Draft Proposal - Goldsmiths Research Methods in Psychology

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Proposal for Psychology Department Research Methods 2024-5

Goldsmiths Research and Data Skills

Distinctive blend of research and training

Showcase the departmental strengths

Not available in school

Intellectual virtues of critical thinking, creation of knowledge, communication

Open Science

General goals

Alive, practical, digital literacy, transferable skills,

Weekly structure (all levels)

2 hours lecture (1 hour reading)

2 hours lab (1 hour reading)

2 hours online Data Skills (with short weekly assessment)

Goldsmiths stuff

Jin, C., & Wells, J. (2015). Developing open educational resources with students: A case study in an undergraduate course. MERLOT Journal of Online Learning and Teaching, 11(2), 197-213.
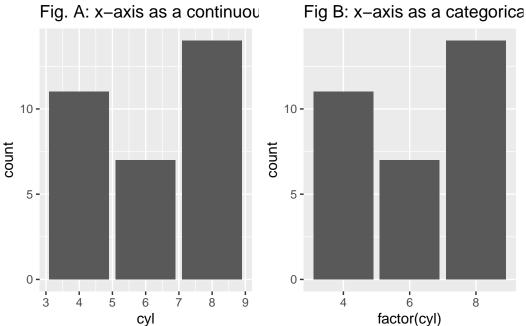
Executable code chunk

Below is an example of an executed code chunk - in html format clicking on
▶ Show the code would unfold the code that drives the plot and results summary. In pdf format, it's unfolded and printed - ideal for handouts etc.

Integrated Code Example

```r
library(ggplot2)
library(gridExtra)

# x-axis as continuous
p1 <- ggplot(mtcars, aes(x = cyl)) +
        geom_bar() +
        ggtitle("Fig. A: x-axis as a continuous variable")

# x-axis as categorical
p2 <- ggplot(mtcars, aes(x = factor(cyl))) +
        geom_bar() +
        ggtitle("Fig B: x-axis as a categorical (factor) variable")

grid.arrange(p1, p2, ncol = 2)
```

Fig. A: x–axis as a continuou   Fig B: x–axis as a categorica
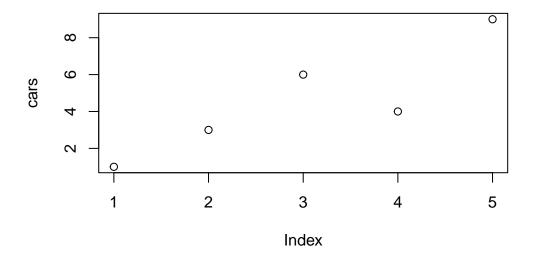
The Psychology department at Goldsmiths has a number of differentiating features, upon which it must build in order to ensure it remains attractive and distinctive.

- Alchemical, interdisciplinary research programmes and projects
- Passion for empowering students and producing creative, skillful, disruptive agents of change
- Blend of Art and Science, craft, entrepreneurship, massively transferable mind-set/skill-set

Research Methods has to be an adventure, "Alive" with enthusiasm, inspiring curiosity and intellectual problem-solving.

We have to break the A-Level preconception that Research Methods is dry, maths-like or indeed difficult.

3

This must be achieved by: - Practical First - The majority of lab sessions should be practical and 'hands on'! - Only present research/methods/topics that are 'ownable' - where we have expertise, cachet and competitive advantage - and that could NOT be done at school - 'Relevant & Applicable' above all else. Nothing is taught 'because the BPS says we have to' or that doesn't have widespread use in a range of future endeavours - Demonstrate and model intellectual virtue, curiosity, empiricism, skepticism, humility and

> **i** Open Stuff
>
> We embrace an Open Science approach in our efforts to cultivate your critical evaluation skills, enhance your understanding of the significance - and power - of research, and equip you with the necessary graduate-level skills to collect, handle, and interpret data using programming software for statistical model development, visualisation and analysis.

> **i** Teaching and Assessment
>
> Through lectures, interactive group discussions, online skills development modules, and practical lab sessions, we will ignite your enthusiasm for Psychology and Behavioural Science research and help you develop the fundamental skills, knowledge - and confidence - required to become a Psychology literate, disruptive scientist of the future. Tada!

AUTHENTIC ASSESSMENT - OPenAI

"Authentic assessment" generally refers to assignments that reflect the skills students will use in their post-graduation careers and life experiences (Archbald, 1991; Gulikers et al., 2004). This is distinct from traditional assessments such as closed-book exams and academic essays (Macandrew & Edwards, 2002). For psychology, authentic assessments may involve the development of scientific inquiry skills, such as a practical research report (Halonen et al., 2003). In clinical psychology, this can include formulation of case studies or mock practitioner dialogues

(Villarroel et al., 2018). Other examples of authentic assessments include writing letters to non-psychology audiences (Cranney, 2013), critical evaluation of media materials (Halpern & Butler, 2011), written reflections of volunteering (Hadlington; as cited in Taylor & Hulme, 2015), and research project interviews (Turner & Davila-Ross, 2015). All of these are designed to promote psychological literacy by encouraging communication with non-experts and application of psychology content (Hulme, 2014).

Central to psychological literacy is the effective communication of psychology in practice (Trapp et al., 2011). To this end, blog writing may be an effective assessment for capturing and promoting students' psychological literacy. Blogs are a web-based form of journal or writing platform, and are useful for disseminating information (Richardson, 2006). They are also increasingly popular for assessing written language skills (Kim, 2008; Lee, 2010; Raith, 2009; Williams & Jacobs, 2004). Blog writing may help students take different perspectives, develop a critical appraisal of content, and become more self-reflective (Frye et al., 2010; Jimoyiannis & Angelaina, 2012). It also empowers and engages students (Creme & Hunt, 2002), a core goal of psychology education (Ishak & Salter, 2017). It enhances academic language learning (Murray et al., 2007) and assesses different skills than traditional forms of assessment (Morris et al., 2013). Studies show that students report high levels of engagement with blog writing (Hindley, 2018).

Blog writing may help students overcome the challenge of academic essay writing (Ishak & Salter, 2017) since it is less rigidly governed by academic norms (Bennett et al., 2012) and involves more reflective, creative, and critical tone (Arslan & Aysel, 2010; Novakovich & Long, 2013). It also provides an opportunity to communicate psychology content to a wider audience (Gardiner et al., 2018; Schmidt, 2008; Relojo, 2017). It has been embedded successfully in many different subjects in higher education, such as pharmacy (Dunne & Ryan, 2016), anthropology (Walker & Chatzigavriil, 2017), professional development (Shanks, 2020), and English literature (Agarwal, 2017). The British Psychological Society, 2019 and the American Psychological Association (2013) stress the importance of critical evaluation and reflection, which is compatible with blog writing. Research shows that blog writing prompts critical thinking and reflection (Chretien et al., 2008; Novakovich, 2016). Challenges to implementing blog writing as an assessment include students having little to no previous experience (Kerawalla et al., 2009). Blog writing should be grounded effectively in course materials, have clear expectations, and be understood through a lens of psychological literacy (Cranney et al., 2008, 2012). We propose that blog writing may provide a useful opportunity to allow students to apply their psychology content in a critical, creative, and non-conventional way.

- OPENAIabove

BPS Guidelines from OpenAI

1. Ensure that students have a clear understanding of the research methods used in their field of study.

2. Provide opportunities for students to develop critical thinking skills in relation to the research methods used.

3. Encourage students to practice the research methods in a safe and secure environment.

4. Develop a range of teaching materials and resources that best support student learning.

5. Encourage students to become independent learners by providing appropriate scaffolding and support.

6. Encourage students to become active participants in their learning process.

7. Facilitate meaningful discussions about research methods and the application of research methods in practice.

8. Incorporate ethical considerations into the research methods teaching.

9. Promote the use of technology to support the teaching of research methods.

10. Monitor and evaluate students' progress throughout the teaching period.

Source: British Psychological Society (BPS). (2020). Guidance for the teaching of undergraduate research methods. Retrieved from https://www.bps.org.uk/publications/guidance-teaching-undergraduate-research-methods

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ⓘ BPS website

Research methods Research methods must be delivered at Level 5 or Level 6. Research methods are integral to Psychology and students obtain a sound knowledge of, and a proven ability to use, a range of methods appropriately. Knowledge and understanding of how to obtain and analyse evidence is best acquired and demonstrated through extensive and progressive empirical work in laboratory and naturalistic settings through all stages of a degree. [section 3.4 Subject Benchmark Statement] Psychology students learn the basic principles of sound data collection. Given the broad theoretical scope of Psychology, rigorous specialist training is required to engender a critical understanding of the role of experimental design, the choice of research methods employed, and the analytic approach taken, for testing psychological theories. [section 3.5 Subject Benchmark Statement] Programmes' coverage of research methods should support students' engagement with the sub-areas listed above, and should be directed towards supporting students' attainment of the subject-specific skills highlighted in section 4.4 of the Subject Benchmark Statement. As they progress through the programme, students should be able to: • apply multiple perspectives to psychological issues, recognising that psychology involves a range of research methods, theories, evidence and applications; • integrate ideas and findings across the multiple perspectives in psychology and recognise distinctive psychological approaches to relevant issues; • identify and evaluate patterns in behaviour, psychological functioning and experience; • generate and explore hypotheses and research questions drawing on relevant theory and research; • carry out empirical studies involving a variety of methods of data collection, including experiments, observation, questionnaires, interviews and focus groups; • analyse, present and evaluate quantitative and qualitative data and evaluate research findings; • employ evidence-based reasoning and examine practical, theoretical and ethical issues associated with the range of methodologies; • use a variety of psychological tools, including specialist software, laboratory equipment and psychometric instruments; • apply psychological knowledge ethically and safely to real world problems; and • critically evaluate psychological theory and research.

Communicate complex information effectively using appropriate written, oral, graphical and electronic means, taking into account diversity among individuals to whom the information is communicated.

Explain the potential impact of psychological research and theory on a broad range of real world settings and situations (e.g., classrooms, industry, commerce, healthcare, as well as local and global communities).

Problem-solve and reason scientifically. Specifically, graduates will be able to identify and pose research questions, consider alternative approaches to their solutions, and evaluate outcomes.

Be sensitive to contextual and interpersonal factors. Graduates will be familiar with the complexity of the factors that shape behaviour and social interaction which, in turn, will make them more aware of the bases of problems and interpersonal conflicts.

or Be a self-critical learner, showing sensitivity to contextual and interpersonal factors. Graduates will be familiar with the complexity of the factors that shape behaviour and social interaction which, in turn, will make them more aware of the bases of problems and interpersonal conflicts.

Show an understanding of various research paradigms, methods, and evaluation procedures, including statistical analysis, as well as their constraints.

Design, carry out, evaluate and interpret scientifically rigorous and ethically sound studies both independently and collaboratively, utilizing quantitative and qualitative methods, statistical analysis and modern digital software.

Psychological literacy is the ability to understand and apply psychological principles and theories to everyday life. This includes the ability to understand how psychological processes and phenomena influence our behavior, emotions, thoughts, and relationships. It also includes the capacity to use psychological knowledge to make informed decisions and to better understand, explain, and predict the behavior of self and others.

Psychology graduates are highly sought after by employers due to their ability to formulate and communicate well-reasoned, evidence-based, and statistically defensible arguments based on their expertise in the study of human behavior and its causes. On top of this, psychology graduates possess the skills to work independently or collaboratively, as well as strong numerical capabilities, verbal and written communication skills, and an up-to-date knowledge of digital technologies applicable to a wide range of occupational fields.

Intended Learning Outcomes

Intended Learning Outcomes

Create reproducible data analysis scripts and reports within the R statistical programming environment.

QAA Benchmarks

Subject Knowledge and Understanding

6.3.4 demonstrate detailed knowledge of several specialised areas and/or applications, some of which are at the cutting edge of research in the discipline 6.3.5 demonstrate a systematic knowledge of a range of research paradigms, research methods and measurement techniques, including statistics and probability, and be aware of their limitations.

Subject-specific skills

PS510XX - RM1 - Introduction to Research Methods and Data Skills

PS520XX - RM2 - Research Methods in Practice and Data Skills

PS530XX - RM3 - Research Project Incubator

*PS710XX - Practical Research Skills

Lectures - Overview of key concepts/context and preview Lab practicals / Data Skills

Labs - Practical or activity based (inc. Group Work)

Executive Summary by year

Y1 - showcase and active participation/skill development

Y2 - Practical drive towards self-motivated research

Y3 - Competent research

Social Constructivist

PeerMark

Podcast/Webpage/Blog

Integrate own interest/guided by stream/lab

Technical Overview

Figure 1: R language

R is primarily a computer programming language for statistical analysis. It is *free*, and *open-source* (many people contribute to developing it), and runs on most operating systems or through an internet browser, and so there are few obstacles to its use by the normal undergraduate population (compare to SPSS).

It is a powerful language that can be used for all sorts of mathematical operations, data-processing, analysis, and graphical display of data - it is used more a more frequently in corporate settings, unlike 'pay to play' software such as SPSS.

I even used R to write this lab manual. And, I use R all the time for my own research, because it makes data-analyis fast, efficient, transparent, reproducible, and exciting

Figure 2: Posit (Formerly RStudio)

Figure 3: Quarto Publishing

Quarto is an open-source scientific and technical publishing system built on Pandoc. Quarto documents are authored using markdown, an easy to write plain text format.

In addition to the core capabilities of Pandoc, Quarto includes:

1. Embedding code and output from Python, R, Julia, and JavaScript via integration with Jupyter, Knitr, and Observable.

2. A variety of extensions to Pandoc markdown useful for technical writing including cross-references, sub-figures, layout panels, hoverable citations and footnotes, callouts, and more.

3. A project system for rendering groups of documents at once, sharing options across documents, and producing aggregate output like websites and books.

4. Authoring using a wide variety of editors and notebooks including JupyterLab, RStudio, and VS Code.

5. A visual markdown editor that provides a productive writing interface for composing long-form documents.

Learn more about Quarto at https://quarto.org.

R will be used. Gold standard statistical programming language

For literate programming (The concept of **"literate programming"** was originally introduced by Donald Knuth in 1984)

Formerly RStudio. The Interactive Development Enviornment for use of R.

Hours specification (e.g.) Years 1 & 2

Table 1: Notional Hours

Activity	Time	Note
Lectures	40	2hrs/week
Labs	40	2hrs/week
Data Skills (Online)	40	2hrs/week
Guided Reading/viewing	40	2hrs/week
RPS	20	1hr/week
Independent Study/Coursework	120	6hr/week

Programme Overview

Pre-Arrival onwards / Onboarding

Showcase in Induction week - Staff labs and research projects for the year.

Year One students self-test

MSc Students - ditto and ability to shop around for supervision

Year 2 develop their pods? Show Y1 and Foundations what they did last year

Year 3/MSc students - Research Bootcamp and refreshers/skills workshops

Support PhD students and staff

Pedagogical & Delivery Overview

General FUN

Practical first.

Flipped stats

Evidence suggests that a flipped approach to teaching statistics significantly improves student performance (across a range of metrics) at the mean and throughout the achievement distribution, while controlling for baseline student characteristics Sathy & Moore (2020) (see tables 13.3 & 13.4 - specifically Anxiety, preparedness and under-represented minority status).

Assessments

> **i** assessment types
>
> Blog
> Podcast
> Website
> Posters
> Information Packs Macandrew & Edwards (2002)
> Portfolios (or ProcessFolio)
> Interview (and self-reflection)
> Clinical Assessment
> Skills assessment
> Oral Examination (mock job interview)
> Self and Peer evaluation
> Literature Review (with or without annotations)
> Annotated Code
> Computational documents (Lab Reports)
> Design and Proposal (Pre-registration)
> Data analysis (Results section)

"Authentic assessment" (Archbald, 1991) refers to assignments that are designed to reflect the skills that students will practice in their careers and other life experiences after graduation (Gulikers et al., 2004), looking beyond traditional assessment such as closed-book exams and traditional formats of academic essays (Macandrew & Edwards, 2002). The impact of employing Authentic Assessments range from increased engagement and satisfaction through to heightened employability skills (Sokhanvar et al., 2021)

Projects

"Authentic assessment" refers to assignments that are designed to reflect the skills that students will practice in their careers and other life experiences after graduation (Archbald, 1991; Gulikers et al., 2004), looking beyond traditional assessment such as closed-book exams and traditional formats of academic essays (Macandrew & Edwards, 2002). In general psychology, for example, authentic assessments may include the explicit development of scientific inquiry skills, such as a practical research report (Halonen et al., 2003). Or, for more applied facets such as clinical psychology, this may also include formulation of case studies or engagement in mock practitioner dialogues (Villarroel et al., 2018). Previous examples of authentic assessments designed to foster and assess psychological literacy include asking students to write letters to non-psychology audiences (Cranney, 2013), critical evaluation of media materials (Halpern & Butler, 2011), written reflections of volunteering (Hadlington; as cited in Taylor & Hulme, 2015), and research project interviews (Turner & Davila-Ross, 2015). All of these examples are designed to encourage a psychologically literate approach to psychology content because they encourage communication with non-experts and application of psychology content (Hulme, 2014).

Indeed, central to the notion of psychological literacy is the effective communication of psychology in practice (Trapp et al., 2011). Therefore, a psychologically literate education should encourage students to communicate their knowledge in clear and accessible ways. With this in mind, here, we propose that blog writing may also be an effective assessment for capturing and promoting students' psychological literacy. Blog writing inherently aligns with the agenda of psychological literacy because it aims to communicate often complex psychology knowledge in an accessible way (Jolley et al., 2016; Lin et al., 2007).

Primary Citation Pownall et al. (2023) Blogs, which are a web-based form of journal or writing platform, are a powerful tool in the wide dissemination of information in the modern media mix - relevant to current students (Richardson, 2006) .

Blog writing is thought to offer the opportunity to take different perspectives in writing, develop a more critical appraisal of the content, and thus can prompt higher levels of self-reflection (e.g., Frye et al., 2010; Jimoyiannis & Angelaina, 2012). Activities that encourage creative participation in the process of academic writing have been found to empower and engage students (Creme & Hunt, 2002), a core goal of a psychology education (Ishak & Salter, 2017). Therefore, blog writing promotes wider academic language learning (Murray et al., 2007) and thus complements more traditional forms of assessments by allowing a different set of skills to be assessed (Morris et al., 2013). Across the literature, studies show that students report high levels of engagement with blog writing exercises, owing to the high levels of creativity associated with this form of writing (Hindley, 2018).

Research demonstrates students often report feeling unprepared and overwhelmed at the perceived "rules" of academic essay writing (Ishak & Salter, 2017). Blog writing should help students to overcome this pedagogic challenge, given that blogs are governed less rigidly by academic norms (Bennett et al., 2012) and typically involve more reflective, creative, and critical tone (Arslan & Aysel, 2010; Novakovich & Long, 2013). Writing in a clear and accessible way is an important transferable skill and undergraduate outcomes across subjects in higher education (Hawkey & Barker, 2004; Leki & Carson, 1994). Blog writing can, in theory, enhance these skills, given its highly reflective nature and deviance away from the conventions of academic writing with which some students struggle (Dippold, 2009; Soysa et al., 2013; Xie et al., 2008). Similarly,

blog writing also provides a useful opportunity to communicate psychology content to a wider audience. Scholars have noted how traditional forms of academic psychology dissemination, such as journal articles, are typically inaccessible to a general audience, both in terms of language use and access (i.e., because they are published behind a paywall that requires institutional subscriptions; Relojo, 2017). Blog writing may thus be an important platform to mediate the relationship between science and the general public (e.g., Gardiner et al., 2018; Schmidt, 2008), which again is a facet of the psychological literacy approach (Hulme, 2014).

Blog writing as an assessment has been embedded successfully in many different academic subjects in higher education, such as in pharmacy (Dunne & Ryan, 2016), anthropology (Walker & Chatzigavriil, 2017), professional development (Shanks, 2020), and English literature (Agarwal, 2017). Indeed, given that the British Psychological Society, 2019 note in their degree accreditation standards that "critical evaluation and reflection" is a key graduate attribute for psychology programs, blog writing may be particularly compatible with psychology undergraduate content. The blog approach to writing has been promoted through BPS-led initiatives, such as the Voices in Psychology program (Sutton & Pownall, 2018, 2019). This also extends to the American Psychological Association's guidelines for undergraduate psychology majors (2013), who too stress that scientific inquiry, critical thinking, and communication are among the core goals of a psychology degree.

Moreover, research shows that blog writing prompts critical thinking and reflection (Chretien et al., 2008; Novakovich, 2016). For example, Novakovich (2016) investigated whether there are differences in the quality of writing generated through in-class workshops between the use of traditional methods compared with blog writing. They concluded that blog writing fostered more complex literacy skills, which is echoed by other empirical studies (e.g., Alsamadani, 2018; Febianti & Wahyuni, 2019).

However, there are also some challenges in implementing blogs as an effective assessment format. For example, students often have little to no previous experience of blogging which can impede engagement with it as an assessment (Kerawalla et al., 2009). Similarly, Kerawalla et al. (2009) warned that blog writing as an assessment in higher education should be grounded effectively in the course materials; without an effective sense of purpose, blogs as an assessment can be perceived as lacking clarity about their function, audience, and tone. Therefore, the expectations of blog writing should be made clear to students. Given the necessary alignment with subject-specific degree outcomes, blog writing may be best understood through a lens of psychological literacy, given that this approach encourages psychology students to apply their knowledge to daily life (Cranney et al., 2008, 2012). Therefore, we propose that blog writing may provide a useful opportunity to allow students to apply their psychology content in a critical, creative, non-conventional way.

> **ℹ Blog Rubric example**
>
> Scientific Blog marking rubric
> Below are the grading criteria for the assessment of the science blog. The profiles give an indication of typical performance at each class band, and clearly permit some variations up-wards
> or downwards while remaining in the same class band. These descriptions should be taken as
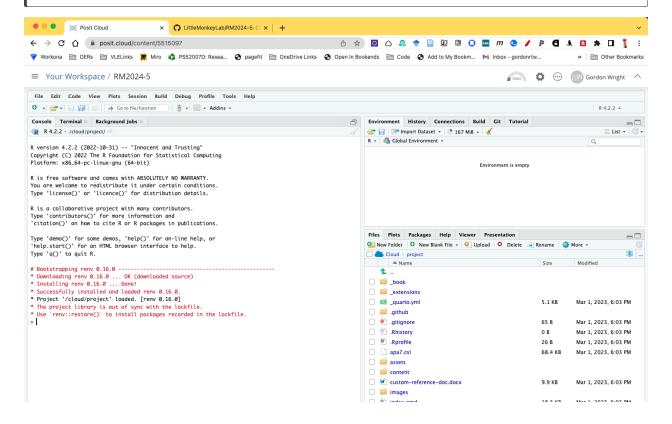
indicative rather than prescriptive. Seven key attributes of written work are considered when assigning marks, with some (e.g., 'accuracy') clearly more important than others:

1. Accuracy (i.e., is the material reported accurately?)
2. Appropriateness for general audience (i.e., is key content well defined and explained, could a
3. non-specialist follow the argument)
4. Application to question (i.e., is the material used effectively in the assignment)
5. Evidence (i.e., are claims supported by relevant evidence and/or theory from the literature?)
6. Argument (i.e., is there a convincing line of argument through the work?)
7. Critical evaluation (i.e., is the material presented evaluated fully?)
8. Structure and coherence (i.e., is the answer well-structured with good flow between points?)
9. Presentation (i.e., is the clarity of expression good)

See accompanying website for Rubric or go here https://osf.io/rgf8t

YOUR PERSONAL ACCOUNT

PLAN

Cloud Free

CURRENT USAGE PERIOD

Feb 17, 2023 - Mar 17, 2023

USAGE

Projects: 1 of 50

Outputs: 0 of 50

Compute hours: 0 of 25

GORDON WRIGHT

G Log Out

👤 Profile

● Account

⊙ Authentication

🔑 Credentials

Considerations

Further considerations

Preparation

Need to begin preparation

Lectures x 40

Open Educational Resources Textbook for Research Methods CCBY4.0

Lab Practicals x 40

Open Educational Resources Textbook for Data Skills (Navarro) CCBY4.0

Recordings and worksheets for above x 40

Y3/MSc Bootcamp

Infrastructure

Recording suite

Materials storage

Estates and Facilities

Removal of computer banks in labs to make them more useful for practicals?

Wall-mounted monitors

Technology

Posit Cloud as Entry Level

Student download for Y2 onwards

Possible Posit Server run by Ian

Costs

Cost for Posit Cloud (Maybe)

Chromebooks on loan

Risks

Technology obstacles (lower than SPSS)

Finite knowledge within staff

Staff resistance

Staffing

Recruit next TFs specifically to help build the infrastructure and programme

Timetabling

HeartData week

asdgasdfhg

Induction planning

Pre-arrival comms

Accessibility

Homework club - Where staff are on hand every week

Student Support/Welfare

Enhanced by access to resources

Employability

R and Python are most versatile tools on the market

Years

Foundations (Level 3)

sdgasdg

Foundation Year schedule

Week	Schedule			
1	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
2	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
3	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
4	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
5	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
6	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
7	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
8	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
9	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
10	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	

Week	Schedule			
11	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
12	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
13	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
14	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
15	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
16	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
17	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
18	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
19	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
20	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	

Year 1 (Level 4)

Year 1 (Level 4)

Module Weighting - 30 Credits (300 notional hours)

Coursework and attendance only

2 hours lectures each week - with 1 hour prep/reading

2 hours labs each week - with 1 hour prep/reading

2 hours Data Skills Interactive Online Tutorials with activities

Module Content

This module introduces and equips students with the conceptual and practical skills necessary for the effective study of psychology, but also highly valuable transferable and employability skills. This includes computer skills, presenting results of experiments, structuring a technical report, and critiquing scientific research.

The module combines individual and group work, therefore requires the development of time- and project-management skills, as well as cooperation and communication skills.

Additionally, it provides an introduction to research design, data, and statistics in psychology, as well as the processes of analysis and interpretation of Qualitative research.

Students will learn the theoretical aspects of basic statistical concepts and tests, and gain experience using the statistical package R, as well as the IDE Posit (formerly RStudio) and Quarto academic publishing platform for the production of Posters, Blogs, Websites and interactive documents for Lab Reports and Theses.

Module Learning Outcomes

The student should be able to:

- Demonstrate the ability to **work collaboratively and independently** to deliver projects and reflect/evaluate their individual and group performance
- demonstrate a comprehensive understanding of the **principles of research in psychology**, both Qualitative and Quantitative, from reading and summarizing scientific research to planning, writing and presenting reports and presentations.

- understand the importance and relevance of **data analysis, the different types of research design**, experiments, sampling techniques and tests used.
- understand the **philosophical underpinnings** of qualitative and quantitative approaches to research and evaluate their merits in answering questions across the range of psychological domains.
- demonstrate the skills to **analyse and interpret data** using qualitative and quantitative frameworks and methods.
- demonstrate statistical proficiency in the ability to use R to perform appropriate statistical analysis and visualisation of quantitative data.
- be able to visualise and present/communicate research findings to a range of audiences

Assessment

Assessment Element	Length	%	F or S	Group/Individual
Visualisation/Dashboard	NA	0	Formative	Group
Lab Reports x 3	1500	30%	Summative	Individual
Annotated Bibliography	1000	20%	Summative	Individual
Portfolio of weekly activities	2 hours per week	20%	Summative	Mixed
Data Skills Interactive Tutorials	2 hours per week	20%	Summative	Individual
RPS	10 hours	Required	Pass Fail	Individual

Visualisation - The task will be to assemble a poster/dashboard of the cohort data, with some explanatory content (subtly employing the format of a lab report/academic poster) that communicates something about the year group. Each group can develop a single additional question to allow them to tailor the content that all students will answer, but will use the cohort-wide data collected in Welcome week. Qual and Quant data - posing the challenge of what to present and how to present it. Mesearch.

This is an intro to R, Posit & Quarto, and the goal is to introduce group working early, to allow for feedback and reflection, and to get students to produce something novel, relevant and real, of which they can be proud. Can be a team-coding exercise, incorporating some novel student-generated questions and ethical considerations.

Train tables and plots so that this contributes to academic writing skills.

Lab Reports x 3 - 1 per theme at block 2, block 4 and block 6. Standard goal of training academic writing APA style. Heavily templated Quarto document, putting the focus on CONTENT, not formatting. Training the use of Zotero or .bib reference management.

Cohort wide data collected by staff on a question central to the block in both Qual and Quant Methods:

- either multiple variables from which a student can choose. e.g. 5 predictors of well-being and 2 measures of well-being collected and each student chooses 2 predictors and an outcome for a regression model, or compare means (1, 2, 2+) or Qualitative from TA/DA/IPA/GT.
- Or there could be multiple studies to choose from from within a block - to allow for intro to different methods

- Students must do at least one of each Qual or Quant out of the 3 reports.

❗ Zotero online library resource per block

https://www.zotero.org/groups/4972953/ps52007d_research_methods/library - Zotero Library of some AWESOME research that would be bundled and ready to go.

Annotated bibliography on a topic of your choosing - To match the skills tested in the Extended Essay and to train critical thinking & lit search/review skills - find 3 papers on a topic of your choosing. Present a correct APA format reference list, summarise the papers each answering key questions (design, results, likes and dislikes), and wrap in an introduction/conclusion that incorporates a reflective "what do I think about this research and what does it mean to me"

Portfolio of weekly activities - Each week readings, preparation, reflection or activities are assigned, and a portfolio of responses, or log is kept. We can allow for non-completion of x% but they are a combination of competency checks or practical activities. These can include reports on group work, reading log, contribution to forums, use of hypothesis to annotate a web page, learning log, data skills.

Reading and Resource List

We propose a custom made textbook remixed from Open Educational Resources to support key study skills throughout your degree - also shared CCBYSANC4.0

Research Methods (Big picture) see:

CrumpLab

https://crumplab.com/ResearchMethods/

https://crumplab.com/statistics/

https://crumplab.com/statisticsLab/ (Labs in R, Excel, SPSS and JAMOVI)

plus https://lakens.github.io/statistical_inferences/index.html

plus https://openpress.usask.ca/introtoappliedstatsforpsych/

Qual Williams, D. D. (2018). *Qualitative Inquiry in Daily Life (1st ed.)*. EdTech Books. https://edtechbooks.org/qualitativeinquiry

Qual content is sparse, thus ownable!

R gold standard https://learningstatisticswithr.com/

Data Sets,

Versions with Jamovi, JASP, and SPSS

Year 1 schedule

Week | Schedule | Indicative content |

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Week

{ {< fa chalkboard-teacher >}} **Lecture** - here is a load of stuff that nobody really cares about
👨‍💻 **Data Skills** - here is a load of stuff that nobody really cares about

👥 **Lab** - here is a load of stuff that nobody really cares about
☲ **Assessment** - here is a load of stuff that nobody really cares about

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Year 2 (level 5)

Module aims

Experimental designs in psychology typically employ statistical analyses such as analysis of variance, factor analysis and regression. The aim of this module is to make these topics more accessible through the use of practical examples and data collection on a self-directed group research project.

Module Content

The module's overall aim is to offer a supportive and intellectually rigorous environment allowing students to develop highly valuable, transferrable research and collaboration skills in the context of undertaking a group research project.

This module teaches fundamental empirical research techniques within the framework of Open Science and reproducibility, promoting best practice in study design, Open Materials and Data, and methodological practice. This module fully immerses students in the Goldsmiths 'community of practice,' providing structured research support and opportunities to reflect on learning, modelling the key milestones of the final year dissertation.

The module seeks to promote the application of a scientific, intellectually virtuous, research-based approach to any and all future endeavours, and integrates metacognitive and reflective practices to deliver this transformative learning towards academic and personal development.

Over the course of two terms students will follow a programme of lectures introducing a critical approach to psychological research, as well as how such skills can be transferred beyond psychology; across academic disciplines and into the everyday world, with extensive use of case studies and problem-based learning.

Structured weekly labs will enable students to work collaboratively to identify an area of research, critically evaluate current research in the area, and develop a modest research project building on these insights.

Students will work together, alongside lab tutors and researchers in the department, to design and deliver the research project, including obtaining ethical approval, data collection and analysis, then interpreting and writing up the results, and sharing the materials and data in line with Open Science best practices in the Psychological, Behavioural and Data Sciences.

Module Learning Outcomes

1. Show a critical understanding of research design and methodology

2. Design, conduct, analyse, interpret and disseminate a psychological research project

3. Understand the conceptual and historical issues concerned with psychology as a science and area of practical application

4. Demonstrate valuable time-management and collaborative project-management skills and proficiencies

5. Reflect on their own learning, skill development and metacognition, preparing them for the final year dissertation

6. be able to use R to analyse: regression, correlations, reliability and validity, effect sizes, one-way within and between subjects designs (and post-hocs), two-way within, between and mixed designs; and factor analysis

7. Be able to present reproducible, APA format literate-programmed research reports.

Assessment

Assessment Element	Length	%	F or S	LO Tested
RPS				

Reading and Resource List

We have a custom made textbook to support key study skills throughout your degree:

Year 2 schedule

Week	Schedule			
1	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
2	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
3	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
4	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
5	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
RW	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
6	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green

Week	Schedule			
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
7	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
8	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
9	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green
10	**Lecture:**	ANOVA recap	**DataSkills:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Assignment:**	There was a wee cooper who lived in fife and his hat was green

Week	Schedule			
11	**Lecture:**	Your final year project	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
12	**Lecture:**	MANOVA	**IndStud:**	
	Lab:		**Data:**	
13	**Lecture:**	FA (LVM, PCA, EFA, CFA)	**IndStud:**	
	Lab:		**Data:**	
14	**Lecture:**	Mediation & Moderation	**IndStud:**	
	Lab:		**Data:**	
15	**Lecture:**	Longitudinal Data	**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
16	**Lecture:**	Multi-Level Models	**IndStud:**	
	Lab:		**Data:**	
17	**Lecture:**	Categorical Data	**IndStud:**	
	Lab:		**Data:**	
18	**Lecture:**	Big Data	**IndStud:**	
	Lab:		**Data:**	
19	**Lecture:**	Machine Learning	**IndStud:**	
	Lab:		**Data:**	
20	**Lecture:**	Artificial Intelligence	**IndStud:**	
	Lab:		**Data:**	

Dissertation (Y3 & MSc)

Level 6 - topline summary

Module Content

Module Learning Outcomes

Assessment

Assessment Element	Length	%	F or S	LO Tested

Reading and Resource List

We have a custom made textbook to support key study skills throughout your degree:

Table 2: Y3 Term 1 Laydown

Week	Lecture	Practical
Pre	Preparing to become a Psychologist	
WW	Let's measure some stuff	
1	Answering questions with data	Doing stuff with stuff
2	Finding patterns and relationships	
3	Correlations and models	
4	Distributions and sampling	
5	Probabilities and P-Values	
RW	--	--

Dissertation Schedule (Y3 & MSc)

Week	Schedule			
1	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
2	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
3	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
4	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
5	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		

Year 3 RM module (NEW MODULE) (Level 6)

Year 3 (Level 6)

Module Content

Module Learning Outcomes

Assessment

Assessment Element	Length	%	F or S	LO Tested

Reading and Resource List

We have a custom made textbook to support key study skills throughout your degree:

Year 3 schedule (NEW MODULE)

Week	Schedule			
1	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
2	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
3	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
4	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
5	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
6	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
7	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
8	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
9	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
10	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	

MSc Module (NEW)

xcghfg

MSc Module (NEW) schedule

Week	Schedule			
1	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
2	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
3	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
4	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
5	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
6	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
7	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
8	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
9	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
10	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	

Week	Schedule			
11	**Lecture:**	There was a wee cooper who lived in fife and his hat was green	**IndStud:**	There was a wee cooper who lived in fife and his hat was green
	Lab:	There was a wee cooper who lived in fife and his hat was green	**Data:**	There was a wee cooper who lived in fife and his hat was green
12	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
13	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
14	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
15	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
		Reading Week		
16	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
17	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
18	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
19	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	
20	**Lecture:**		**IndStud:**	
	Lab:		**Data:**	

Guidelines

QAA

QAA Benchmarks

3.4 Research methods are integral to psychology and students obtain a sound knowledge of, and a proven ability to use, a range of both qualitative and quantitative methods appropriately. Knowledge and understanding of how to obtain and analyse evidence is best acquired and demonstrated through extensive and progressive empirical work in laboratory and naturalistic settings through all stages of a degree.

3.5 Psychology students learn the basic principles of sound data collection. Given the broad theoretical scope of psychology, rigorous specialist training is required to engender a critical understanding of the role of experimental design, the choice of research methods employed, and the analytic approach taken, for testing psychological theories.

Subject knowledge and understanding 6.3 On graduating with an honours degree in psychology, graduates are able to:

1. understand the scientific underpinnings of psychology as a discipline, its historical origins, development and limitations

2. recognise the inherent variability and diversity of psychological functioning and its significance

3. demonstrate systematic knowledge and critical understanding of a range of influences on psychological functioning, how they are conceptualised across the core areas as outlined in paragraphs 4.4 and 4.5 and how they interrelate

4. demonstrate detailed knowledge of several specialised areas and/or applications, some of which are at the cutting edge of research in the discipline

5. demonstrate a systematic knowledge of a range of research paradigms, research methods and measurement techniques, including statistics and probability, and be aware of their limitations.

Subject-specific skills 6.4 On graduating with an honours degree in psychology, graduates are able to:

1. reason scientifically, understand the role of evidence and make critical judgements about arguments in psychology

2. adopt multiple perspectives and systematically analyse the relationships between them

3. detect meaningful patterns in behaviour and evaluate their significance

4. recognise the subjective and variable nature of individual experience

5. pose, operationalise and critique research questions

6. demonstrate substantial competence in research skills through practical activities

7. reason analytically and demonstrate competence in a range of quantitative and qualitative methods

8. competently initiate, design, conduct and report on an empirically-based research project under appropriate supervision, and recognise its theoretical, practical and methodological implications and limitations

9. be aware of ethical principles and approval procedures and demonstrate these in relation to personal study, particularly with regard to the research project, and be aware of the ethical context of psychology as a discipline.

Generic skills 6.5 On graduating with an honours degree in psychology, graduates are able to:

1. **communicate ideas and research findings by written, oral and visual means**

2. **interpret and use numerical, textual and other forms of data**

3. **be computer literate, for the purposes of furthering their own learning and in the analysis and presentation of ideas and research findings**

4. **solve problems by clarifying questions, considering alternative solutions and evaluating outcomes**

5. **be sensitive to, and take account of, contextual and interpersonal factors in groups and teams**

6. **undertake self-directed study and project management, in order to meet desired objectives**

7. **take charge of their own learning, and reflect and evaluate personal strengths and weaknesses for the purposes of future learning.**

References

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