

Case Study

Using the 'Observation Methods' CDROM and fOCUS-II as a qualitative research tool by doctorate students at the University of Manchester.

Dr **Garry Squires**, B.Ed, BSc, MSc, DEdPsy, Dip Psych, AFBPsS, CPsychol
Co-course Director of the Professional Doctorate in Educational Psychology
School of Education
University of Manchester

Background

A very successful doctorate course has been developed in the School of Education for qualified educational psychologists to return to part-time study. The doctorate course lasts 6 years and during this time participants are expected to complete 3 short research projects (about 8000 words) and 1 thesis (about 45000 words). This gives plenty of opportunity for data collection and analysis.

We currently have around 40 doctoral students at various levels of completion on the course. Most live within travelling distance of the university, but some live much further away and this means that they have to be able to access materials and support at a distance. All of the students on the course have already undertaken a first degree in psychology and masters degree in Educational Psychology that included completing a research project. They are all employed as educational psychologists with the majority working for local authorities and they have access to laptops to help them in their work.

The course tutors also work with local educational psychology services by providing training and helping other educational psychologists who are engaged in action research projects within their own local authorities.

When I saw fOCUS-II, I could see how it had been developed to teach the skills of systematic observational and quantitative methodology to undergraduate psychology students. The interface looked easy to use and it struck me that the ability to add annotations and devise coding systems opened up the possibility of using it for qualitative analysis. If this was possible, then it had potential advantages for our course:

- The materials on the CDROM could act as a reminder of undergraduate skills in systematic observations. Several of our students had graduated many years previously and although they used systematic observations in their daily work they might not be as rigorous as they needed to be for academic research. The package can be used as a stand-alone self-teaching unit using the Coding and Reliability materials.
- The fOCUS-II software seemed to also have the potential for supporting analysis of video and audio data collected by students through their research projects. It further seemed that the interface enabled coding and the addition of comments through the annotations box 'on the fly'. For qualitative data analysis this seemed an advantage over transcribing the whole of an audio recording as a first step to data analysis - it could save students hours of time in transcribing.
- The fOCUS-II interface looked very intuitive and easy to learn to use. For small amounts of video or audio data this looked to be a better tool than more sophisticated

packages such as ATLAS-Ti. I wanted students to spend more time analysing their data and making sense of what they had collected than learning to use the tools to help them with the analysis. The counter argument is that all doctorate students should learn to use sophisticated tools so that they can apply their skills to bigger research projects post-graduation.

- Once students had learnt how to use the software they could borrow a disc and use it on their own computer. This is similar to using other analytical tools such as SPSS and saves students the trip into the university to use cluster machines.
- It is possible to easily export data from fOCUS-II and then import it to other software for further analysis (such as EXCEL, MindManager, WORD).

With this in mind, I contacted Sue Martin and John Oakes and spent a morning with them being shown how to customise fOCUS-II. Their helpful comments and expert teaching enabled me to plan how to teach this skill to students.

Using fOCUS-II

Potentially we had several ways of introducing students to fOCUS-II:

- We could engage with one of the local authorities that we support to try fOCUS-II out as a research tool by using it in a piece of small scale research.
- We could provide individual training for students who were ready to analyse data and consider this alongside teaching the appropriate qualitative methodology (e.g. thematic analysis, discourse analysis, grounded theory)
- We could run a session at the University that would be aimed at a small number of students who might want to analyse video or audio data as part of a current project

In the end, we did try all three approaches.

Local authority trialling of fOCUS-II

As well as working at the University, I work as an Educational Psychologist in Staffordshire. One of my colleagues is completing the doctorate course at Sheffield University and she was working with an Assistant Educational Psychologist who is now doing her doctoral training at Birmingham University. We had a group of primary school head teachers who were experiencing high levels of stress and job dissatisfaction, so my colleagues set up and ran a solution focussed support group for them. In order to evaluate the impact of the support group, the head teachers were interviewed using a semi-structured questionnaire and the interviews were then converted into QuickTime (.mov) files for inclusion in fOCUS-II. This required a reasonable degree of computer literacy – files had to be transferred from the digital recorder to the computer using software that came with the recorder. They then had to be converted into a format that could be loaded into an intermediate software package to do the final conversion to QuickTime. The fOCUS-II data base then had to be edited and a new CDROM burnt.

We wanted to use fOCUS-II to carry out a thematic analysis. This involved several steps. Firstly an initial coding system was devised to match the research questions for the project. The codes used focussed on the following issues:

- The sort of problems that head teachers had.
- Why was peer supervision the only forum for discussing these problems?
- What was helpful about the sessions?
- What potential or actual barriers impeded the process?

Each interview was listened to and coded using fOCUS-II by the two psychologists. For each code, they added a transcript of what the head teachers were saying by using the annotation box in the fOCUS-II user interface. Once the record was complete, it was saved.

The next step was to open the record and use the export function. The text file produced was then available for further analysis. This involved importing the codes and text from all of the interviews into EXCEL and then grouping using the sort function.

The final step involved looking at the grouped themes and drawing out issues with specific examples to illustrate each. A paper reporting the project has been submitted for peer review (McBlain, Squires and Richards; submitted)

The success of using fOCUS-II for this project led my colleague to discussing it with other doctorate students at Sheffield University. One of these students joined us for a one-day workshop and he talked about it with his course tutors who have now expressed an interest in using the software on their programme.

Individual Training and Supervision on fOCUS-II

Having succeeded in using the fOCUS-II in a way that I hoped it could be used, I then thought about how this might be used with individual students who would be working alone. One of our students had already got interviews recorded and video rushes that she wanted to analyse. Rather than wait for the one-day workshop she received a more condensed individual run through the software and guidance on including her own material. This was a two and a half hour session and we were joined by her partner – a lecturer at Manchester Metropolitan University.

She had a lot of video material to code and we decided that this required burning to a DVD rather than a CD and she was encouraged to use re-writable discs so that further new material could be added as the project developed. Although she used the fOCUS-II for several pieces of video, she decided that the time taken to convert formats and then burn discs outweighed the advantages. This meant that most of her video was coded straight from tape and manually recording tape-counter settings and adding notes to paper.

I understand that fOCUS-III is under development and will get around the need to burn discs by allowing video and audio files to be added more easily from the computer hard drive. With the price of external hard drives falling and their capacity increasing, this might mean that students could work with large amounts of video data in a way that does not swamp their computer.

One-Day Workshop

A one-day workshop was devised as an optional extra for students, with a limit of 10 places for those who wanted to attend. A supporting handout was devised that would start with basic computer skills (e.g. installing fOCUS-II) and then moved through using the interface to advanced skills required to burn a new CDROM. Students were able to bring their own laptops with them and most were able to load the software successfully. In one case, the local authority had restricted permissions on the machine to prevent users from loading illegal copies of software. This student was able to work alongside another student.

The morning session consisted of a tutor led introduction to the software using the power point presentation and then allowing students to work in pairs through the Coding Unit using the worksheet on the CDROM. Students were directed to the Unit on Reliability as a self-teach unit to do at home and given the option of completing the assessment questions for both units to provide portfolio evidence of development of research skills. By the end of the morning, the students were feeling competent in using the fOCUS-II interface and were able to code behaviours successfully.

The afternoon part of the session developed this further and students were warned that this was going to be a technical session. We started with the idea that the students' own audio and video material can be added by burning new discs. The fOCUS-II interface was explored further, particularly looking at how coding schemes can be created to support qualitative research and how annotations can add commentary or higher order codes (depending on the methodology chosen e.g. thematic analysis, Interpretative Phenomenological Analysis, grounded theory). Exporting the codes and commentary to Excel so that further analysis can take place was practised. This used the sample record on the CDROM as a first step (although the output was uninspiring for our use). I was then able to use real data from the head teacher project and some interview data from the DfES project reviewing the role of educational psychologists (Farrell et al., 2006). This data was useful to look at, partly because it came from the professional field and was intrinsically interesting to educational psychologists but also because it illustrated the potential of combining fOCUS-II with other software in order to help with the extraction of meaning. Students then spent some time practising looking at the fOCUS-II file structure and editing the database and burning a RW-CDROM.

Development

As it stands, the *Observation Methods* CDROM is a useful distance learning revision tool that we feel confident we can give to students who want to revisit the notions of systematically recording observations and consideration of reliability and validity of quantitative data.

Several other students have expressed an interest in attending further workshops to introduce them to fOCUS-II. The handout produced for the first workshop seems 'fit for purpose' and has been added to our WebCT site. This means that students can access the handout and then arrange a tutorial to learn how to use the software for their own project. We feel that we can approach fOCUS-II training through both strategies equally well.

We certainly feel that fOCUS-II is a useful tool for helping doctorate students extract meaning from qualitative data. For some students, all of the steps needed to get their data into the right format and to burn a disc is a stumbling block. We are hopeful that fOCUS-III will reduce some of these steps so that our less computer literate students can cope with some support from the tutor team.

The potential usefulness of fOCUS is also being considered by other tutors running post-graduate psychology courses within the School of Education.

References

McBlain, A-M, Squires, G. and Richards, V. (submitted) Keeping Heads Above Water: Solution Focussed Support Groups for Headteachers *Educational Psychology in Practice*

Farrell, P., Woods, K., Lewis, S., Rooney, S., Squires, G. and O'Conner, M., (2006) *A Review Of The Functions And Contributions Of Educational Psychologists In England And Wales In The Light Of "Every Child Matters: Change For Children"* Annesley, Nottingham: Department for Education and Skills Publications