Annual Statement on Compliance with the Concordat to Support Research Integrity (2018–2019)

The University of Glasgow (UofG) is a broad-based, research-intensive institution with 5,000 research-active staff and students. The Vice Principal (Research) is responsible for ensuring that standards of good research practice are maintained, with support from a team within Research and Innovation Services.

This report summarises the activities undertaken to promote a culture of research integrity, seeking to position this work within a wider institutional plan to place research integrity at the heart of a positive research culture.

Building a Positive Research Culture

In 2019, the University's Senior Management Group set out a commitment to identify the most effective means of developing a positive research culture, acknowledging that research success is not only about the success of individuals, but also about the health of the research community. As part of this commitment, in late 2019, we will publish an annual statement on the progress of our research culture projects. This statement will bring together the different initiatives that are being undertaken in the University to advance our research culture. They include:

- Showcasing and celebrating examples of good practice, through the introduction of our Research Culture Awards. The awards celebrated outstanding activities that promote collegial behaviours among researchers and contribute to a positive research culture. 33 nominations were received, and prize winners were announced at the annual grant-award ceremony which was hosted by the Vice Principal (Research) in June 2019.

- Updating our academic promotion criteria to reward collegiality in professorial staff. The criteria reward not only the achievement of the individual but how that individual has supported the careers of others. These promotion criteria will also require staff to evidence the adoption of open research practices; the aim is to reward not only *what* research has been done, but *how* it was done. A good example of open research practices can be found at the end of this paper, in Appendix 1.

- Promoting inclusiveness, collaboration and integrity by incentivising open access and research, and ensuring that authors are both credited and held accountable for their contributions to a manuscript. We have embedded the CRediT taxonomy into our Code of Good Research Practice to encourage authors to put their contribution on the public record, and furthermore have enabled researchers to record their author contribution(s) in our institutional outputs repository. Making outputs open access is done simply by sending an email to the library: our prioritisation of this agenda explains why Glasgow is the institution with the highest proportion of open access outputs worldwide (79.5%), among institutions with >10,000 publications[1].

- Establishing a cross-university Research Culture and Careers group, to support communication and implementation of projects.

- Launching a research culture survey to track progress with this agenda.

Academic Leadership: Research Integrity Champions and Advisers

---

[1] CWTS Leiden Ranking, 2019

Glasgow's approach to promoting a culture of research integrity through the roles of Research Integrity Champions and Advisers has been recognised as a beacon of good practice across the sector, and is included as a case study for the UK Research Integrity Office (UKRIO) and the Royal Society (as part of their joint *Research Culture* project).

Good practice example of local provision

Dr Erin Jessee, a Lecturer in the School of Humanities and a newly appointed Research Integrity Adviser, developed a bespoke ethics and integrity workshop "Qualitative Research in Conflict-Affected Settings", which was delivered to research students in both the Scottish Graduate School for Social Sciences and the Scottish Graduate School for Arts & Humanities.

Dr Jessee also contributed to a new online course that will support researchers to prepare for fieldwork.

Throughout the year, our 29 Champions and Advisers record informal queries from staff and students on good practice or integrity. The logbooks are collated annually at University-level, making it possible to monitor the types of queries raised and identify training needs or areas in which policies, advice and guidance might be improved.

At our annual Champion and Adviser meetings in June 2019 it was agreed that a review of the roles would be undertaken by the end of the year, four years since these roles were introduced.

Training and Development 2018/19

Training for staff

Research integrity training is mandatory for new academic and research staff and this is signposted to them at the point of induction and in probation forms. Online training is available if staff are unable to attend face-to-face sessions. Research integrity is also covered as part of PhD Supervisor training.

To expand and enhance our integrity training provision, a new, centrally located staff position was appointed in January 2019: a Researcher Development and Integrity Specialist. They provide staff training sessions on request for Colleges, academic units, and research groups, as well as general sessions. For example, in February 2019, all 86 staff at our MRC Centre for Virus Research received research integrity training, and specialist sessions have been developed for Research Technicians (as part of the University's Technician Commitment) and Principal Investigators. Following feedback, a new development for 2019/20 will be to deliver bespoke research integrity training for research administrators (project coordinators and business development posts).

168 staff have completed face-to-face research integrity training this academic year, and 102 staff have completed online training. We plan to develop further online training for research integrity which can be used as part of a blended learning approach or a flexible training plan to meet local needs.

This year's annual research staff conference included several sessions on research culture: The Importance of Preprints as Part of Your Publication Strategy; Responding to Peer Reviewer Comments; and Community Engagement.

Tracking and monitoring attendance for staff is challenging but this is an area in which we hope to see improvements as all units in the University are moving towards recording training participation on the HR Core System. We also intend to use our research culture survey as a way of tracking the effect of our training and other awareness-raising efforts — recognising that a broad suite of activities, other than workshop attendance, could be constituted as training and that these might include talks from Advisers at an away-day, leadership development, reading blog posts or newsletter articles. Finally, our annual meeting of Research Integrity Advisers and Champions allows an opportunity to reflect on how well our training is being received and embedded locally.

Training for postgraduate research students

Research integrity training is mandatory for all research students.

- 72% of 1st year PGRs attended integrity training (649 out of 902; 66% of 1st year PGRs in the Sciences and 83% in Arts). Training was primarily delivered face-to-face, with small numbers attending via webinars (described later in this section). Attendance has improved significantly since 2018.
- 88% of PRES 2019 respondents (45% response rate) agreed that their understanding of research integrity has developed during their programme (compared with 87% in 2017).

Feedback from PGR integrity workshops:
- 87% found the course good or very good for giving an awareness of what research integrity means (87% Sciences; 89% Arts)
- 73% for considering good practice (66% Sciences; 80% Arts)
- 76% for understanding roles in publication (71% Sciences; 83% Arts)
- 74% for understanding plagiarism (72% Sciences; 80% Arts)
- 70% for understanding university procedures etc. (68% Sciences; 73% Arts)

Quotes from 2018/19 course participants:

"I have a better appreciation of issues related to plagiarism. For instance, I just came across a published paper that bears very close intuition and modelling approach to a theoretical model I have been working on that is almost complete. I understand through the training, the plagiarism concern this amounts to if I do not acknowledge the prior work here, even though I never saw the paper before developing my model."

"The information about the chain of authority (college conveners etc) was very useful, so that if I am ever in a position where I feel integrity of the work is questionable, I will know there is a support system in place I can turn to for advice."

"Discussed research data management plan with my supervisors to ensure my code/work is transparent and appropriately shared/saved once completed. I have also enrolled in an external workshop to learn more about GitLab and the Open Research Framework."

"I am not using any more google drive for my data."

"I've taken note of who to contact at GU for further help as my auto ethnography has some tricky issues related to it."

"I have begun to think carefully about the need for permissions in relation to the use of illustrations in my work."

"I will also ensure through discussion with peers and staff that my methodology decisions are sound in terms of research questions."

"Knowledge of the UK Concordat was also very insightful for understanding how integrity underpins research principles - this will in turn be very useful when I am discussing theories of this in an international setting, or when creating applications which require an understanding of this."

Data management training is mandatory for research students in the Sciences and strongly recommended in the Arts and Social Sciences. As of 2018/19, it is mandatory for all research students to present a data management plan as part of Annual Progress Review.

- 50% of 1st year PGRs in the Sciences and 15% from Arts and Social Sciences attended research data management training.
- 36% of PRES 2019 respondents agreed their project had a data management plan (with 30% being unsure or believing that one exists and they just have not seen it). The UofG Data Management Service has seen a rise significant rise in the number of data management plans it reviews due to this requirement (60% of the increased demand for support is due to requests for support on data management plans from PGR students). We anticipate that by writing a data management plan for their of Annual Progress Review, students will become more aware of good research data management requirements and practices.
- 8% of 1st year PGRs attended training on 'How to Write a Data Management Plan'.

Training via webinar for both research integrity and research data management was provided to researchers unable to attend on campus e.g. through disability or due to caring responsibilities, or from being based out of Glasgow or on fieldwork. 73% of those who completed the integrity webinar and 88% of those who completed the research data management course found the courses to be overall very helpful.

"This was a really great opportunity for distance learning students to come together and learn in real time and have an opportunity to engage with each other. It enables real time discussion and helps consolidate materials."

Communications and Sharing Practice

Throughout the year, we used internal newsletters, social media campaigns and tailored emails (including via the Research Integrity Champions and Advisers) to draw attention to policies and resources. Hits on our webpages have increased by over 600% over the past year (see Table 1).

Table 1: Hits on UofG research integrity webpages 2017/18 and 2018/19

Number of Unique Pageviews	May 17–May 18	May 18–May 19	% Increase
Research Integrity – Homepage	257	1988	674
Research Integrity – About	135	976	623
Research Integrity – Conduct	106	753	610
Research Integrity – Advisers	93	649	598
Research Integrity – Misconduct	50	385	670

The PGR blog — written for research students, by research students — has also proven to be a useful means of raising awareness of research integrity issues and support.

The following integrity-related blogs were published this year:

- The Open Science Movement (November 2018, 287 views)
- Research Integrity – Is It Common Sense? (February 2019, 45 views)
- Authorship on Academic Papers (March 2019, 132 views)

Each post was shared on social media, including through networks external to UofG.

We have contributed to national and international discussions and practice sharing in this area, including:
- Leading on the development of a shared statement of the Russell Group Integrity Forum (RGIF) on training

- Hosting a Scotland-wide workshop on best practice in peer review on behalf of UKRI, in partnership with our Equality and Diversity Unit, to share practice and ideas for embedding equality and inclusion into peer review processes and ensuring they are as robust and transparent as possible (January 2019)

- Professor Denis Fischbacher-Smith (Research Integrity Champion for the College of Social Sciences) wrote a blog for the Chartered Association of Business Schools: *Wither Research Integrity? Framing the Issues* (September 2018)

- A case study on our new career pathways for specialist and technical research scientist roles was included in the Academy of Medical Sciences Team Science report (also shared at the Royal Society's Research Culture event (October 2018)).

Research Misconduct Investigations 2018/2019

We updated our Policy & Procedures for Investigating Allegations of Misconduct in Research to reflect changes in the responsibilities of the University's senior leadership team and the consolidation of the administrative support responsible for governance. The Named Person is now the Clerk of Senate, who is responsible for overseeing all investigations, in conjunction with the pre-existing Research Integrity Council.

The Table below summarises the nature and status of active formal investigations into alleged misconduct conducted August 2018–July 2019. A formal investigation is conducted by a panel whose role is to examine and evaluate all relevant facts in order to determine whether there are grounds for proceeding with the allegation under the Staff Disciplinary Procedures or Student Code of Conduct.

Table 2: Formal Misconduct Investigations for 2018/19

Respondent(s)	Nature of allegation	Status	Outcome
Staff	Manipulation of data images in published journal article	Formal investigation complete; allegations upheld in part	An erratum was published; the affected results were removed from the amended article

Lessons learned in 2018/19

- Feedback from the University's PGR writing adviser suggested a need to provide specific guidance to PGRs on the use of proofreading services. This has now been provided on the web.

- Additionally, the Library has issued online guidance on identifying trusted journals.

- As Western Blots are a common feature in many national and international misconduct investigations, we are considering the feasibility of lodging Western Blot data in our UofG repository. This will be piloted with the Institute of Cancer Sciences in 2019.

Appendix 1

Case study: Supporting a Culture of Open and Reproducible Science. *The Institute of Neuroscience and Psychology/School of Psychology*

The Institute of Neuroscience and Psychology and the School of Psychology are increasingly viewed as a leading example of a positive research culture, as a result of their work to support reproducibility and transparency.

Their philosophy has been that the key to improving research culture is *building community*. Although nearly all scientists subscribe to the values of reproducibility and transparency, working in a truly reproducible way requires a transformation in how researchers approach data analysis; in essence, researchers must learn to code. This skill set, which is new to many staff and students, will not become embedded in regular practice without a supportive and inclusive research methods community: the technical barriers are too high, and the Internet can be a threatening and overwhelming place to seek help. By offering staff and student training sessions and putting in place community structures where people can learn from one another in a non-threatening environment, colleagues worked to create the optimum conditions for the spread of an inclusive research culture.

Since 2012, the Methods & Metascience (M&Ms) journal club, led by Dr Dale Barr, has promoted the professional development of staff and postgraduate students, with training events, paper discussions, and open sessions where students or staff can get help. Any member of the research community is welcome to share good research practice — from undergraduate students to world-leading staff experts.

In 2015, to address the changing research skill requirements of UG, PGT and PGR students, Dr Barr led a large-scale reform of the unit's research methods training. In January to March 2016, he offered weekly staff and Graduate Teaching Assistant training sessions, developing online material to support learning, with additional online support and discussion via Slack messaging. These efforts led to the genesis of the #psyteachr team, and to Glasgow being recognised as one of the first departments in the UK to teach fully reproducible methods at the undergraduate level. These activities had the added benefit of upskilling staff across the unit on statistics and coding for their own research, and created an ethos of collaboration and sharing. This ethos is reflected widely in the social media posts by staff in the School and in their contributions to external networks[2] and events[3], as well as local initiatives[4].

In March 2017, Dr Barr's team led a workshop on Teaching Reproducible Data Analysis in R that was attended by representatives from institutions across the UK. This was an inclusive event where students were invited to give testimonials. The event had reverberations online, with the takeaway messages nicely summarized in this series of tweets by a postgraduate attendee. More recently, our postgraduate students showcased their new skills and got valuable teaching experience in a workshop for postgrads from other Scottish institutions (listen to their podcast). Another exciting consequence has been the initiative of the students to create a University-wide student group supporting data analysis in R, guRu.

Students in the unit have not only learned to code; they have learned the value of building supportive research community.

---

[2] Lisa DeBruin is part of the Psychological Sciences Accelerator.

[3] Two Early-Career Researchers from the School attended a "Reproducible Sciences" 2-day training programme at the University of Exeter in May 2019, acting as ambassadors for UofG and feeding back on their experiences to support future training, as well as blogging on the theme of open science [https://uofgpgrblog.com/pgrblog/2018/11/30/how-i-learned-to-stop-worrying-and-love-open-science].

[4] Holly Scott, a PhD student in the School of Psychology, shared her experience of using preprint publishing at UofG's annual 2019 Research Staff Conference.