

Enhancing the Psychology Student Journey Through STEM Outreach

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Engaging the Wider Public in Psychology

As the scientific, applied study of individuals, the mind and behaviour, Psychology sits firmly within the STEM remit. Unfortunately, it is not consistently recognised as a STEM discipline^{1,2}. Psychology's STEM membership relies on communicating its' value and application to the wider public, while increasing participation opportunities^{3,4}.

The National STEM Ambassadors programme helps to maximise public engagement and participation in subjects like Psychology, by providing professional recognition and training for those wanting to volunteer to enthuse young people in STEM education and careers. Much work focuses on primary, secondary and further education, but higher education institutions are becoming more involved in raising STEM aspirations.



"I feel that I can really make a difference."

Psychology STEM Champion

The University of Northampton's STEM Approach

The University of Northampton (UoN) also has its own STEM Champions programme and a unique, STEM Steering Group (SSG). This ensures STEM activities are championed across the University and fosters cross-discipline collaboration, by bringing together staff STEM Leads.

Staff and students are supported in becoming STEM Champions and can participate in a coordinated programme of inreach and outreach events. As the SSG mediates the relationship between the University and the local community, these events include young people and community groups from across Northamptonshire.

This year, a funded STEM Team Leader pilot scheme has ensured students are involved in the co-creation and management of STEM events and activities. Student Team Leaders work closely with staff STEM Leads to assist with discipline-specific training, activities and recruitment, while providing valuable peer support to student STEM Champions.

STEM Roles

- *Staff STEM Team Lead* - A discipline-specific STEM staff coordinator and SSG member.
- *Student STEM Team Leader* - A discipline-specific STEM student coordinator.
- *UoN STEM Champion* - Staff/ students with local STEM Champion recognition.
- *National STEM Ambassador* - Staff/ students with national recognition.



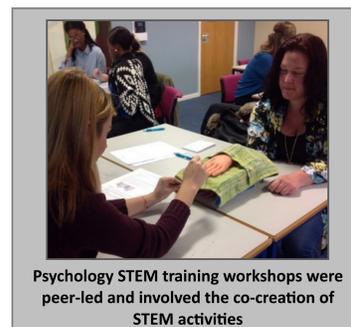
"Team Leaders are valuable in connecting staff with students." **Psychology STEM Lead**

Enhancing the Psychology Student Journey

Psychology has recently been represented in The UoN's STEM provision for the first time, with a dedicated Psychology SSG member and Lead, a student Team Leader and tailored training sessions. This has led to over sixty Psychology STEM Champions signing up to the programme and involvement in over twenty STEM events. STEM activities have included building play-doh brain models, human displays of synaptic transmission and demonstrating how the visual system works using impossible objects and visual illusions.

Transferring interest into practice proved difficult, as less than half of these students attended training sessions and became active Psychology STEM Champions. Feedback from the Psychology Team Leader also suggested that the least enjoyable aspect of the role was liaising with students who did not maintain their commitments. Challenges remain in engaging students throughout the academic year, particularly during the end of term or holidays.

Psychology Students used their STEM experiences to define their career paths, clarify career options and most enjoyed being a positive representative for the university. Students took part to work with young people, help others and gain experience in professional environments. Champions enjoyed creating STEM activities and showed great competence sharing their Psychology knowledge in innovative ways. Involving students in the design, construction and dissemination of STEM activities allowed students to take ownership of their STEM provision, enhancing the connections that they made between their degree and future careers.



Psychology STEM training workshops were peer-led and involved the co-creation of STEM activities



"My Amazing Brain" Girls Into Science Workshops involved 100+ year 3 girls from Northampton primary schools



Many thanks to the **British Psychological Society's Post-Doctoral Bursary Scheme** in supporting HEA STEM conference attendance.

Key Points

- Psychology is an **important** and **impactful** STEM subject, but more needs to be done to **promote** its value to the **wider public**.
- Psychology STEM initiatives provide important **public** engagement and **participation** opportunities, which potentially **reinforce** Psychology's **STEM membership**.
- This work may **enhance** educators' **professional practice** and **student employability** prospects, but must involve **student representation**.

"I applied because I felt that it would give me real psychology related experience and allow me to network with people already in the field."

Psychology Team Leader



Conclusion and Implications for Practice

The UoN's STEM approach helps to share the value and application of Psychology, while widening participation and enhancing the University-community relationship.

As well as enhancing Psychology's STEM membership, these initiatives empower HE students as partners within STEM provision and strengthen the student voice within the Psychology student journey. Psychology STEM Champions and Team Leaders obtain essential knowledge, skills and experience of working within professional environments, which is valuable for graduate success within competitive Psychology careers

These activities must not be viewed as extra curricula, as they are integral to the student experience. While there are clear benefits for educators, more work is required to increase staff participation, recognition and perceptions of STEM engagement.

References

1. American Psychological Association (APA). (2010). *Psychology as a Core Science, Technology, Engineering, and Mathematics (STEM) Discipline*. Retrieved 16/09/2015, 2015, from <http://www.apa.org/science/about/psa/2010/08/stem-report.pdf>
2. Sage. (2010). *Recognising Psychology as a STEM Discipline*. Retrieved 16/09/2015, from <http://www.socialsciencespace.com/2010/12/recognising-psychology-as-a-stem-discipline/>
3. Hill, K.M. (2015). Psychology as a STEM discipline. *PsyPAG Quarterly*, 96, 44-47.
4. Hill, K.M. (2017). Enhancing the Psychology STEM student journey. *Psychology Teaching Review*. 0965-948X. (In Press)

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