } \end{array}$ |
|  |  |  |  |  |  ґәцรәృృәл ә૫ł иәчм |  |


| słuәpmıs yפd <br>  | ＇sułuou 9 <br> イıəлә ：（ә૩｜nd） <br> Kə＾．ns uo！כous！les <br> sцұиom <br> $\varepsilon$ кцəлә <br> ：дəŋəऽМәก <br> 7t youne pue Креәл Кәлıns әцд әлец ：ıZOZ Кィпก <br>  <br>  ：IzOZ KeW | ұиәшdoןəләд рие ләчэлеәгәу yĐd | sцłuou <br> 9 Кдәлә дәңә｜ડмәи ә૫ł 〕o ssəu｜n」əsn әЧъ ио жэеярәә <br>  Кәлиns е әңедл <br>  yOd pue дәчә．еәsәу <br> s．оџәә！！ soy pue＇yoo <br>  | ＇səәuәдәృиоо доң 6u！pun！ pue sen！unnuoddo Ku！punt <br>  <br>  <br>  10，sel！！！unyoddo pue sәэ！ләs ә｜q民！！еле әңъ ио ssəuәıеме ،\｛ұuәpmłs yod <br>  | ＇（uо！̣ешıојu！әлоqе әчł <br>  e doןəләр II！${ }^{\prime}$ әМ <br>  łno Kueכ of əoeds ‘səэиәдәјиоо оұ ןәлед <br>  <br> ＇$\quad$ •ə）y9d dot səગınosəı fo uo！s！＾oıd <br>  pue（uo！ssanбoud ләәле ‘бии！！̣м <br>  <br>  słuәpnłs Qud ot so！！！unuoddo 6u！puny pue ןеұиәudoןəләр би！̣әдо әпи！！uoう | un！pəw <br> （＾！ 99 ） <br> $0 Z$ <br> צヨコロシo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| －（七ZOZ <br>  Hels buome se！！？unhoddo ұиәшdоןəләр pue $\mu$ нoddns 6и！и！ед fo ssәиәлеме \％08＜ | － దйңұәәш Hels pxәu ol fulod se ppe LZOZ ！！ $1 \mathrm{~d} \forall$ <br>  เZOZ Kuenıqəョ <br> －seท！！unuoddo <br>  와 u！̣立q ：Izoz Kıenuer | （ssәuәлеме <br>  |  uo！̣sənb ұuеләəə <br>  <br> se！！uunuoddo ұиәudoןəләр <br>  <br>  <br>  ұе шәң！биириетs e se t！ppe of $\forall \mathrm{O}$ | әлеме <br> Kㅣenbə әде деңs łечł ә．ns әуеш оㄱ дәрıо u！pinoys әм ұnq＇sə！̣！̣unuoddo yons punoxe ssәиәлеме лоиииош Łои ор әм Кұиәдип | yooqpuen Hels <br>  <br> е） Ku！̣sodu6！！s əpn｜pu！ <br>  бuйnр рәңеиишәss！p <br>  <br>  <br>  кq дәцо ио криәлиь ио！ssəィКолd ләәле <br> 10」 sə！！！unuoddo ңиәudoןəләр pue foddns 6u！uę әчł ！о ssəuәлеме Hels əsearou！ рәрәәи ！！pue dol！uow | un！̣əә <br> （！！！q9） 61 บヨコン丬 |
|  |  |  |  | ＇әЈиеноди！ <br>  s，I००ч：्ड әчł мочs <br>  |  |  |


|  <br>  <br>  | － 6uob К｜әде！рәшш | $\begin{array}{r} \text { peәך } \\ \text { K!!!!!qeरo\|düヨ } \end{array}$ | дәэщо әэиәبฺәдхә ¡uәphłS <br>  <br> реәา К！！！！qeイo｜dwヨ | stıuәupedəa ןеnp！！！！pu！әчł łо spәәu <br>  <br>  <br>  of $\mu$ oddns sep！ioud <br>  <br>  <br>  |  <br> $\varepsilon$ Кıәлә）sбu！əәәш <br>  səィ！̣е！！！u！K！！！！qeरo｜duə әЧł 아 Spıe6ə」 <br>  s，Кұן ןочэ्ऽ ә૫ł иәәмұәд ио！̣еग！иишшот әЧł әлолдш৷ | $\begin{array}{r} \text { моך } \\ (\wedge!q 9) \\ \varepsilon z \\ \text { צョヨyษว } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br>  <br>  <br>  | sypuou 9 Кıəлә еұер мә！ィәу <br> －（Кұиә yפd Məu LZOZ ！！！d $\forall$ |  | дәэщо әэиәبฺәдхә ұuәphłs <br>  <br> реәา К！！！！qeイo｜dwヨ |  of әшшелболd Kq pue дәриәб Кq s！sұuәлә K！！！！！qeイo｜dmヨ јо әэиериәџе ио рәıйдео ио！！ешлоди！әчъ Кұиәииว |  <br> әчң әәш！ишоэ І曰ヨ <br>  －səлп！е！！！u！pue suopre <br>  uo（әшше土болd Kq pue дəриәб <br>  еұер ұиәџs！suoo र॥еи！рпи！йио әınsuә $\mathrm{O} \perp$ |  |
| ＇s．eu！uәs pue <br>  әлец Ot słuәpnłs पOd רa IIV | －6u！ṓo pue К｜әце！рәшш | 10¢0ә！ |  | sndmeo uo әsouł oł sə f！！unuoddo ұиәшdоןəләр рие би！̣иеә әવृе！̣Пbә әлец КәЧ士 әınsuә dəə૫ II！М иo！̣วe s！ $4 \perp$＇sndweo uo әכe｜d <br>  <br> 6и！и！ед әчł оұ ssәәэе Клеә әлец sКемје łou op pue＇sұuәpnłs ио！！еэо이 әошә» se рәПодиә әле очм sұuәрпıs <br>  | sy9d uolpeool әұошәґ 」оృ әи！！иио әрqе！！eле sdoчsчıм pue sıeu！uәs ‘suo！̣ses бu！u！ex шод ן ןиәдеш ॥е әуеш |  |
|  |  |  |  |  |  |  |


| －əınıdeэ ұиелб <br> jnґssəכэns әsеэмочs of（sцłuou <br>  <br> ＇рә！！！！иер！s｜әрош әрод әрешәд ןеиәәхә рие ןешәґи৷ <br> ・てOZ 」әqшәлоN <br>  <br>  <br>  |  | SOH | ұиелб 아 иопперә」 u！suoḷeग！！dde әлеәา КpnłS дəp！suoつ 아 ЭS <br> sdoчsчиом јиеләәд әңен！！！e，pue ＇səo！̣oend bu！ueys 10f SId əlewə pue s｜әрош әәоג <br>  아 」əదिеие qnh＇yoo |  se＇sjesodoıd łueג6 <br> 6uidoןəләр ио ұдом 아 <br>  <br> ＇sjesodoıd njıssəoons <br>  मoddns ueo sןəрош әроу Helts əlemat ot paredmoo Id se 6u！ 人ld $_{\text {Ide }}$ <br>  әЧІ әЈ！мұ sәәs цग！чм ‘әэиејеqш！јиәииэ әчт әб̂p！̣q оџ pəәи е S！әдәч」 | әлеәן Кpmıs dn Ku！yet pue גot Ku！ u！Шə૫ł Ђu！̣！oddns Kq ：әs！̣əәdxə pue səэиә！̣әdxə ‘sd！̣ әлецs ІІм очм sןәрош әрон әршәґ ןшшәхә pue ןешәұи！反u！̣omod pue 6u！イ！！¢ <br>  бu！ $\mid$｜dde u！so！uәреэe әюшшә น Hoddns | $\begin{array}{r} 46!\mathrm{H} \\ (\wedge q \mathrm{~g}) \\ 9 Z \\ \text { yヨコּ } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| рә6eınoэиә <br>  | sцłuou ع Кләлә рəцsəયృә ＇suio！ ләquәய みеңs мәи е әш！ 7 Кィəлә рәґерdn －bu！o6uo pue＇әэелд и！Креәд৷ $\forall$ | yoo | （1） | suo！̣eo！｜dde ґиелб әл！̣елоqе｜｜оэ ңо ио！̣еледәл⿱ <br>  <br>  | －əs！̣цәdxə pue słsəəəəu <br>  6u！！！youd әnu！̣uoう |  |
| Hets ıo！uәs <br>  <br>  <br>  <br>  <br>  |  | yoo | ง．оюэәи！ <br> dno．פ чว．．еәsəy ‘s．ołury чว．eәsәy ‘əббеие qnH＇yod | jesodord ұuèб е би！̣эәโәи иәчм чэеярәәן <br>  6u！punı ısom ‘дәләмон <br>  оя шәчъ би！！ spesodoıd ұиелб ，рә！！é， би！уломәл Кq рәлодdш！әq ueo s！чч pue \％88．91 Ie s！ <br>  | sə！̣poq 6u！̣puņ Кq рәəəə！əı иәәq әлец sjesodoıd әsoum \＃els ןenp！м！pu！아 уэеqрәә！ <br>  дәqயəш 乙 е чs！｜qełsヨ | $\begin{array}{r} 46!\mathrm{H} \\ (\wedge q \mathrm{~s}) \\ \forall 乙 \\ \searrow \exists \exists \exists \forall \partial \end{array}$ |
|  |  |  |  |  | yoda pue гәэщо Ки！！！ <br>  <br>  |  |


| －sıедर 乙 人дәлә <br>  <br> ＇уооqриен <br>  рие рәs！ләд Кןеә！роиəәd <br>  <br>  | pue sułuou <br> 乙 イıəлә әғерdn иәч」 <br> әәqе！！еле әреш s！IS！！ ә૫ł ңо ио！̣едә！！ 1S！！$e$－ izOZ Kıenuer | yoo | уооवриен Hels әuł 아 ŁS！！p pes yu！l of $\forall$ O <br> 6uipuny tot <br>  <br>  и！еди！еш＇әұеәл 여 лəбеuew qnH＇yoo | －Inıdəəч әq Кеш（К｜ио <br>  s॥еэ бu！pun！рәэиәృби！у <br>  әృешә！әңошодd 아 sКем К！！！иәр！оұ рәәи әм | －suo！̣eग！｜dde әјешә」 <br>  łечł buppun！ „о sұod әұеэ！иишшоэ pue K！！̣uәрі | $\begin{array}{r} 46!\mathrm{H} \\ \text { (^q9) } \\ 8 z \\ \text { yヨコy } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| †ZOZ <br> ıəquəлоN Кq әлеәן Кpmłs әуеұ <br>  <br> ¡૪ZOZ 」əquəлоN <br> Кq әлеә Кpnłs ıof К｜dde <br>  <br>  јо рлоэәл рәңерdn Kısnonu！̣uоэ |  6u！！！！！enb s，\＃ełs uo р．оэәд әңерdn <br>  чэセә ృо риə $\ddagger \forall$ <br> Неңs <br>  ：LZOZ әuñ <br> ఛ！pne <br> u！̣əә ：レZOZ Kıenıqə」 | SOH | әшәчэs ə૫ł 〕० әsod．nd ә૫ł प！！М әu！l u！әлеә｜ Kpnłs dn 反u！yet u！ <br>  Hets әq！！！！ ц！！м（мә！ләу чэлеәรәу Ienuū әчң Бии！nр） ssnos！p of ： <br> әэוләร <br>  Hels | ¡иәшәэе｜dəл <br> би！чэеәу／イұ！宀едеэ дәло süəวuo of ənp ‘ə｜โ！！！！｜ <br>  <br>  Ind sкемме ıои кеш иәшом ұецұ suшәзио әе әәәцд（sıəded э！шәреэе pue әantdeo ұueュ6） ұиәшdоןəләр дәәлеэ <br>  <br>  <br>  | ＇мә！ләу чгләләу Ienuū әиo－ot－əио әЧł 6u！unp suo！ssnos！p әл！̣юолд әлец pue <br>  <br>  | $\begin{array}{r} 46!\mathrm{H} \\ \text { (^qg) } \\ \angle z \\ \text { yヨコy } \\ \hline \end{array}$ |
|  | syłuou <br> † Кəәлә＇иәч －dочячиом （әрош－ә｜од） 1S！！：ZZOZ रıenıqə」 <br> леәК <br> 6u！uoodn ә૫ł <br>  fo uo！！eэ！！！uәр！ ：LZOZ ләqшәəəด Кя |  |  |  <br>  |  |  |

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|  | －yooqpueн Hels әपł 6u！̣epdn u！̣əәq ：LZOZ Kınヶ <br> ＇səu！！əрр！̣6 MO이아 아 Ksea рие әґер－оұ －dn 反uịdoןəләр u！̣əә <br> ：LZOZ әuns | IOヨa＇W0 | （syoed <br> 6u！̣ołnł ןeuos．əәd лод ןииәдеш әл！！ешшыи！ dоןəəә） <br>  ұuәpnis pue Hets $\perp 700$ pue әән！ | ఛueubəəd ә！！чм Би！イpmıs әnu！̣uoэ of <br>  до／pue sұuәpnłs ．of sts！xə әлеә ןеұиәлед／Кұ！ишәұеш 10f $\mu$ Hoddns <br>  <br>  Łецң әәиәр！лә s！әдәчц |  әм pue צэed 6u！̣oın」 <br>  и！ио！̣ешлоди！ұиеләәәд рәрпןзи！Креәдје әлец <br> әМ ‘әлеәן ןеұиәлед бu！əәр！suoכ əsouł pue sұuәpnıs ұueubəıd <br>  <br>  әұеэ！иишшоэ Оㄴ | $\begin{array}{r} 46!\mathrm{H} \\ (\mathrm{IOG}) \\ \mathrm{zx} \text { ) } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br>  <br> ！！emョ <br>  и！рәəеэ！ипшшоэ sәбиечэ <br> уооqриен <br>  <br>  <br> ＇рәృер！｜osuoo pue <br>  |  | $10 \exists 0$ | әрqе！！еле әреш би！̣роэәл pue <br>  әм！̣еұuәsəədəд yH Ч！！М ‘uo！̣ełuәsəad әs！ueb．ı of Iロヨコ <br> （səб匕edqәм yH Of 6u！lsodu6！！ әpnjou！ pue yooqpueн Hels әృepdn）$\forall \mathrm{O}$ <br> （səu！｜əр！nб јеәј dојәләр） әәท！யயшоэ Iロヨ | sイер дІу әңд <br>  <br>  <br>  <br>  Łецң Нәд әлец Киеш рие әлеәן Іеұиәлед иәуенәрй әлеч очм әऽочł <br>  јо ио！ฺеиел е s！әәцц |  әреш әq оł sәэиәдәəә <br>  yH of yooqpueн Hels silo әчъ и！ч！！М Би！̣soduб！！ рие әэиер！пб леәр әрп｜כu！O＿؛sıəquәu Hels dof əiqel！e＾e s！¥ечм рие әлеәา uo！̣dop $\forall$／Iełuәex． of uo！̣e｜ə u！sıəб6euew әи！ 7 여 Ки！и！ед дәчรәдәд дәңо О |  |
|  |  |  |  |  |  |  |
|  | －sıрри！шәд „ешә риәs ！！ешә риәs |  |  |  |  |  |


| －रроqәшоs чІ！м dn рәчэŋеш <br>  | －（7sənbəд uodn） 6u！̣бй pue К｜ә્ᅡ！！рәшші | WO | sdn чэァше әбиеле рие әэunouue of $\forall \mathrm{BO}$ | －Күүооші u！ <br>  ueo Kppnq $\forall$（әכe｜d u！ səssəэодd мәи ‘⿰丬еңs мәи） <br>  <br>  | ృ๐ spouəəd pə反uoןoдd шоц би！！unłม <br>  ‘әшәчગ्ड Кppng <br>  ןeuo！̣do ue 4 s！！｜qełs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| уооqриен <br>  <br>  <br> рәнер！｜osuos pue ә｜q｜ssəээе әлош s！иопңешиоди｜ | sцłuou z <br> Кıәлә рәцерdก <br> －yooqpueн Hels әपł <br>  ұиеләәд ә૫ъ әлеч 아 ‘LZOZ łsn6n $\forall$ <br> ә｜qе！！еле səшәцวs цวns ృ๐ ио！ฺэәə๐๐ tsu！e әлеч <br> Of＇LZOZ Kew | WO＇IGヨa | рәрәәu se yоoqpuen Hets әपा ә્ృерdn 아 $\forall \mathrm{O}$ ‘səшə૫วs цэns „о әэиәదィәшә әчł доңииои <br>  | ssəээe of Кseə sКемје ұои s！uо！̣ешидыи <br> ә｜qе！！eле әшоэәд Кеш sәшәчэs <br>  <br>  <br>  ｜е！ sem dy甘M әЈu！ ә｜q！b！｜ə uәəq seч әuo on | sıәдеэ pue şuәлеd <br>  Кppnq pue sұдмұәи Hoddns ıe！！u！ pue 6uppunt dy $\forall \mathrm{M}$ uo ио！！еш．оди！уооqриен Hełs әчł u！ısodubis pue＇әъер！！оsuos ol |  |
|  |  |  | （səб̄edqәм yH of Ku！̣sodu6！ әрпןги pue уооqриен Hels əlepdn）$\forall \mathrm{O}$ <br> （yロd／ノOd） s．ołtn」 leuos．aəd |  | ＇yоосриен нетs <br>  <br>  |  |


| yפd 反uowe uo！ly｜duoo \％GL＜ <br> \＃ełs buour uo！fərduoo \％06＜ <br> ってOZ JəquәへON <br> кq Бииләчэе＇әәел әsuodsәл рәлолдш！леәК－ио－леә人 <br>  ґәриәэ иo цоdә» ןenuue uも | －К｜｜enuue иәЧł ＇Kəлuns цэune｜ ：IZOZ Kıenuer <br> －enoıdde sэ！！łə доృ KIdde＇Kəィ．．ns әృерdn：0Z0Z ıəqшəวəД | $\begin{array}{r} \text { 9S Ot } \\ \text { Hodə ot IOヨa } \\ \hline \end{array}$ | 9S ә૫ł ． 10 ৷ मodәл e әлedəлd pue s！sイ｜eue әчł uni ‘рәрәәи se Кəлиns SヨコІ әЧł әృерdn 아 әәम！யшол <br>  | sənss！ <br> рәләриәб Кие ssəıрре pue मодәд ‘К！！ичәр！ 아 ə｜q！ $\operatorname{ssodu!~}$ əq I！！M ไ！‘ssәиәлеме до əлә pue suo！̣dәлıəd sұuәpn！s pue Hets бu！uotuoom пnоч！！ |  ио ssәuәдеме サеңs pue słulod uo！̣эe әપł ృо ssəuәл！̣әәృә әцł se ॥әм se＇swəןqoud рәләриәб pue sənss！ ‘suo！̣dəכıəd ıot！uou 와 S！seq ןenuue ue uo Кəлиns Sヨロા әЧł 6uluund ənu！̣uoo ol | $\begin{array}{r} 46!\mathrm{H} \\ (\mathrm{pg}) \\ 1 \exists \\ \text { yחค } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 2．nı｜no pue u | еs！ueб．o |
| ио！！ешлоји！әчł риц оұ әдәцм моия до ssəэoıd әЧł puets．aəpun pue ssəoうe әлеч Hets IIV | неея <br>  ＇уоояриен Hels ul əpnjou pue ‘əs！｜！u！ <br>  <br> －久реәд Hexp tsint әлеи Ot LZOZ əunत | W0 | уооqриен Hets әut әłepdn of $\forall$＇＇WO | ррәмо이 <br> әq oł ssəoo．d әчł pue <br>  рәэпрәд шощ ио！！！sue．д әчъ би！риебәл suәәиог иәәq әлец әәәц। | әЈиер！пб <br> yH 아 syu！！pue <br>  әsеว ssəu！snq ә૫ł 〕० ио！！exedəлd 6upnjou！ ‘әسய！！Inf ot sino рәэпрәд／рәsиәриог <br>  <br>  биирребәу уооqриен Hets әłepdn ol |  |
| （sıәриәб чıоq）биччлом <br>  <br>  <br>  <br> －ssəэoıd әчł риеłsıәрии pue ssәээе әлец みең IIV | неня <br>  ＇уооqриен Hets ul əpnjou pue ‘es！！euy ：してOZ łsn6n $\forall$ <br> －久реәл Hexp ts．！！әлеч Ot LZOZ әuñ | İヨa＇W0 | sұчәшәбиение бичуом <br>  ә૫ł ио әәиәр！ィә ч！！м ‘səu！｜əр！！nб doəəләр oł WO ‘әәฆ！шшоэ เロョ уооqриен нетя әपł ə્ృepdn 0 | 7uәts！suoou！ s！sұэедииoо чэns <br>  ә૫।＇（səə！！unцoddo ңuәudoןəләр әшеs әчł әлец дои ор（иәшом K｜ңsow）sұэедииоо чэns ио әऽочł łечł рәл！әЈләд <br>  <br>  <br>  неңь әшоя ұечұ рәмочя Кәлıns әчъ ‘биџуиом ә｜q！хәә｜ <br>  | sıə6buew <br>  әq I！м pue＂रo！Iod yH <br>  yooqpueн \＃еts әЧł u！ рәрпрои！әव І！м цग！чм ＇sұиәшәбиене бичуном әрq！хәу иo ио！̣ешиоди！ ¡uәıedsuen <br>  pue әдеәл ОД |  |

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|  <br>  |  | $10 \exists 0$ |  |  <br>  | pue sə！！！！！̣ŋe ‘sұuəлә Iロヨ łечł әınsuə O」 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br>  ＋O1997 әлеч 아 Hets \％OS＜ | sułuou 9 <br> Кдәлә мә！ләу <br> бииооииои u！̣бәq pue <br>  ：LZOZ чэле <br> －（pətsodu6！s биии！еди рәңеןәд uo！snjou！ ＋01997 ч！̣M）！s！！ә૫ł әңеәЈ ：してOZ イıеnıqə」 | $10 \exists 0$ |  <br>  <br> u！son！unuoddo <br> бu！̣иецд чэпs <br>  | s．әдеш чолs <br>  <br>  ұиеләәәл рие＇sә！！！！иәр！ <br>  <br>  <br>  łечł 기 әлец şuәриłs <br>  | －әqе！！еле <br> Би！и！едұ ІІヨ әЧł <br>  Ienxәs＇ssәиддеме <br>  <br>  <br>  \＃ets $\uparrow$ sodub！s |  |
|  риполе ssәиәлеме рәseәлои <br>  <br>  | uo！ssəs э！шәреэe әuо цэеә Бu！̣np K｜lenuue иәчъ＇Бu！̣оұп jeuos．əd łst Łe KuḷsoduE！ 15！！！：IZOZ ıəqயəлоN <br> syooqpueн ә૫ł ul म！әрпји ：してOZ łsn6n $\forall$ <br> Креәд ио！̣ешлоди әЧł әлец ：IZOZ KIn¢ | IOヨO＇WO | бийәәш <br>  <br> lst 6u！unp 6u！̣soduб！！s әчł op 아 S．oplyt leuos．ad <br> syooqpueн әчł <br>  <br> uo！snjuu <br> ＋O1997 <br> иo uо！̣ешији！ ә૫ા әృedəı <br> 아 әәฆ！ | sə！！！uәр！ <br>  әЧł U！̣ Бu！puełs，əəpun <br>  Łецł 기 әлец sұuәphłs pue неңs +1897 әшоs | syооqриен ґиәрnis pue Hets әut ulu uo！snjuu！ ＋OLAOT punore ио！̣ешиоыи！әрп｜гu！ pue＇sseoodd uo！̣onpu！ әчł до ユеd se stə！！ <br>  uо！̣еэоㅣ әЧł słuәpnłs pue деңь Би！шоги！ <br>  әnu！̣uoo O\＆ |  |
|  | －K｜｜enuue uәЧł ＇OS of Hodad ：LZOZ Kew |  |  |  | рәрәәи se suopəo әл！！әәноэ ұиәшә｜дш！ рие шәңъ ио |  |


| †ZOZ 」əquәлоN <br>  <br>  <br>  әле лпо！лечәа рие әбепбие <br>  ןоочэs әңłłечł әәдбеs！p \％я＞ | sцıuou乙 Кıәлә pue К｜әృе！рәшші | SOH | WO ‘sOH＇IOEX |  <br>  IOOчગS әपł łечł 6LOZ u！рәәлБе！ јо \％6乙 ә！！чм ‘ssəuиец чџ！м рәцеәи әле Кәчң ұечł рәәムБеs！p みеңь ！o \％9z ‘8LOZ U！‘6LOZ pue 9LOZ иәәмұәq рәлолdш！әлец лno！̣ечәд pue әбепбиеן <br>  Биoшe suo！̣dəэəəd ә！чМ | pue＇səınpəooud Kıeu！！d！̣s！̣p pue әэиелә！иб＇ұиәшsseıеч <br> ＇Ku！$K_{\\|!}$nq uo se！כ！！od บН әЧł ЧІІМ уооqриен <br>  <br>  ә｜qеłdәכэеun <br>  әфе！！eле s｜ооł әчł pue әэеן u！sə！！！ <br>  <br>  | $\begin{array}{r} 46!\mathrm{H} \\ \\ (!!\mathrm{pg}) \\ 9 \exists \\ \text { q. } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| （4）une SヨコI ISMy <br>  －sdnoぉб snooj pue SヨコI <br>  әчł Би！мо॥ㅢ suо！̣еग！ипшшол pue sə！！！и！̣ァe＇sұuәлә ч！！M dnoגб <br>  | －sdnoı6 snoot pue $\mathrm{S} \exists \supset$ I R！＾ ssəuәハ！うәみə ssə⿰sse pue s！seq 反u！̣o6uo ue uo K＿dde ：дәృеәләц」 <br> ＇yooqpueн Hels әut u！səu！｜әр！nб әрпјコu！：レZOZ ıəqшəłdəS <br> uo！̣emunuos IOf ЭS पБnoıч səu！｜әр！nб ә૫ł ssed ：LZOZ łsnБn $\forall$ səu！｜əp！！n6 әЧł £о |  |  | шәц <br> оł ұиеләәә әдәм ұечł <br>  <br>  | pəəqes！p <br>  ＇（stuəpnłs गo／pue нels） sə！！！uпшшот ұиеләןә <br> प！！M uo！̣ejnnsuos u！pədoןəләр әде ‘ә｜q！ssod әләчм ‘suo！̣eग！unwmos | un！̣əә <br> （！．pg） |


| －（ZZOZ SヨOI）səəમ！ ио рәциәsəлддл Кицее әле иәшом <br>  <br>  <br>  |  | $10 \exists \mathrm{C}$＇SOH | IOf YOL Mə！＾ə pue＇d！̣sıəə әәम！шшоэ д！и！uou <br>  |  әлош дәझ० ॥！М ио！̣Ј әЧ। рәәриәб әл <br>  <br>  әле әәчъ ‘би！̣одdш！иәәव <br>  | puəme ：s？！！！｜enbəu！ диәıs！s．əəd Kue К！！！uәр！ 아 K！！euo！pors．əұu！ ио pəseq səәџ！шшоэ ssoגכe pue и！ب！！ d！ys．əәqшәш 10！！uou OL |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| би！уеш ио！s！эәр до <br>  | －LZOZ Kıenuer кq pәəəəᅵduoう | WO＇SOH |  | －I0очग्S әчł и！ч！！ sdnoג6 ұиецодш！әЧł ！ әио punoле кэиәлеdsuед <br>  | уоосриен \＃етs ә૫ł u！dno． ә૫ł ło d！̣sıəquәш ә૫ł 4S！！qnd O। | $\begin{array}{r} 46!\mathrm{H} \\ (!!!\mathrm{pg}) \\ 8 \exists \\ \text { yחㄴำ } \end{array}$ |
| ＇sə＾ก！e！！！u！ pue sep！！！od iag Kı！ SS』 fo ssəuәдеме рәseәлии <br> ＇es．əл <br>  <br>  ssәиәлеме рәsеәлои | ถu！̣бйо | $10 \exists 0$ | әәнишшоэ І曰ョ $10 \exists 0$ | －6uluue｜d әminn <br>  pue ןо૦чО्ડ әЧł U！प！！ <br>  <br>  <br>  （Кq рәшлоли！Бu！əq pue би！шшоии！ио！̣енбәи！ кем－омұ е и！еұиешш of sn SMO\｜ㅡ ॥！ | ＇оочэs <br> әчł U！ч！！sәıерdn КO！Iod pue ‘suo！̣วe <br>  ৷и！ „о ио！！eu！uәss！̣ әчъ pue כוםヨ <br>  ano ənu！̣uoo $\mathrm{O} \perp$ | un！̣pə <br> （！！ pg ） |
|  <br>  Kq＇（Sヨפા Кq pəıııdeo） <br>  <br>  <br>  әле лпо！лечәq рие әбепБие｜ <br>  <br>  | ＇s！seq spәәu e uo pue К｜әృе！рәшш｜ | $10 \exists 0$ | уооqриен нетs әЧł u！ Bu！̣！sodub！s әрпן价 $\forall \mathrm{O}$ <br>  рие／！！ешә в！ кп！！qе！！еле әэunouиe 여 IOヨC | ＇рәәи Кеш Кәчъ みoddns әЧҰ ри！рие әәиәр！чио <br> и！рәэиә！！әдхә әлец Кеш Кәчł sұиәр！эи！Кие <br>  | ләииеш <br>  <br>  ssnos！̣ of sıəquәш <br>  иәdo ue әłеәл Оค <br>  | $\begin{array}{r} 46!\mathrm{H} \\ (!!\mathrm{pg}) \\ 9 \exists \\ \text { yחา } \end{array}$ |


|  <br>  иәл！ рие рәб́елоэиә <br>  <br>  <br>  <br>  иәл！！рие рәбелпоэиә <br>  <br>  | －／｜｜enuue ләнеәдәчц uoḷed！̣！ued мә！лә ：してOZ łsn6ึn $\forall$ －시라！ррәшш｜ | WO＇SOH | мə！ィə <br>  <br> sธu！̣əəə Hets buunp до／pue ！！ешә е！＾ әવ૧е！еле әшоэәд Кәчъ иәчм so！！！unuoddo <br>  아 WO ‘SOH <br>  |  łuəserdaı of sen！unnuoddo иәл！！рие рәбелnоэиә әде Кәчł łечł әәдБе <br>  ＇รәәйшшоэ ןешәұхә ло <br>  <br>  | әq II！M S！̣ł uo łu！ode pue ןоочэ्ड әч7 и！ч！̣м рәธ！！əəре әव ІІМ <br>  әЧІ ККешшұхә se $\\|$ Ім se＇ןоочэs әપł Бu！̣uәsəədəય <br> ＇Kı！！ısan！un <br>  <br>  u！әped！！！ued of Hets әб匕е．noэиә ॥！м әМ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br> е әлец suo！̣dәэхә Кие ：рәңеұол <br>  <br> sdnoaб／səәฆ！ <br> диет！！ии！！әдош <br>  <br>  <br> sse！nnp u！upe uo \％s иецł ssə 여 sıәриә6 иәәмңәq <br>  | －（ユodə <br> pue до！̣ииош） рәңеоо쓰 әд sə！！！！！！！suodsal pue səjo． иәчм $\kappa_{\\|}$｜епииие ләџеәәцц <br> ZZOZ дәqоңэ○ <br>  | WO＇SOH |  s！seq ә૫ł uo sə｜Oג ub！ sse 와 SOH sə！วuәłక！suoวu！ Kue OS Ot मodaı pue sajod fo uo！̣eto <br>  <br>  | łuәmdopəəәр jeuosıad әләџэе рие әэиә！əәхә <br>  <br>  <br>  u！ue，duolsseovns e ot реә pue sәןод э！шәреэе и！ире｜e！！uәпии！ <br>  <br>  <br>  <br>  лон рроодәло әәи！ <br>  | s．ıедК $\varepsilon$ <br>  u！upe әңеํㅆㅇㅗ | $\begin{array}{r} 46!\mathrm{H} \\ \text { (!!!pg) } \\ 019 \\ \text { yחıกכ } \end{array}$ |
|  | ＇〇S Ot みodaı pue sułuou 9 Кдәлә мә！ләу <br> ＇рәрәәи se уод Би！̣биечэ IOf Iesodoad |  | рәрәәu se <br>  아 भodəュ 아 IOヨa | sұuәpnłs 아 sןəpou əן이 to <br>  <br>  u！әped！！̣ued of sdnox Kוبו？ | （ио！̣еи！pıooэ әшшелбодд <br>  ләриә6 әшеs до sшеәұ әq！ssod әәцм р！оле оч ‘әрол Кұпдәр pue реә е әлец stsod If ！d！usiəquәu <br>  <br>  |  |


| †てOZ 」əqயəлоN <br>  <br>  <br>  әл！ிе｜әл ‘әэиеןеq ләриәб әлә！чэ૪ | мә！ләд деәК „о риә pue деә人－р！ш <br>  ләџеәәцц <br> （мә！ләд деә人 јо риә）LZOZ Кın¢ | Wa＇sOH |  | （ 170 ＇ yo <br>  кәу Бu！pn｜ગи！＇əәqஜ！！еле sәшоэәq әрод ұеч7 иәчм рие ！！＇pәдәр！suoэ <br> 人ןл！̣әе әq pue <br>  <br>  әq pInous əs！̣əəxə pue <br>  <br>  | Кәңł әлә！！ə рәґsәəәди！әq pınoм <br>  uo！̣onpu！pue Says <br>  <br>  <br>  d！чsıәреә／／u！шре <br>  प！！M К｜əл！！uełsqns әлош әБебиә О」 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| －（Sヨコロ セ！ィ pəュnseәш <br>  <br>  Биоше ssәиәдеме до ןəлә рооэ <br> צооqриен \＃етя <br>  | －suọ！duosəp әप Бu！sn әреш әq of suoḷeool｜e ：LZOZ Iəq윙 －ләquəədəs <br> yооqриен Hels әपł ul pəpnjou！əq 여 ：LZOZ łsnБ̆n | SOH |  |  <br>  <br>  <br>  оұ дәрıо и！รәлрәsшәч7 <br>  pue＇sәлроли！әрод чэеә дечм риполе ssәиәлеме рие коиәледsиеп әรеәлои！I！M S！ч $\perp$ | ＇sןes！̣eddde／sмә！ィә says buunn əsn pue <br>  әЧł U！Ol ¥lsoduह́！s ＇yооqриен \＃е1S ә૫ł u！әsəчł әрпрэи！ <br>  реоэжом би！рпрои！ səpoy ग！uәреэ丈 d！чsıәреә7／u！up Iㅏ 〕о suọ！̣！uэsəp doןəләд | $\begin{array}{r} 46!H \\ (\wedge \mathrm{pg}) \\ \varepsilon เ \exists \\ \text { \&חป } \end{array}$ |
|  е әлец suо！̣дәәхә Кие ：рәңедол <br>  <br> －ииууеш <br>  <br>  <br>  <br> ＇seḷnp u！upe uo \％G <br>  <br>  | （ $\mu$ odə <br> pue ıо！ㄴuow） рәңеэо쓰 әле sə！！！！！！！suodsə pue səpo иәчм КІепиии ләџеләчц <br>  －」əquәłdəS | WO＇SOH | ［IIYヨコyシo pue uo！̣oe s！！ఛł s！seq ә૫ł uo səן૦ ub！sse of SOH <br> sə！วuәłక！కuoวu！ रue פS of podar pue sәoд fo uo！leto， <br>  <br>  | ＇рәs！！ецұиәэәр pue pәıецs әq I！！M sə！！！！！q！suodsəд se sə！̣np u！̣upe әıош <br>  ә૫ł әseə osןe II！М Џ <br>  <br>  ә૫ł ！o әןод ә૫ł шод ssə„6oıd＇d！чsıołuәш pue Би！u！eдд би！ィ！әכәл u！Hels मoddns II！M s！uı | －sıеәК $\varepsilon$ Кләлә әенол оs｜е ॥！М чગ！чм ‘Kındəロ <br>  ұuеכ！uи！！s әоош IIV |  |
|  |  |  | siseq jenuue uo uoped！pyed |  | Mə！ләд SGYS әчł u！pəpn！əu！ |  |


| ・ヶてOZ <br>  әЧł pue＇sles！endde әэuешuонәd se yכns＇səssəooud дә૫ł० до＇мә！ләд Says әЧł цбподчł рәрдемәл әде иопедияиииире рие би！чэеәұ рие чом чэеәдпо <br>  <br>  <br>  | Мə！＾ə」 Says reәк Łо риә ә૫ł рие деәК－р！ш әЧł <br>  әэ！мұ рәдә6Б！и ләџеәләц」 <br> $\cdot($（Креәл səu！｜әр！nб ә૫ł әлец оұ） SOYS Мə！ィəл леәК－р！ш ：LZOZ Kew | wa ‘soh |  | Mə！ィәд SQYS <br> әЧł pue мә！ләд uo！！eqoıd ＇sjes！exdde bu！unp yом Ł0 әdКł s！чł доł рәрıемәд <br>  <br>  ‘уом u！̣шре јо дед se łnq К｜əృелеdəs pəıəp！suoo <br>  би！риешәр ә！чм＇（＇əә səmue„болd Ło uo！̣omoıd ןеиәхә）sә！！！！！！̣эе чэеәдипо ‘uo！̣omond <br>  | sıəquәu <br>  әбрәмоижэе оұ мә！ィәд ןes！exdde／Says әપł u！ <br>  uo！ssnos！p e әpnjuu！of <br>  SQप्यS әЧł әłepdn O＿ | $\begin{array}{r} 46!\mathrm{H} \\ (!!!\wedge \mathrm{pg}) \\ 9 \downarrow \\ \text { gyกา } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ＇$て Z O Z$ 」əqயəлоN <br>  ＇pə｜qes！p ‘ $\exists W \forall q$ ）sə！！̣unumos <br>  <br> $\%$ оя әлоqе до ұе <br>  әэиејед ләриә6 йедииеш |  | s．oppouna <br>  <br>  10 s．oํํㅣㅣ Kındəa |  <br>  <br>  sıołəә！！ | słuәpnłs yod <br> pue 1 Od dno dol sləpom <br>  <br>  ләриәб оұ ұиәшџ！шшот s،оочэ्ड әчъ Би！зеэмочs Ч！！M djə II！M S！ $4 \perp$ | －К！！！euo！̣כәs．əəృu！ <br> 6u！ңomoлd ә！！чм ‘syગヨ 10ı әכeds 6u！yeu pue＇sıołnqułuoo әјешәృ рие әןеш ！o sıəqunu ןenbə lof <br>  ұนәлә u！әэиеןеq ュәриәб доұ！ииош of әnu！̣uoo ॥！м ә $\boldsymbol{M}$ |  |
|  |  |  |  |  | suo！̣еэо॥е әגnınt доя рәләр！suos әq ol paınłdeo pue pə66оן ؛әуедәрй 아 S॥！！ソS әપł әлец |  |


[^0]:    ${ }^{1}$ HE student enrolments by subject of study, Academic years 2014/15 to 2018/19, https://www.hesa.ac.uk/data-and-analysis/students/whos-in-he, accessed on 01/09/2020.

[^1]:    ${ }^{2}$ CILIP/ARA (2015). A study of the UK information workforce: mapping the library, archives, records, information management and knowledge management and related professions. Executive summary. Available at: https://archive.cilip.org.uk/research/workforce-mapping

[^2]:    $\Rightarrow$ Audit, and if needed develop measures to improve, the progression pipeline between PGT and PGR. [Action STU4]

[^3]:    ${ }^{3}$ These have been appointed after the census date and therefore are not included in the data collected via IGES2019 or via HR.

[^4]:    ${ }^{4}$ The USS does not report data split by gender.

[^5]:    ${ }^{5} \mathrm{U}$ for Unspecified (gender is not mandatory in IGES2019).

[^6]:    ${ }^{6}$ https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2019-06-11/262366/

[^7]:    $\Rightarrow$ The refresher training for Line Managers, coupled with the guidance in the Staff Handbook, should ensure that appropriate support is provided for those returning to work [Action FLEX1].
    $\Rightarrow$ We will establish a "Returning to work" Buddy Scheme, available to all staff returning from prolonged periods of absence. [Action FLEX4]

[^8]:    $\Rightarrow$ We will publish the membership of the Executive Group in the Staff Handbook. [Action CULTURE8]

[^9]:    1. D. = Deputy role; 2. PC = Programme Coordinator; 3. Programmes jointly run with other Schools/Departments School (blank cells indicate that the role has been discontinued or does not exist). Grey denote posts held by male academics to offer a visual effect.
[^10]:    ${ }^{7}$ Squazzoni, F., Bravo, G., Grimaldo, F., Garcia-Costa, D., Farjam, M., Mehmani, B. (2020). No tickets for Women in the Covid-19 race? A study on manuscript submissions and reviews in 2347 Elsevier journals during the pandemic (October 16, 2020) Available at SSRN,
    https://ssrn.com/abstract=3712813.

