



**QUEEN'S
UNIVERSITY
BELFAST**

Creativity in bioscience teaching: improving student knowledge and understanding, and enriching the student experience

Rogers, K. M. A., & Bennett, M. (2017). Creativity in bioscience teaching: improving student knowledge and understanding, and enriching the student experience. *Reflections*, (25), 9-10.

Published in:
Reflections

Document Version:
Publisher's PDF, also known as Version of record

Queen's University Belfast - Research Portal:
[Link to publication record in Queen's University Belfast Research Portal](#)

Publisher rights
Copyright 2017 Queen's University Belfast.

General rights
Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact openaccess@qub.ac.uk.

Open Access
This research has been made openly available by Queen's academics and its Open Research team. We would love to hear how access to this research benefits you. – Share your feedback with us: <http://go.qub.ac.uk/oa-feedback>

Creativity in Bioscience Teaching: improving student knowledge and understanding, and enriching the student experience

By Katherine MA Rogers and Maggie Bennett, School of Nursing and Midwifery

Introduction

Engaging with bioscience subjects can be challenging for some nursing students because they lack confidence in their ability to study science. Consequently, many students and qualified nurses have difficulty applying the anatomy and physiology (A&P) that underpins their professional practice and is essential to provide safe and effective patient care (Rogers, 2014).

Recent evidence highlights variation in the extent of bioscience teaching and assessment across nursing curricula (Taylor et al., 2015). To improve student engagement in A&P, nurse educators also need to develop innovative and creative approaches to enhance the teaching and learning of bioscience subjects.

Given the links between art, science and nursing (Jasmine, 2009), this project aimed to explore the benefits and impact of engaging undergraduate nursing students in A&P through the artistic medium of felt.

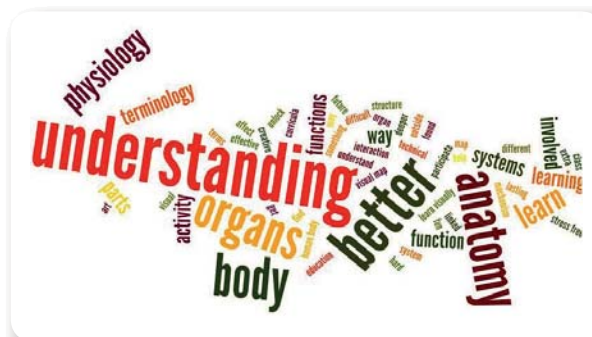


Figure 1: Setting the scene – a “Word Cloud” created from the brainstorming session at the first workshop; students were asked the question “what do you hope to achieve from the workshop?” It demonstrates their main aim was to better understand A&P.

Objectives

This project was funded by a Teaching Innovation Award from the School of Nursing and Midwifery at Queen’s, to explore creative ways of engaging year one undergraduate nursing students in learning anatomy and physiology.

The complex organisation and function of the human body can be difficult to understand and many Nursing and Midwifery students lack confidence in their ability to study science. This project aimed to help students explore their creativity and develop new study techniques that could assist them with knowledge acquisition and clinical application of A&P in practice.

Methods

Year one undergraduate nursing students participated in a series of workshops designed to explore the cells, tissues and organs of the human body through felt.

An information event was held to introduce students to the project, trigger interest, and recruit participants to the workshops (Bennett & Rogers, 2014).

The project was facilitated by lecturers in nurse education in partnership with an artist from Arts Care, a unique arts and health charity in Northern Ireland.



Figure 2: Felting in action; students tease the felt wool fibres and layer the fine threads before binding the pieces using warm soapy water and bubble wrap. Students are encouraged to consider colour because it is a very important part of the creative process that can trigger memory or emotion which aids learning.

Felting engages all the senses as it involves manually teasing out individual wool fibres, which are then remodelled to form intricate designs before being bonded together using warm soapy water.

Evaluation of the project's outcomes and impact was based on individual reflective journals completed by each student throughout the project. The participants' self-reflection reported improvement in essential A&P knowledge and understanding, and their generic study skills.

Results

The creative process translated and transformed the students' learning in the A&P of cells, tissues and organs; while also creating striking, memorable art works, which have been collated in an exhibition entitled "Breathe"

and presented in a number of public exhibitions across Northern Ireland.

Analysis of the student reflections revealed the project was also associated with positive emotion, engagement, meaning, positive relationships, and accomplishment – elements which have been identified as contributing to overall well-being (Seligman, 2011) and an improved student experience. The project is an accredited Degree Plus activity, so participation has also enabled students to enhance their skills for career progression and employability.

Impact and Conclusions

This paper reports on the positive impact the creative project had on the overall experience of year one nursing students, by enhancing their A&P knowledge, and positively impacting

on their approach to the professional nursing care of patients.

This paper proposes that how we teach A&P can enable students on any bioscience programme to flourish as individuals, enhancing subject knowledge and understanding, enriching the student experience and improving overall well-being.

Contact details

If you would like further information about this project please contact Dr Katherine Rogers (k.rogers@qub.ac.uk) or Ms Maggie Bennett (m.bennett@qub.ac.uk) at the School of Nursing and Midwifery.

References

- Bennett, M. & Rogers, K.M.A. (2014). First impressions matter: an active, innovative and engaging method to recruit student volunteers for a pedagogic project. *Reflections*, 18, 6-7. Available online at: QUB, Centre for Educational Development / Publications / Reflections Newsletter, Issue 18, June 2014
- Rogers, K. M. A. (2014). A Preliminary Evaluation of a New Life Science Module for Year One Nursing and Midwifery Students. *Health and Social Care Education*, 3, 46-47.
- Taylor, V., Ashelford, S., Fell, P. & Goacher, P. J. (2015). Biosciences in nurse education: is the curriculum fit for practice? Lecturers' views and recommendations from across the UK. *Journal of Clinical Nursing*.
- Jasmine, T. (2009). Art, science, or both? Keeping the care in nursing. *Nursing Clinics of North America*, 44, 415-21.
- Seligman, M. E. P. (2011). *Flourish: A New Understanding of Happiness and Well-Being - and How To Achieve Them*, London, Nicholas Brealey Publishing.