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Discussion Paper

Psychology as a STEM Discipline

Psychology is a science that contributes greatly to a number of other Science, Technology, Engineering, and Mathematics (STEM) disciplines. Utilising scientific methods, psychologists create knowledge and solve real-world problems, with very practical implications. Unfortunately, psychology is not often recognised as a STEM discipline, or at least not consistently across different bodies (American Psychological Association, 2010; Sage, 2010).

As the scientific study of the mind and behaviour, the impact of psychology on society is very clear. From improving health and wellbeing, to understanding behaviour, psychology has an impact on most aspects of our everyday lives. For example, psychologists have been involved in designing British coins to aid the visually impaired (Bruce & Hellawell, 1988); safety aspects and the ergonomic layout of cockpits (Craig, 1940); and developing rear-facing pushchairs to assist parent-child interaction (Zeedyk, 2008). Beyond this, psychologists have helped to develop effective educational programmes, influence public health policy, inform legislation, create care systems, produce statistical techniques and shine a light on complex decision making.

Many real-world problems require collaboration among disciplines, which is something that psychology does very well. This is important because forging connections with other disciplines and areas of research is one way which may enhance psychology's standing as a core STEM discipline. Research students play a key role in this, as they are increasingly working on complex, but innovative inter-disciplinary PhDs. For example, my own doctoral research brought together core ideas about social, cognitive, and health psychology by focusing on how an individual's relationship with their environment promotes or inhibits excessive alcohol consumption (Hill, 2014). Not only is alcohol misuse an area of public health concern, but these ideas potentially have implications for environmental design and how we understand complex social behaviours.

Over time, the public are becoming more receptive to the work that psychologists do, but these perceptions may not always be accurate. For example, if you were to ask a member of the public what a psychologist does, how closely would this description reflect what you do on a daily basis? The many reasons for these often inaccurate perceptions are beyond the scope of this article (see Klatzky, 2009), but it is our responsibility as psychologists to communicate the value of what we do to others and to consider the impact of our research. As Miller (1969) suggested, wherever possible, we must *give away* innovative methods, interventions or results which contribute to the public good.

There are a number of ways to do this, from publishing research to presenting at conferences. One way that I achieved this as a postgraduate student was by becoming a National STEM Ambassador. STEM Ambassadors support students, teachers and educational establishments by enriching and enhancing the psychology curriculum. For example, by going into schools and informing students about psychology-related careers, or helping to support teachers in lessons. Following training, I found myself helping to organise and taking part in a number of STEM events, including A-Level research conferences, open days and Science Bazaar festivals.

Research students aiming for a career in academia are often told that a PhD is not enough, leaving many students trying to find ways to enhance their skills and stand out from other candidates. My own experiences as a STEM Ambassador were so much more than something I could add to my CV. As well as improving my own professional skills, experience and confidence, I really felt as if I was contributing to the futures of young people by enthusing and motivating them to find out more about psychology. For example, I fooled children and adults into thinking a rubber hand is their own hand; used magic tricks to teach students about awareness and attention; and explained how the visual system works using impossible objects and visual illusions.

Now as a lecturer at The University of Northampton, I have had the opportunity to build on the relationship between Psychology and STEM. Many universities have a faculty-based STEM programme, which potentially isolates psychology from other disciplines. Northampton has a unique inter-disciplinary STEM Steering Group and its own STEM Champions programme. This brings together all areas of Science and ensures that psychology has a clear STEM membership. One of our most recent *Getting the Buzz from Science* days involved more than 80 Year 3 girls from ten Northampton primary schools. For the first time at this event, an interactive psychology workshop appeared alongside other sessions on atomic science, biodiversity and engineering.

Being a psychologist requires individuals to be problem solvers. Therefore, it is up to us as psychologists to make sure that psychology has a clear STEM membership. For me, psychology is clearly a science, but it is important that we continue to communicate this and increase our involvement with other disciplines. Even if we do not have the opportunity to become a STEM Ambassador, we can still promote the impact and applications of our research to local communities and ensure that others can see the value of our work. Not only will this improve our own professional practice and employability skills, but it might even inspire others to forge a career in psychology.

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Information about the national STEM Ambassador scheme can be found at:
<http://www.stemnet.org.uk/ambassadors/>

To find out more about STEM at The University of Northampton please see
<https://mypad.northampton.ac.uk/stem/> or follow: @STEMatUN on Twitter.

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