



Faculty of Business, Law and Social Sciences

Proposed Title: Examining statistics anxiety in students
School: School of Social Sciences
Proposed Supervisory Team: Dr Jeffrey Wood Dr Emma McDonald Dr Keeley Abbott
Abstract: <p>The study of Statistics is an important part of many topic areas and is a critical skill in understanding and carrying out research in many of the sciences. However, research has shown that students often perform poorer on these courses than might be expected based upon their general academic ability. One of the most important barriers to student success within statistics has been shown to be statistics anxiety. There have been numerous studies which have established the key factors which lead into why students feel anxiety towards this topic, such as lack of confidence in their mathematics ability. There has also been research into how to alleviate some of this anxiety. However, most of this research is either cross-sectional or uses short term longitudinal designs of just one semester. This work has shown that poor performance in one assessment can lead to a lack of engagement in further study. This project will, therefore, follow up on whether these short-term effects have a long-term impact upon students' performance throughout their degree. This is important to know given that in many subjects, including psychology, students study statistics over several years. Furthermore, the previous research has not focused as heavily on what aspects of statistics it is that students find most anxiety provoking. For example, how much information on a figure is beneficial to a student's understanding. It is, therefore, critical that this be investigated so that those teaching statistics have a better understanding of how to present information for students in a way, which helps them to understand the concepts without provoking high levels of anxiety. To complement this, it is important to also understand how statistics is taught currently and what influences lecturers choices in how they teach statistics.</p>
Research Environment: <p>The research will use a variety of lab-based testing methods including eye-tracking to look at the how students view statistics concepts and figures during their learning processes. This will use existing equipment within the department and will be conducted alongside other researchers working on projects requiring similar levels of technical expertise. There are also two dedicated technicians within the department who have expertise in the equipment which will be used in this project and will be on hand to assist with any technical issues with the eye-tracker or EEG equipment. This will enable students to feel fully supported in using these pieces of equipment for the projects on this PhD.</p> <p>We will also used established questionnaires and qualitative interviews which all the supervisory team have extensive experience in using. This will enable the student to feel supported in the use of and analysis of the results of these measures during the Ph.D.</p>

Applicant Requirements:**Essential:**

BSc Psychology (Hons) Degree (2:1)
Computer proficiency (Microsoft office, SPSS)
Good communication skills
Good writing ability
PG Cert or willingness to gain
Undergraduate level quantitative statistical analysis
Effective oral and written communication skills
Ability to work as a member of a team with shared goals
Interpersonal skills: ability to relate to others with tact and diplomacy

Desirable:

First Class BSc Psychology (Hons) degree
MSc in Psychology or Psychological Research Methods,
Programming experience with Experimental Psychological Software (E-Prime, MATLAB, Inquisit, R, etc.)
Experience teaching statistics
Experience conducting psychological experiments
Postgraduate/advanced level quantitative statistical analysis

Contact: Name, e-mail and telephone number:

Jeffrey Wood
Jeffrey.wood@bcu.ac.uk
0121 331 5715

Emma McDonald
Emma.mcdonald@bcu.ac.uk
0121 331 6939

Keeley Abbott
Keeley.abbott@bcu.ac.uk
0121 331 4090