

Visual metaphors for the professional doctorate

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A tiered hanging garden and Celtic tree of life knot are presented as visual metaphors to promote visualisation of a personal interpretation of the professional doctorate journey with respect to podiatric practice. Previously published quest, plant and gardener metaphors are discussed with reference to the acquisition and distribution of new knowledge through doctoral study. Visual metaphors are presented in order to facilitate a deeper appreciation of the complex interdependent relationships throughout the professional doctorate process of education, research and advancement of practice.

The use of metaphor promotes understanding of novel concepts with respect to those that are familiar, through exploration of shared traits (Kittay, 1987). Education as a stairway, for instance, implies progression (Roncero et al, 2006). Professional doctoral study within podiatric practice has been described as a journey (Ellis, 2009), articulating the evolving longitudinal nature of this academic endeavour. Visual metaphors as cognitive learning tools permit additional meaning to be conveyed by applying the shape and elements of a recognisable object, activity, or story (Eppler, 2006). Familiarity and simplicity promote ready interpretation and processing of such visual metaphors (Williams, 2000), benefitting from the directness and appeal of visual elements applied (Coyne, 1995).

Learning styles continue to receive considerable attention in education research (Knoll et al, 2017). The VARK® learning style inventory is of particular note (Fleming, 2001), describing visual (V), aural (A), read/write (R) and kinaesthetic (K) learning preferences. A personal learning style assessment may be undertaken through the *www.vark-learn.com* website (VARK Learn Ltd, 2018). Visual learners typically prefer information in the form of pictures, illustrations, diagrams or symbols (Inott and Kennedy, 2011). Visual metaphors may be of

particular benefit for those identifying a preference for visual learning.

Trees have long been employed as visual metaphors, demonstrating key elements and interrelationships concerning knowledge, morality, consanguinity, genealogy, systems of law and the mapping of species (Lima, 2015). Throughout this article, a tiered hanging garden and Celtic Tree of Life knot are employed as visual metaphors to elucidate key interrelationships throughout the professional doctorate, embedded within podiatric practice. While these visual metaphors are considered to permit ready interpretation of these complex interrelationships, the reader is encouraged to apply mind-mapping and concept-mapping techniques to develop personalised visual metaphors, tailored to their individual learning needs.

The doctoral quest

McCulloch (2013) proposed a quest metaphor for doctoral study, applying six elements described by Auden (1969), including a precious object to be obtained, a long journey, a hero, a test, or series of tests, guardians of the precious object and helpers along the way. McCulloch's quest metaphor described the doctoral candidate as the hero and

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Article points

1. The podiatry Professional Doctorate demands information exchange among a wide range of stakeholders.
2. Mind mapping, concept mapping and visual metaphors enable visualisation of complex interrelationships.
3. Tiered hanging garden and Celtic tree of life visual metaphors are presented to elucidate key interrelationships, embedded within podiatric practice.

Key words

- Celtic Tree of Life knot
- Concept mapping
- Mind mapping
- Professional doctorate
- Visual metaphor

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academic supervisors as helpers enabling attainment of a precious object, the philosophical doctorate (PhD). Of particular relevance to professional doctoral study are the series of tests and guardians of the precious object.

While PhD candidates must pass a preliminary and final viva, the modular nature of the professional doctorate at Queen Margaret University (QMU) requires successful completion of several preliminary doctoral modules and the achievement of agreed learning outcomes, prior to undertaking the thesis and final viva. Internal and external examiners throughout the viva may be considered guardians with respect to the achievement of both the PhD and professional doctorate.

As the professional doctorate is embedded within practice, such programmes may be considered to produce researching professionals rather than professional researchers (Bourner et al, 2001). This article considers previously described, arboreal metaphors before presenting tiered hanging garden and Celtic Tree of Life knot visual metaphors to facilitate deeper understanding of complex interrelationships throughout the professional doctorate, with specific reference to professional advancement of podiatric practice.

Plants and gardeners

The plant is the first of nine team roles described by Meredith Belbin (2010), defined by creativity and an unconventional problem-solving approach. The plant is a thinking role (Belbin Associates, 2014), the name derived from the intentional 'planting' of creative individuals within a team. Other authors described a house plant, sitting in a corner, unengaged (Henry and Stephens, 1999; Gündüz, 2008; Wellington, 2012). The professional doctoral candidate does not, however, sit in isolation, within a lonely pot and intradisciplinary collaboration within the workplace, among the professional doctoral candidate cohort, and throughout associated academic and professional supervision and mentorship demand a richer metaphor.

Austin (1996) introduced a gardener metaphor while considering her nurturing approach to teacher education, specifically in promoting the development of roots and seeing her students flower. Austin described finding a balance between under- and over-watering concerning the volume of information

delivered. More recently, Nash (2015) has applied a gardening metaphor to motivational interviewing as plants grow according to their own timetables and not all will blossom, despite this care and attention. The planting of seeds and creation of a suitable environment for growth are equally applicable to the professional doctorate.

Podiatrists are involved in a process of lifelong learning, demanding continual professional development through education and experience. Evidence-based clinical practice requires ongoing audit and research of interventions provided with a growing number of podiatrists electing to formalise this process through doctoral research. Researching podiatrists may be considered gardeners in their own right, with responsibility for the education and dissemination of findings to students, colleagues, the wider profession, service users and the public.

The gardener metaphor, therefore, also proves too simplistic to describe this multi-directional educational process. If delivering education is to be described as watering, then plants must be capable of both watering and being watered. For this reason, a tiered hanging garden was initially conceived as an alternate metaphor.

The tiered hanging garden

A tiered hanging garden visual metaphor was developed through mind mapping, which Tony Buzan (1974) introduced as a means of demonstrating "visual, non-linear representations of ideas and their relationships" (Biktimirov and Nilson, 2006). A mind map typically emerges from a central image representing the topic, connecting related objects through a radiant hierarchy, numerical order, or outline (Buzan and Buzan, 2000). A tiered hanging garden visual metaphor was applied, representing key stakeholders as plants and knowledge-exchange as watering within a hierarchical structure (*Figure 1*). The sharing of experience and ideas from senior managers, workplace mentors, and academic supervisor's to the doctoral candidate, doctoral cohort and work colleagues is demonstrated through water-exchange within this tiered structure. Education is, subsequently, shown to trickle down to podiatry students, service users, the wider profession and the public.

While the research output of podiatry undergraduate and master's programmes are

frequently clinically relevant, the professional doctorate demands further embedding of research within professional practice and, together with the PhD, demands wider dissemination of findings. This impact is more accurately conveyed with a tiered hanging garden than a solitary potted plant. The tiered nature of the hanging garden, however, does not adequately represent the personal, academic and professional growth of professional doctorate candidates or the sharing of information to tiers above. Growth and less restricted flow of water and nutrients may, possibly, be better demonstrated with a rainforest metaphor.

The Celtic Tree of Life knot

Concept mapping informed development of a further Celtic Tree of Life knot visual metaphor for the professional doctorate. Concept mapping grew from Ausubel’s (1968) cognitive learning assimilation theory, promoting meaningful learning and deep understanding of novel concepts (Novak and Gowin, 1984). A Novakian concept map was initially developed in order to graphically represent interrelated concepts, connected by linking words, forming propositions (Huang et al, 2012). The earliest application of a tree of knowledge visual metaphor is the Porphyrian Tree (Lima, 2015), however, Charles Darwin’s (1859) Tree of Life and genealogical family trees should also be familiar to the reader.

Historic Celtic images typically depict the tree of life emerging from a small pot (Bain 1996), however, modern knotwork adaptations disregard this element, instead emphasising an unending, interconnectivity between branches and roots (Figure 2). This Celtic Tree of Life knot was considered to more accurately represent interrelationships between academic and professional partners. While concept maps are typically messy and complex, visual metaphor is one means of improving readability. A Celtic Tree of Life knot is, hereby, presented as a visual metaphor, demonstrating key interrelationships relevant to the professional doctorate (Figure 3).

Conclusion

This article has sought to describe the key

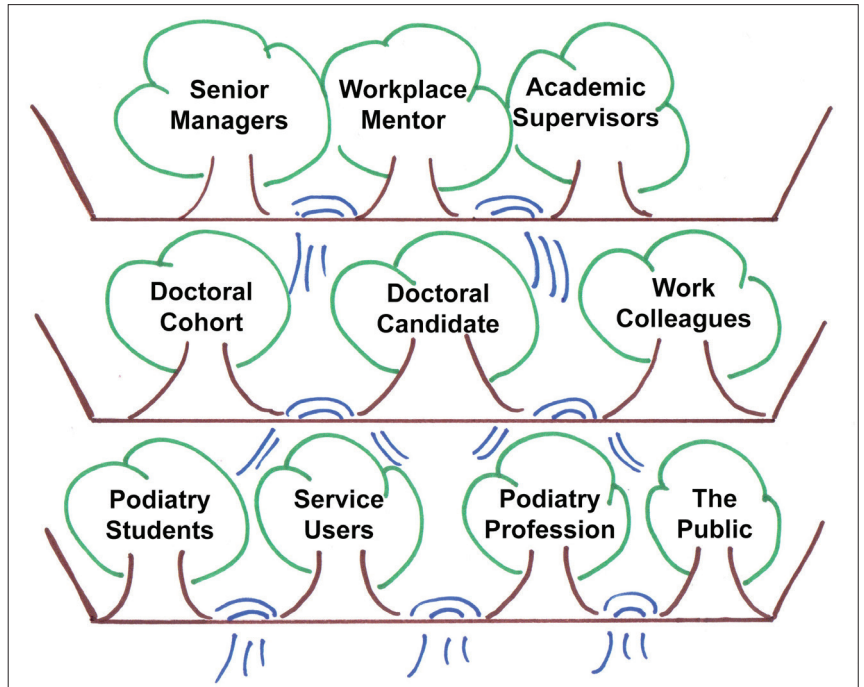


Figure 1. Tiered hanging garden visual metaphor for the professional doctorate.

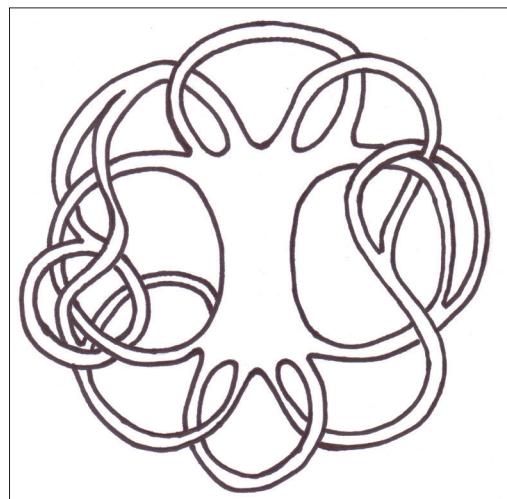


Figure 2. Celtic Tree of Life Knot (Saunders, 2016).

interrelationships relevant for the podiatrist undertaking a professional doctorate through the application of metaphor. Previously published quest, plant and gardener metaphors were explored before presenting novel tiered hanging garden and Celtic Tree of Life knot visual metaphors. Through consideration of these metaphorical representations, the reader is encouraged to consider the many complex interrelationships relevant to such work-based learning and research. Those currently

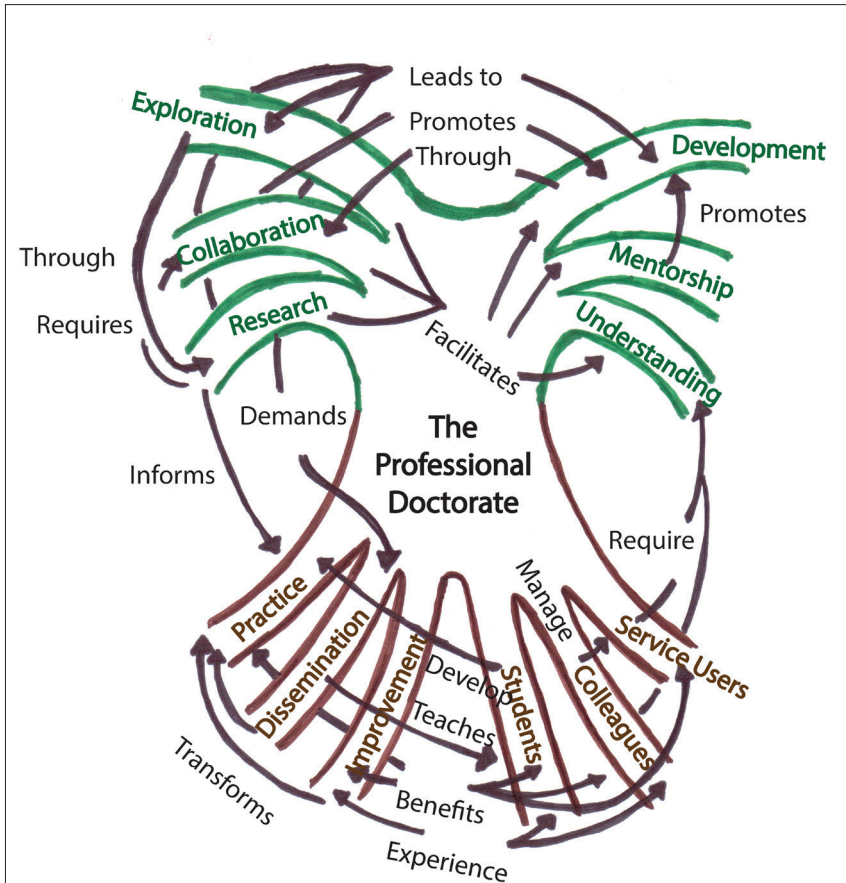


Figure 3. Celtic Tree of Life knot visual metaphor for the professional doctorate.

undertaking, or considering, the professional doctorate are encouraged to consider mind mapping, concept mapping and the development of visual metaphors to identify key stakeholders and elucidate complex interrelationships throughout this academic pursuit. ■

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