

So you want to do (free) research?

Simon Knight offers some handy tips and resources for austere times

Do you, like me, have a BPS-accredited degree but no access to the resources of a psychology department? Or perhaps your university's licence agreement isn't wide enough to include software such as e-prime, or doesn't cover you as a student? Maybe your resources are simply stretched, in some of the less well-funded institutions. Whatever your reason, if you want to conduct research without costs beyond your own time, then this article is for you.

Background and literature

Your first step is likely to be scoping an area. Google Scholar often links not only to journal sources but also to other copies of the paper, including open access PDFs on university sites. Failing that, I often find that searching for article titles with '.pdf' outside the quote marks will bring

up a (free) version, often in 'final draft' form. Google Books is, of course incredibly useful for extracts of books, although access to what you want is hugely unreliable.

In the UK at least, it's often possible to get access to university libraries as a visitor for a fee. If you're a student anywhere, you can normally get access to university libraries as a visitor. As a member of the BPS, you can use Senate House Library in London, and you have access to a developing portfolio of online resources (see www.bps.org.uk/resources). Additionally, e-mailing people to ask for copies of papers can be acceptable. In particular it can be hard to find copies of measures

"it is still possible to conduct research at a junior stage of your career"

without contacting people – although sometimes these are copyrighted.

Ethics

My focus here is research on over 16s, for non-sensitive issues. If you're not sure about the quality of your research or capabilities of conducting it, you shouldn't continue; conducting poor research helps no one, and wastes your own and participants' time, which is ultimately a breach of ethics.

However, it is still possible to conduct research at a junior stage of your career, with training and very close support from qualified practitioners. My view is that one of the benefits of a psychology degree ought to be some degree of competence in research methods, so that one could use these skills 'in industry'. But it should always be borne in mind that whilst you might have research skills training from an undergraduate degree, this does not extend to every type of research, and your background knowledge does not cover every area of psychology. If you do not feel absolutely qualified in a methodology, or topic area, you shouldn't embark on practical research until you've undertaken training or gained a supervisor.

If you're attached to an institution, as a student or staff member, the first port of

Name	URL	Pros	Cons
SPSS	www.spss.com/uk	Widely used, powerful script with VB or python.	£210 minimum
SOFA statistics	www.sofastatistics.com	Very nice interface, export (python) scripts. Simple to use.	Deliberately limited options, not clear whether you can import/write scripts.
PSPPP	www.gnu.org/software/pspp	Cross-platform. Trying to replicate SPSS function & appearance.	Limited options presently.
RKward	http://rkward.sourceforge.net	GUI, based on powerful R language. Some standard stats tests (and graphics) have menu options (although some require self-coding).	R is complex. Linux primarily, Windows version is unstable.
R	www.r-project.org	Very powerful extensible scripting language <i>no gui</i> .	Steep learning curve.
R-evolution	www.revolutionanalytics.com	Will have a GUI, R extensible. Has all the power of R.	GUI coming 2011, r is complex (but powerful). You'll need to obtain a free copy by request or via an academic; it's expensive for commercial use.
OpenStat4	www.Statprograms4U.com	Wide range of functions. Probably cross-platform. Wide range of functions.	Not extensible. Not as attractive as (for example) SOFA, including output files.
PAST	http://folk.uio.no/ohammer/past	Very extensive list of operations. Extensible with 'simplified PASCAL' (unstable, modifications coming).	Designed for palaeontology research, so examples are about palaeontology, and some analysis may not be relevant for social sciences.

Table 1: Quantitative analysis tools

methods

package makes life much easier. <http://statpages.org/javasta2.html> has an extensive list of alternatives. I'm keeping my eye on r-evolution, and using OpenStat for now. The former uses the very powerful R language for statistical analysis and will have a GUI (menus, and so on as in SPSS) in 2011; depending on the quality of their GUI, this will create an impressive alternative to the SPSS model – and it's worth noting one of the brains behind SPSS is now working on this. Some of the other suggestions in Table 1 have other benefits – in particular SOFA produces very attractive graphs; however it's also worth checking their limitations and in particular whether they have the procedures you'll need to use.

Qualitative analysis

My interests are increasingly leaning towards aspects of qualitative research – however, I'm not an expert. As a more sophisticated way of 'eyeballing' text, I quite like www.wordle.net, which creates an image of the words you put into it in which the words vary in size

according to how frequently they occur in the text.

There are a number of programs designed to help in qualitative analysis as alternatives to programs like Nvivo, MaxQDA, Qualrus, ATLAS.ti and QDA Miner. Table 2 lists some of these, with features. For advice on the use of qualitative data analysis tools, the Online QDA pages prove useful (<http://onlineqda.hud.ac.uk/index.php>). The Digital Replay System looks particularly powerful, although Mac users wanting to do simple analysis might find TAMS is just as useful while Windows users might turn to Weft QDA.

Get it out there – publication

Where you can publish findings will depend on your field, but professional magazines, internal newsletters, websites, blogs and Twitter are all viable options. There's also no reason not to get in touch with academic journals in your field and see if you can publish with them. If you're still a student, or a recent graduate, you might also find essay competitions and

student journals are open to you. One such journal is the *Journal of European Psychology Students* (JEPS), an American (graduate) equivalent is the *New School Psychology Bulletin* (NSPB). Ensure you follow the author guidance offered (if none is given, drop the editor an e-mail). In terms of reference management, if you don't want to use EndNote, RefWorks or similar, Zotero is a fantastic Firefox add-on with much the same functionality as RefWorks including the ability to insert citations in-text in word processors and to save (and annotate) online articles to your PC in a folder-like structure; an invaluable tool to save time and organise your reading.

Whatever you choose, try to get your research out there: dissemination is central to research. And hopefully this article has persuaded you that creating an academic impression need not leave a dent in your wallet!

I Simon Knight is starting a PhD in Education at the University of Cambridge having previously taught philosophy, sociology and psychology A-level
sjgknight@gmail.com