

Cannulation and Venepuncture Training for Pre-registration Nursing

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Introduction

Peripheral venous catheterisation (PVC) and venepuncture are two routinely performed invasive procedures that have vital roles in the diagnosis, treatment and management of patient's symptoms (Simonetti et al., 2019; Dougherty, 2008; Alexandrou et al., 2012). Currently in the United Kingdom, these skills are only taught to qualified staff (Nursing and Midwifery, 2010). The introduction of the revised NMC standards of proficiency for registered nurses (NMC, 2018) earlier this year means the knowledge and skills that registered nurses require when caring for patients to meet proficiency outcomes have changed; now including PVC and venepuncture. The training will be implemented alongside the revised curriculum that will commence September 2019.

Aims and Objectives

- To design a teaching programme that would facilitate pre-registration nursing students to acquire knowledge and skills related to safely and effectively perform venepuncture and cannulation.
- To use evidenced-based approaches that is in line with the university's strategic plan to offer for quality education and transformative educational experience (UWL, 2018).
- To incorporate a mixture of teaching styles that meets the students various learning preference which involves:
 - Creating a pre-session e-learning that includes bite-sized teaching, interactive videos, links to resources and assessments as a means of providing technology-based feedback.
 - The development of a simulation-based learning pack for the face-to-face session.
- Identification of key trainers.

Methodology

The Plan, Do, Study, Act (PDSA) cycle will provide the framework for the development of this teaching programme. This structured approach is an established framework for quality improvement used in contemporary healthcare that is helpful in developing, experimenting, and reporting changes as well as encourages new knowledge and ideas to be formed through small scale testing that can lead to advancement in practices (NHS Improvement, 2018; Morelli, 2016; Reed and Card, 2016). The model can aid in decreasing the risks, cost of time and money as well as encouraging stakeholders to engage which is an important aspect in ensuring the success of any project (NHS and NHS Improvements, n.d.; Leis and Shojania, 2017).

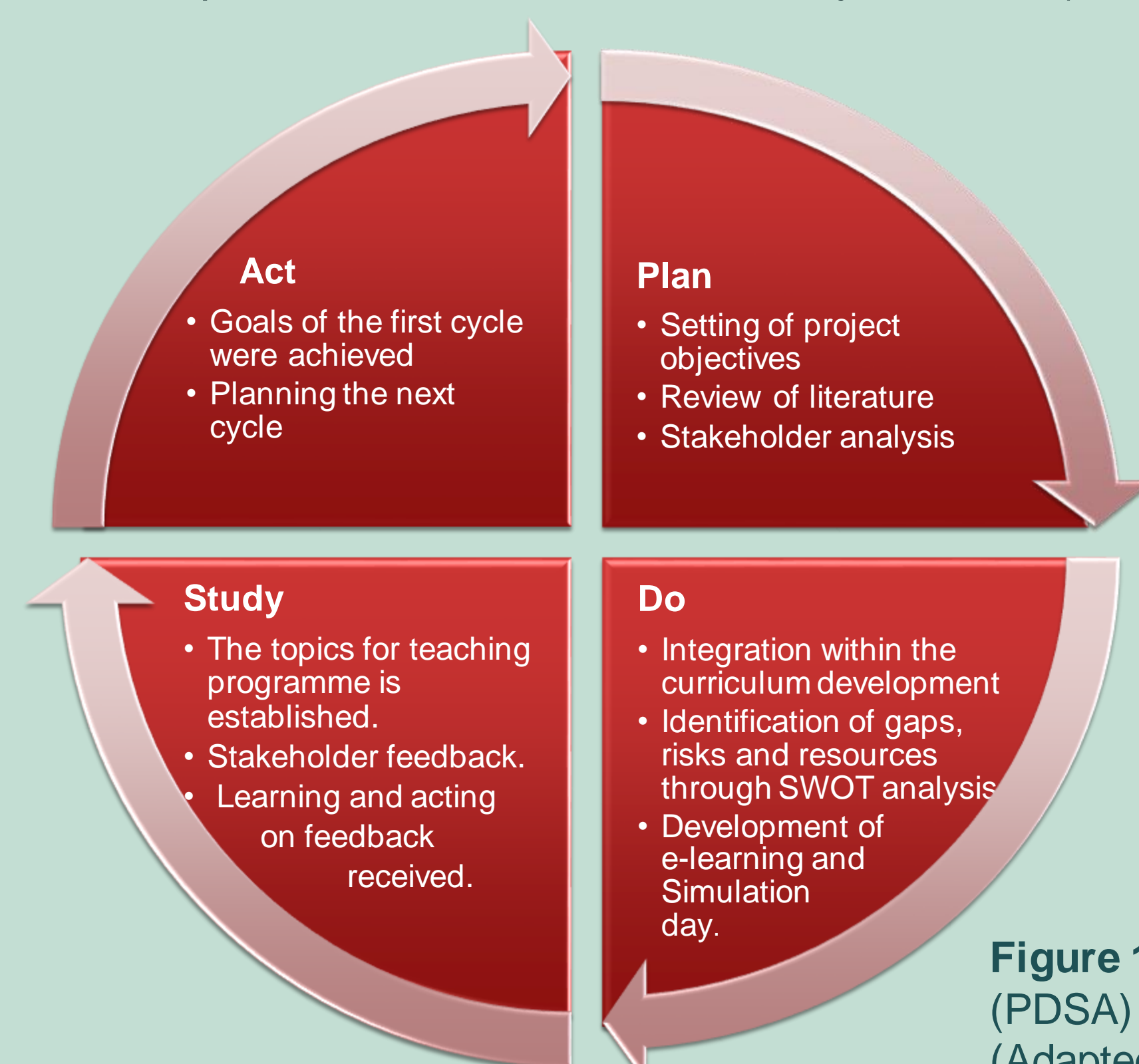


Figure 1. Plan, Do, Study, Act (PDSA) Cycle Implementation (Adapted from: Morelli, 2016)

Evaluation

The measurement for its efficiency would be based on the students' confidence and competence in performing the procedures under direct supervision which can be assessed through simulation and the PAN London Competency Book within their placement.

Outcomes

The project resulted with:

- Sharing of expertise as key trainers were identified from the Sciences that Underpin Nursing theme members.
- Collaboration with midwives for standardisation of venepuncture and cannulation training within the College of Nursing Midwifery and Healthcare.
- Collaboration with the Richard Wells Centre (UWL) using their resources as evidences to support the teaching programme.

The Learning Programme

1. E-learning using Xerte as platform

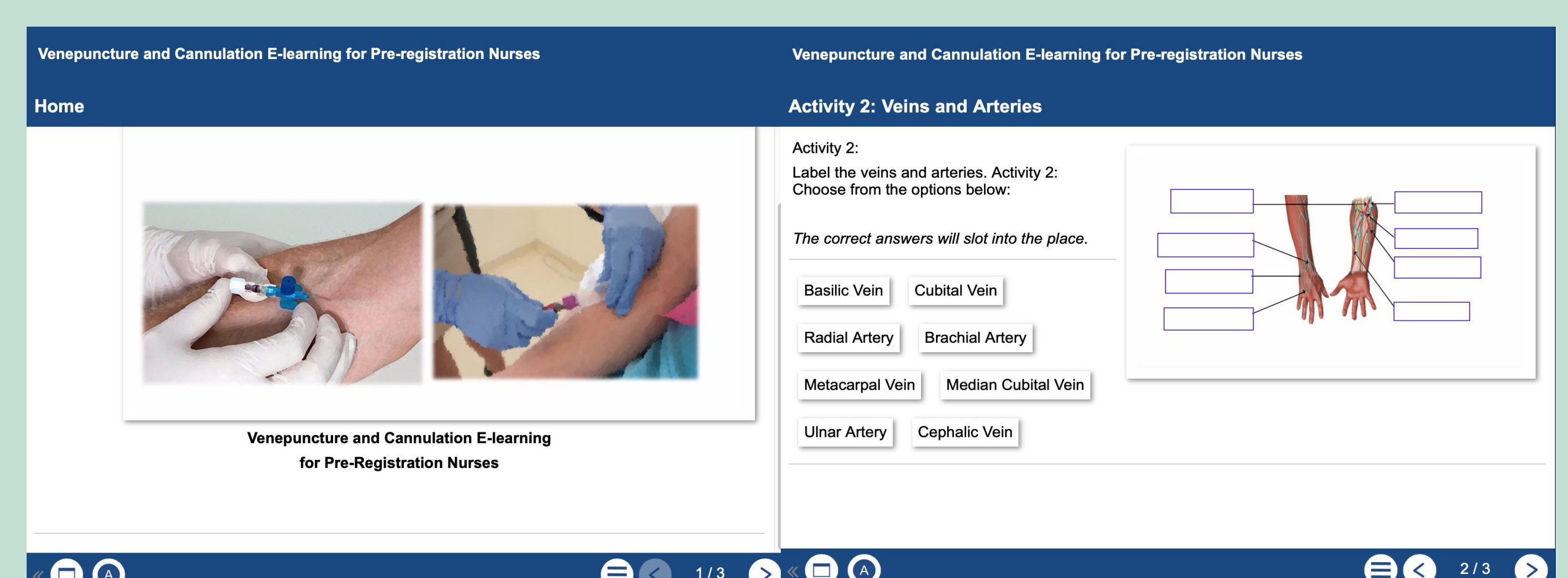


Figure 2. Excerpts from the Cannulation and Venepuncture e-learning.

2. Simulation-based learning day



Figure 3 (Adapted from simulation centre photos) Figure 4 and 5 (own)

Conclusion

The teaching programme that was developed through this project offers a combination of teaching and feedback styles that suit each students' learning style. It has the potential of offering an active and transformative learning experience that could positively impact students' learning. It integrates a culture of quality and safety in patient care that is based on the best available evidences that can inform practice. Lastly, it has provided some valuable insights in designing other skills training within the new curriculum using quality improvement tools such as the PDSA cycle.

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