

# Educationalists and industry: the benefits of co-working for student learning

**Background:** Educational institutions are tasked with developing healthcare professional students into autonomous practitioners, confident to practise upon graduation. We initiated links with industry to develop a venous leg day for podiatry students, combining simulation and theory sessions with a public venous assessment day, where application of knowledge could be put to practical use.

**Aim:** To explore the experiences of students participating in the education industry initiative and the difference this may make to their skills.

**Methods:** Qualitative focus group interview study of four individuals who had participated in venous leg training and the venous leg day to explore their experiences of this learning experience. Template analysis, a form of thematic analysis, was used to structure the analysis.

**Results:** Analysis identified three key themes: real world = real benefit, foundations for future learning and professionalism, and the positive benefits of academia and industry collaboration. Students perceived the industry-educational collaboration as being of benefit to their learning, enabling application of knowledge to real world situations.

**Conclusion:** Findings reveal the enhancement of learning when integrating educationalists and industry experts. Students reported the benefits of collegiate working and were able to gain confidence in understanding the importance of compression hosiery, and in being able to feed this forward into additional clinical work.

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### Key words

- Undergraduate education
- Educationalist-industry collaboration
- Focus group research
- Podiatry
- Lympho-venous

The primary purpose of pre-registration education is to develop healthcare professional students into autonomous practitioners who are confident to deliver effective care to patients upon graduation. Podiatrists in the UK are educated to degree level to meet the requirements of the regulator, the Health and Care Professions Council.

The contribution podiatrists make to the health of the nation is often underestimated, misunderstood and in the process of reform (Saks, 2021). In the context of this paper, the role extends to wound prevention and management across a range of lower-extremity tissue viability pathologies. One such area is the field of lymphovenous diseases of the lower limb.

The landscape of lymphovenous care and prevention has seen a shift from a predominant focus on wound management to a drive for early identification, prevention and prompt intervention (Porter, 2018; Atkin, 2019). The discourse has also changed from a nursing and medical focus to include other allied healthcare professionals (Roberts et al, 2023). The devastating impacts of lymphovenous diseases are well documented, highlighting the

need for transformation towards preventative practice (Barnsbee et al, 2019; Guest et al 2020).

The podiatry department at the University of Huddersfield introduced leg awareness days into their undergraduate curriculum to increase student exposure to patients with lower-limb venous diseases. Members of the public who suspected that they might have venous disease were invited to attend the university's podiatry clinic to receive checks on their lower limb and, where necessary, advice and preventative care in the form of compression hosiery.

Leg awareness day is not a new initiative, having been developed over several years. However, the model was rejuvenated in 2024, with new industry partners bringing their own educational focus to complement the existing academic approach. Where existing academic clinical practice encompasses all manner of lower limb and foot pathology across a broad spectrum of practice, our industry partners brought a specific focus and expertise on the prevention of lymphovenous progression. This narrower remit enabled them to impart finer detail around the use of compression for example alongside meticulous skincare advice and promotion of greater physical activity.

### Declarations

Conflict of Interest: None

### Acknowledgments

We thank Essity, our industry partners, for contributing to the venous leg awareness day and to the open access publication fees.

Indeed, the model of leg awareness events is now deployed in numerous geographical locations and health settings across the UK. The University of Huddersfield model is the only one currently involving undergraduate students as part of their training. This collaboration between industry and academia is a significant innovation in teaching and learning, which adds to current models of podiatry education and development of professional identity (Tobbell and Roberts, 2023). While universities and industry frequently form collaborations for research, knowledge transfer and work-placement purposes there are surprisingly few examples in the extant literature of partnerships for teaching and learning purposes.

Relevant research is engineering based and demonstrate some findings in line with our intentions for the leg awareness days, namely the facilitation of experiential learning and skills acquisition (Bebegali-Mirabent et al 2020; Shah and Gillen, 2024).

### Aims

The aim of the project was to explore the experiences of students participating in the education-industry collaboration and explore the differences, if any this made to their professional development.

### Ethics

Ethical approval was gained from the School of Human and Health Sciences Research, Ethics and Integrity Committee, number SREIC\_2025\_002.

### Methods

A focus group interview was conducted to explore the experiences of students who had completed both venous compression hosiery training and had participated within the public venous leg awareness day. Template analysis, a form of thematic analysis, was used to support data analysis (King, 2012).

### Sampling

A purposive sample was taken from the final year podiatry students and apprentices to ensure they had participated in both the industry-led training and had experienced the collaborative educationalist- industry public clinic (Robson, 2024).

### Recruitment

Recruitment was via email and an announcement to the cohort of 48 during a clinical teaching session. Both recruitment strategies highlighted participation was voluntary, subsequent education would not be affected, and withdrawal was possible from the

**Table 1. List of pre-agreed topic areas to be explored during the focus group.**

- Experiences from the leg awareness day and compression hosiery training
- Their views on this as a learning experience
- Their views on working with industry partners
- Their experiences of working with the public, specifically, those not acclimatised into the normal working of an educational clinical setting.

focus group at any time.

The participant information sheet also informed due to the nature of a focus group, any data collected up to the point of withdrawal would be included in the analysis. Potential participants had the opportunity to ask both researchers questions pertaining to the research. Consent was signed prior to the focus group which informed participants that the focus group would be recorded, direct quotations would be used to support analysis, and to maintain anonymity participants would be referred to as "participant 1" chronologically in order of speaking.

### Focus group interviews

An online Microsoft Teams focus group was intentionally chosen to enable sharing of perspectives and consideration of other ideas to develop deep and rich data (Bowling, 2023). Teams was chosen due to the cohort's familiarity with this online platform, utilised for online seminars and group work throughout the course of the degree programme. Participants were therefore familiar with communicating in potentially larger online groups and utilised ground rules for respectful communication such as not speaking over one another.

The online approach reduced barriers to participation, and enabled flexibility and participation from students or apprentices who studied part time. The focus group was facilitated by both researchers, both of whom were known to all participants, having taught them throughout the course of degree, being year and course leads and engaged in exploring their learning experiences, enabling an ease to the group discussions.

The focus group had a semi-structured approach (Brinkmann and Kvale, 2014), with a focus to the overall topic area, but enabling questions to gain clarity and insight into the experiences of the participants. **Table 1** illustrates the topic areas explored during the focus group.

### Data analysis

The audio content of the meeting was

**Figure 1.** Real world practice leads to real world benefit theme.

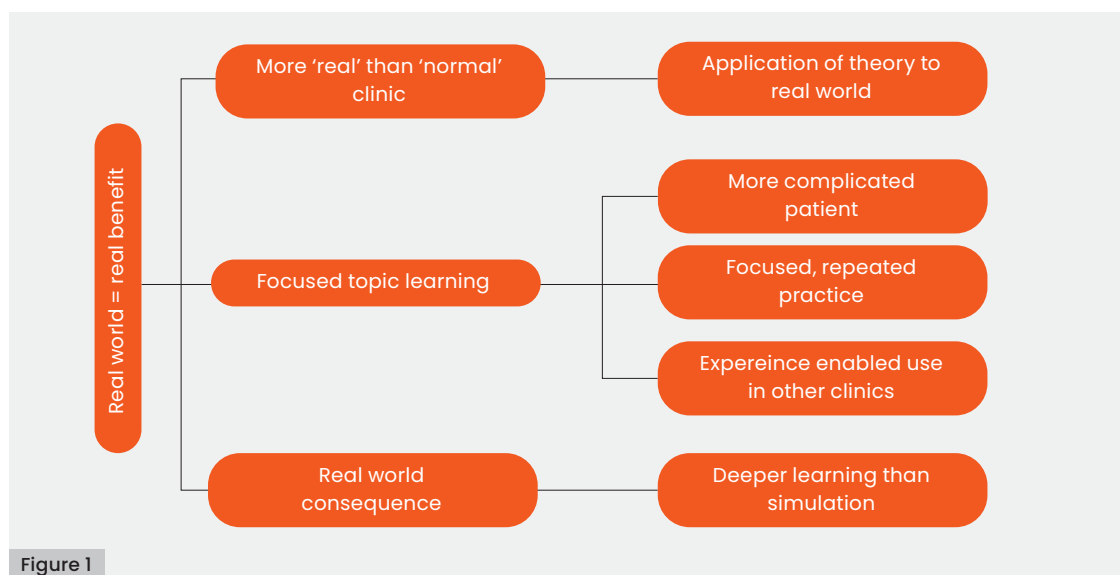


Figure 1

automatically transcribed via Teams transcription software. This was checked and amended as necessary by the researchers to ensure accuracy against the video recording.

A number was allocated to each participant during this secondary transcription process, determined by the order in which participants had first spoken. This was to ensure anonymity for the participants and neutrality for the reader, eliminating subliminal preconceptions if pseudonyms had been chosen (Saunders et al, 2015).

Individual, then group, analysis was performed to minimise distorting the findings of the data by the researchers' own personal bias and perception. Each researcher individually explored the transcripts and used these as a basis for completing the steps of template analysis, a form of thematic analysis (King, 2012). The steps included gaining familiarity with the data, carrying out initial coding utilising in vivo and interpretive conceptual coding (Saldana, 2021), and then template development of a hierarchy of themes. Both researchers then met to explore and develop the thematic analysis and the final coding template to assist with interpretation of the data.

#### Trustworthiness of the research and findings

The trustworthiness of the research was considered by exploring the credibility, dependability, confirmability and transferability at all phases of the study (Guba, 1981). Credibility was considered for contributing researchers, the project itself, data collection and analysis. The research team benefited from being mixed gender, with a range of research and clinical experiences, and qualification within both research practices and educational theories. The credibility of the

project and methods of data collection were confirmed by peer assessment when gaining ethical approval.

To ensure dependability, the focus group was transcribed verbatim to prevent any omission of data. Immediately after the focus group each researcher documented initial reflections and insights. During data analysis, coding definitions were documented to ensure consistency and clarity.

In terms of confirmability and credibility the individual analysis followed by the joint one ensured both researchers were not limited by their own thoughts and focus. The research context, design and data collection methods and analysis are clearly documented in this article, enabling others to explore how the findings may transfer to other contexts.

#### Results

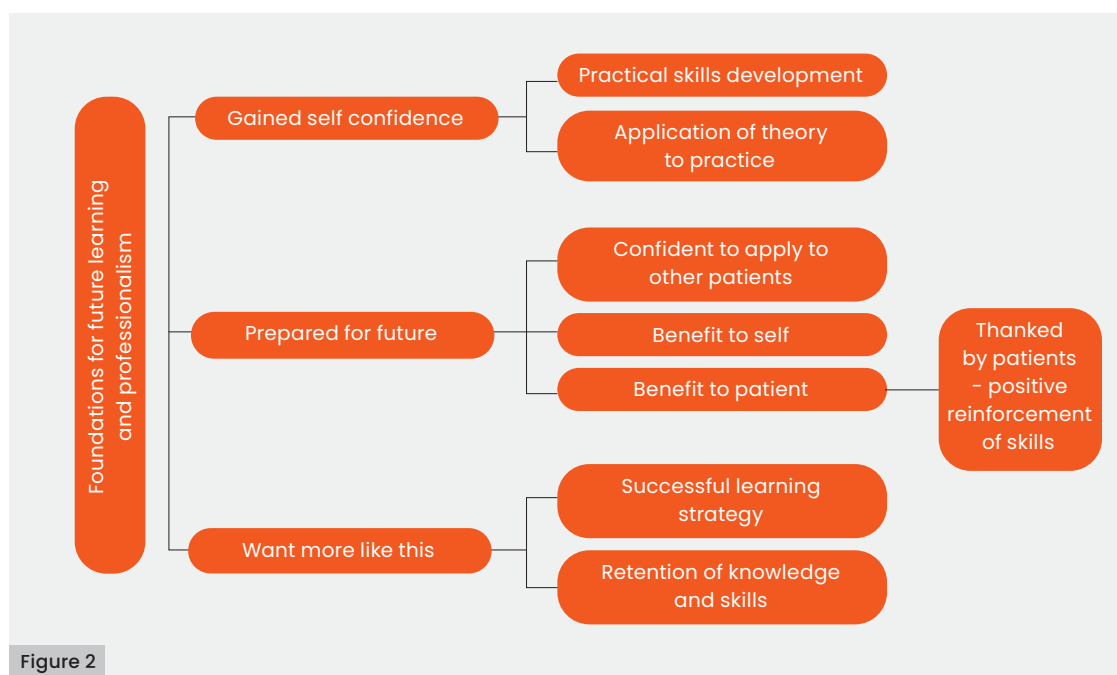
During data analysis, three central themes emerged, which are explored individually below:

- Real world = real benefit
- Foundations for future learning and professionalism
- Positive benefits of academia and industry collaboration.

#### Real world = real benefit theme

Although all students and apprentices participate within podiatry clinics at the university, supervised by qualified clinicians, they perceived a difference between 'normal' clinics and the leg awareness day. There was an emphatic feeling that the leg awareness day provided an authentic lead into the real world of clinical practice beyond some of the experiences students had already had [Figure 1].

*"I found it all very beneficial, we had the clinic and get to treat the patients. That was the point, I got to give them compression stockings*



**Figure 2.** Foundations for future learning theme and sub themes.

*instead of theory, because there is a difference between the theory and the practical part” (participant 4).*

*“We were able to put it into the practical. We could link it and relate straight away. I feel like it was really good exposure for everybody” (participant 2).*

The addition of industry input, and a focus on attracting the public for the leg day revealed differences for students between their normal clinical experience and the leg awareness day. One participant expressed this as having a masking effect in terms of real-world exposure.

*“I feel like we’re kind of masked sometimes in what we see in clinic” (participant 3).*

The opportunity afforded by leg awareness day was recognised by students as a contrast with what they perceived as “normal” patients.

*“These are real, like people have not really looked after themselves. And obviously we get people in clinic who tend to be kind of cared for themselves, and they’re just coming in for nice general treatment” (participant 4).*

The nature of the venous leg day enabled students to focus on one condition, and this was seen as a great benefit when compared to their usual supervised clinics. The final year clinics have a range of patients attending who have a podiatric need focused upon musculoskeletal, neurological, vascular or dermatological pathologies; all underpinned by medical conditions such as diabetes, cardiovascular disease or rheumatological conditions. Students must consolidate and understand the complexities of multiple conditions and determine appropriate management plans and care. The venous leg day enabled a consolidation of knowledge and

application to real-life situations.

*“I really like how you guys [university academic team] teach. It is pretty straightforward, and I can understand everything you say. I would like though sometimes to make it more clear into practice, what am I expected to see? You’ve got to think about every single condition that you have learned” (participant 4).*

### **Foundations for future learning and professionalism theme**

Participants discussed the importance of the practical leg day for cementing theoretical knowledge, creating a confidence in both their retention of knowledge and making that knowledge meaningful and malleable. They were able to confidently apply this to patients after the leg day, thereby increasing confidence in their professional abilities [Figure 2].

*“Two weeks later I had a patient who had no idea that she had oedema. I had to do it by myself, I knew what to do, and I actually did it by myself. I did the whole thing and I could remember” (participant 3).*

*“Now that I see people that wear compression stockings. Alright, now I know how to put them on. I know how they’ve been measured and I know why they are there. Because before I didn’t, I was looking at them in the second year and first year and I didn’t know why they were wearing them and what is actually that for” (participant 4).*

### **Positive benefits of academic and industry collaboration theme**

A key element of the positive reception to the leg day was the participants recognition that

**Figure 3.** Positive benefits of the academia–industry collaboration.



Figure 3

good learning came from the complementary nature of combining academia with industry [Figure 3].

*"No offence to lecturers, sometimes it can blow my mind, but I feel like external people come in and they're like, explaining it a bit easier. It's not very academic, and that's what I like"* (participant 1).

*"Your expertise as lecturers and you know experts, literal experts, in the profession. But you... have to cover a wide curriculum, whereas these people coming in externally are like very direct if this is what they're doing. This is why they do it"* (participant 1).

The importance of choosing the right industry partners to complement and enhance learning was expressed by participants:

*"I found it very beneficial and trusted it because it is coming from you guys. It is coming from professors, and it's coming from people that are doing the job right for them to come and visit, so I trust them"* (participant 4)

*"Really good to relate and learn from both... the lecturers coming in and then, obviously, I worked with the two guys from industry. So it kind of flowed"* (participant 2).

### Discussion

We explored the impact of the collaboration between industry and academia on students' experience of learning as they prepared for professional practice. The focused nature of the day, combined with our industry partners expertise and rich knowledge in tissue viability, orthoses and prosthesis combined with knowledge of both assessment and management of lymphovenous disease provided a unique focused experiential learning opportunity.

All the public attending had the same aetiology, but with a wide variety of needs, considerations and complexities to their

lymphovenous disease. Our exploration has revealed this to be a positive experience for students, promising a new generation of podiatrists ready to promote appropriate and timely preventative lymphovenous care.

In our experience of academic practice, authenticity of learning experiences is key to student engagement and development of knowledge and skills. Wenger's community of practice theory continues to provide a useful theoretical lens for understanding pedagogic research and teaching and learning practice (Wenger, 1998). Authenticity of experience is central to this theory and enacted in our educational model where industry meets academia. We note in our findings that this meeting of two communities of practice provides a rich and authentic experience for learners.

This research sought to explore the experiences of students who had participated in the leg awareness day and its associated compression hosiery training. The rich environment provided by the blend of communities of practice appears to have enhanced student experience and learning of this area of practice.

Participants expressed a clear differentiation between their "normal" supervised teaching clinics and the venous leg day. Arguably, both approaches are designed to provide experiential learning to integrate theoretical education. Potentially the focused nature of a singular complication combined with differing learning opportunities from the collaboration enabled students to focus upon one topic area, rather than having to review multiple topics for patient issues in "normal" clinics. Participants explored the benefits of being able to focus upon one specialism and this potentially enabled a clearer application of theory to practice, thereby resulting in



participants expressing the difference of this clinical experience.

Other aspects where this differentiation may arise from was in the public attending. Patients attending the “normal” clinics do so in the awareness of this being an educational institution and so may be attending for altruistic reasons, as well as for receiving podiatric care. The expert patient may explore the impact of their conditions in more detail, essentially a “professionalised” version of their history (Saif et al, 2024). Students may become reliant upon this and become uncertain of their own skills in history taking and interpretation. The venous leg day has members of the public attending, who are less likely to be an expert patient, so this may also have provided another learning opportunity for the students.

## Conclusion

Findings reveal the enhancement of learning when integrating educationalists and industry experts. Students reported benefits of the collegiate working, were able to gain confidence in understanding the importance of compression hosiery, and in being able to feed this into additional clinical work. Our research contributes a novel understanding of the benefits educationalist–industry collaboration brings to teaching and learning, as well as prevention of venous disease progression. ●

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