Topic stream: B. Good practice

Submission type: Presentation

Submission title:
Demonstrating the links between psychology and biology: The practical use of Biopac in undergraduate psychology teaching

Abstract:
Joint Submission: Jennifer Murray, Maria Shaw, & Alex Willis

For those unfamiliar with psychology, there is often a perception that it is a subject that is all about the mind and 'talking therapies. However, since the 1930s this has not been the case. Modern psychology seeks to build our knowledge base about human behaviour, cognitions, and society through a combination of biological, psychological, neuropsychological, and social understandings. Across several of our undergraduate Psychology modules at Edinburgh Napier University, we use practical learning tasks which aim to bring together and integrate these areas using physiological measures, such as heart rate, electrodermal activation, respiration, and Event Related Potentials (a measure of 'brain activity') and psychological theories, including personality, emotion and lie detection/interrogation to encourage active learning within the classroom. Students work in small groups during three hour practical sessions, using 'Biopac' – hardware and software used to measure physiological responses – and specific psychological tasks that have been developed for our module needs, to best suit our students' learning opportunities. Students each act as a participant, an experimenter, and a data recorder for the task(s) and then individually analyse their own data and that of the whole year group. This in-depth, tailored use of Biopac demonstrates to the students in a practical way that psychology can use scientific method, and that it is not all about reading papers, questionnaires, and therapies. In this sense, we seek to promote both active and deep learning through the practical tasks that challenge common pre-conceptions about psychology. This talk will discuss in more detail the ways in which the classes are used, the pedagogic underpinnings, and also more pragmatic issues, such as how the standard Biopac setups have being used to meet the need of our class based experiments, looking at the problems we have had and some novel solutions. It will also discuss an overview of the student experience and some final year projects that have used Biopac. Finally, it will outline how we will be developing and expanding our usage of Biopac and creating our own bespoke Biopac setups.