



## REVIEW ARTICLE

# Leadership in research

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**Abstract** Research to underpin clinical activity in radiographic practice is rapidly becoming a requirement and not an option. Whilst it is recognised that the ability to undertake research demands suitable training in research itself, arguments have been given which indicate that without adequate leadership abilities the research activity may not develop or flourish. In the context of radiography this review paper initially argues a need for research leadership in the clinical (and academic) environment. The debate then moves to consider one method of leadership (transformational) that might be suitable. Transformational leadership is rapidly gaining popularity within the National Health Service. Finally, the debate focuses on the professional ('taught') doctorate as a means of acquiring both research and leadership training and education within one university course.

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## Introduction

This article continues the research theme by examining how research activity might be facilitated within the clinical practice of radiography. In a previous article we argued that *research in our practice is a requirement and not an option*,<sup>1</sup> consequently we do not intend to revisit that debate rather we wish to concentrate on the steps that could be taken to encourage it to happen. Within this article we place a particular emphasis on research that has value to clinical practice, rather than that of an esoteric nature. Transformational leadership will then be explored as

a potential framework for research in clinical practice and this will then lead into an examination of the professional doctorate as a potential means of integrating research with both practice and the leadership skills to achieve development and change.

It could be argued that within our profession certain staff have responsibility for encouraging research activity to be developed and sustained. University-based academic staff have for many years been encouraged to conduct research and in 2002, Williams<sup>2</sup> articulated this point well, suggesting that

... all university departments of radiography must undertake research...

Furthermore, this article explains clearly the drivers for university-based radiography departments to engage in the research process (not least

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because of the Research Assessment Exercise). However, Williams rightly continues to argue

... this is not to say that all staff must be active researchers, but it does mean developing mechanisms where potentially research-active staff are protected and nurtured to develop their research capacity— (p. 199)

Two years on from Williams' article the principle that university-based radiography departments should engage in research continues to apply. University-based [radiographic] staff expect to see "research", or at the very least "scholarly activity" stated as an explicit requirement on their job description. Given that such staff need to develop (and sustain) a track record of research, often related to their practice area, many have engaged with clinical radiographers to achieve these goals. However, this is not a one way street of academic staff trying to engage clinical staff in research activity—clinical staff are acting as catalysts too.

Clinically-based research radiographers have been employed within the NHS for many years and anecdotally it appears they are increasing in number. In addition to this we are seeing new clinical roles for radiographers and in the context of research it is very likely that the consultant and advanced practitioner will have a research/research leadership role.

The consultant radiographer is likely to play a pivotal role in promoting the clinical research agenda by providing leadership and/or engaging directly in the process itself. For instance Price and Paterson<sup>3</sup> argue a strong case for consultant radiographers to have involvement with research and also its application in practice. This view is supported more recently in the Radiography Skills Mix report<sup>4</sup>—this suggests that the training for radiography consultants could include leadership and also clinical research development skills. In today's health care environment training without purpose is not supported, clearly suggesting that the consultant will have training in research (and leadership) for application in their practice. The College of Radiographers<sup>5</sup> also supports the opinion that the consultant radiographer will engage in the research process. Similarly there is an expectation that radiography advanced practitioners will demonstrate team leadership and also contribute to the evidence base.<sup>4</sup> The process of contributing to the evidence base is normally achieved through engaging in research.

Recognising that a range of radiographic staff are likely to be expected to engage in research it is essential that they have the skills and confidence to discharge this responsibility. This article does

not attempt to focus into the training required to conduct research. It does, as previously stated, attempt to outline how staff acquire the skills necessary to encourage the development of research activity. Once again, in the context of radiography, Williams<sup>2</sup> has a valuable argument on how the research agenda should be taken forwards

The [radiographic] profession has also an urgent requirement for research leaders to take forward this agenda for change, since there is evidence to suggest that the absence of strong leadership is one of the key barriers to research success— (p. 199)

The Higher Education Funding Council (for England)<sup>6</sup> supports this view. Leadership can therefore be seen as an essential ingredient for successful research activity. Consequently we shall now explore a leadership model (transformational) that is gaining importance within the National Health Service.<sup>7</sup>

### **Transformational leadership—a possible model for facilitating clinical research**

To be a leader in the current health care arena requires an understanding of the personal qualities that are associated with effective leadership, an ability to analyse health care systems, and the skill to use this understanding to act strategically.

Traditionally leadership has been defined as an interactive phenomenon of transactions among leaders and followers. For example, Burns<sup>8</sup> defined transactional leadership as occurring when one person takes the initiative to foster the exchange of something of value to another person. The leader and follower may have related purposes but are not necessarily connected by common goals. DePree<sup>9</sup> described leadership as an art form that empowers people and contended that contemporary leadership may be simply viewed as a process of moving the self and others toward a shared vision that becomes a shared reality. The work of both Burns and DePree implies change management as a competence of leadership. However, this definition does not necessarily empower others to take forward leadership roles. This type of hierarchical leadership may stifle the growth of a profession by dictating a vision. Leaders need to help teams to develop and sustain a shared vision of the future evolution of the profession. The ability to empower others to share the dream

and implement change is critical to the advancement of any discipline.

In 1998 Rabindra<sup>10</sup> took this concept further and defined transformational leadership as a process whereby change occurs in which “the purposes of the leader and follower become fused, creating unity, wholeness and a collective purpose”. Transformational leadership therefore occurs when people interact in ways that raise each other to higher levels of motivation and morality.

Surinder et al.<sup>11</sup> describe transformational leadership as a style that motivates followers to perform to their full potential. A number of articles relating to nursing leadership have appeared in the USA literature, identifying the importance of transformational leadership, described as influencing changes in perceptions to achieve improvements in care.<sup>12–14</sup> The focus is upon change from a traditional hierarchical structure to one that promotes an entrepreneurial spirit. Within the literature it is argued that nurses wishing to generate significant and lasting change must adopt this style. Transformational leaders create a culture that recognises everybody as a leader of something. They inspire staff towards a shared vision of some future state. Other characteristics include challenging, stimulating, enabling, developing trust and communicating. Transformational leaders require emotional intelligence, rationality, motivational skills, empathy and inspirational qualities, intellectual qualities and self-confidence in publicly disseminating findings. Thus it is implied that the transformational leader can alter the prevailing organisational culture and create a context that is more conducive to the integration of evidence and practice.

In essence successful transformational leadership is driven by a common goal or purpose and satisfies the needs of both leader and follower. The role of the follower is important and relevant to any discussions about leadership. Leadership may also be defined as being ‘situationally dependent’. The radiographer (eg academic, consultant etc.) as a leader who has a vision of collaboration among health care team members may facilitate an atmosphere that supports individuals or followers in assuming the leadership role in various situations. They do not cease being a leader by empowering colleagues to appropriately assume a leadership role. In fact, this important approach may be an effective way of both sharing a vision and sharing power. Transformational leadership suggests that all staff should become a leader of something.<sup>15</sup> Inclusion of all workers at every level of an organisation should ensure commitment and dynamism. Furthermore workers are more likely to participate

in an organisation when they feel valued and have a choice.

Courses for the development of leadership skills are available to National Health Service staff,<sup>7,16</sup> some place a major emphasis on the transformational leadership model. An alternative to this would be to undertake a [university] award that allows for engendering both research and leadership skills and in 2003 Manning and Bentley<sup>17</sup> considered the value of ‘taught’ PhDs as a prerequisite for consultant radiographers. Furthermore, the United Kingdom Central Council for Graduate Education (UKCGE) describes the professional doctorate as an extension of the taught doctorate. The professional doctorate could potentially be a valuable means of integrating research with practice development, whilst developing and applying leadership skills. The next section explains what a professional doctorate is and why it might be a valuable award to hold for those wishing to have both leadership and also research skills.

## The Professional Doctorate—combining leadership and research training

The UKCGE identifies the Professional Doctorate<sup>18</sup> as

a programme of advanced study and research which, whilst satisfying the University criteria for the award of a doctorate, is designed to meet the specific needs of a professional group external to the University, and which develops the capability of individuals to work within a professional context— (p. 62)

The Professional Doctorate has the same outcomes as the so-called ‘traditional’ PhD: expertise with research design and methods, originality, creativity and ultimately knowledge to satisfy peer review.<sup>19</sup> However, there are additional elements. The Professional Doctorate is usually undertaken by professionals in the practice setting, in order to develop and apply knowledge and expertise to that area. There are resulting implications for other professional skills such as leadership, motivation and vision, which also have synergy with health modernisation. For example, the Department of Health has identified the need for professionals to engage in creative decision-making when dealing with the challenges of health care. Lifelong learning, interprofessional learning and collaboration, evidence based practice and practice development are key themes.<sup>20–23</sup>

#### Professional Doctorate Outcomes Associated with Reclaiming Leadership

Examples of outcomes include:

- Utilise the current evidence base to critically evaluate the principles of effective leadership
- Critically analyse the context in which leadership takes place. Apply the information gained to the critical analysis of factors influencing leadership; personal, professional, organisational, political and social.

**Figure 1** Professional Doctorate outcomes associated with reclaiming leadership.

There is a focus on expanding health care practice, with the development of higher level roles for health professionals. The introduction of consultant roles is one example, as illustrated earlier. The application of learning and research to practice through the development of leadership can be illustrated by examining one Professional Doctorate which combines taught and research components (University of Salford<sup>24</sup>). Through one modular theme, in this example, through the theme of 'reclaiming leadership', students are required to meet the outcomes identified in Fig. 1. Following students' critical analysis of the leadership literature individual student action planning will be used, to enable students to identify the professional and personal knowledge and skills for their strategic leadership. The skills will be developed and applied in practice through the student's focus on their practice based research activities, its development, application to the practice setting, in order to achieve effective change, or evaluation. There will then be a critical review of the processes in terms of learning and leadership and the outcomes of practice development. Throughout, student knowledge and support will be derived from small group learning, peer review and analysis, and masterclasses.

The above illustration has reviewed the potential to integrate education and research within practice, with explicit leadership development. It is this combination that could potentially be addressed through the Professional Doctorate. While the PhD, as established in the German tradition of Humboldt, addresses subject knowledge and methods, it does not necessarily address the additional skills for application and integration of research with practice. Booth and Satchel<sup>25</sup> also suggest that [traditional] PhD students are likely to be academics or practitioners wishing to move into the academic setting, while PhD completion rates also give some cause for concern. The Cabinet Office of Science and Technology<sup>26</sup> also recommended that research training and development should be geared towards the needs of the wider business and social context, as opposed to meeting the needs of the academic community.

## Summary

Academic and clinical radiographers are being required to engage in research activity that has value to practice. With suitable research training but without adequate training in leadership research activity may fail to flourish, consequently there is a need to have suitable leadership skills. Various models of leadership are available but the current model being supported within the National Health Service is transformational leadership. Whilst training courses exist in both research and leadership a way of combining both is through the professional doctorate. Whilst there are programmes of learning which focus on research or leadership or change management, it is suggested here that the professional doctorate offers one potential means to integrate these characteristics, with application to the clinical setting. The brief overview of contemporary health service modernisation given earlier implicitly suggests there is a need for programmes of learning to aid such integration and further develop the notion of lifelong learning and adaptation.

## References

1. Gambling T, Brown P, Hogg P. Research in our practice—a requirement not an option: discussion paper. *Radiography* 2003;9:71–6.
2. Williams P. Research, radiography and the RAE: lessons from the 2001 research assessment exercise. *Radiography* 2002;8:195–200.
3. Price RC, Paterson AM. Consultant practitioners in radiography—a discussion paper. *Radiography* 2002;8:97–106.
4. Department of Health. Radiography Skill Mix: a report on the four-tier service delivery model. 2003. Available from: <http://www.doh.gov.uk/radiography/>.
5. The College of Radiographers. Developing the business case for consultant radiographers. 2003. Available from: <http://www.sor.org/members/resources/buscons.pdf>. ISBN 1871101034; NB a password is required to access the on-line version.
6. Centre for Policy in Nursing Research, The Royal College of Nursing, Research Forum for Allied Health Professionals, and the Association of Commonwealth Universities. *Promoting research in nursing and the allied health professions*. Bristol: Higher Education Funding Council for England; 2001.
7. Greater Manchester workforce development confederation. Scoping exercise of national leadership initiatives—National Nursing Leadership Project. 2003. Available from: [http://www.gmconfed.org.uk/downloads/2003/core\\_projects/modernisation/scoping\\_document.pdf](http://www.gmconfed.org.uk/downloads/2003/core_projects/modernisation/scoping_document.pdf).
8. Burns JM. *Leadership*. New York: Harper Row; 1978.
9. Depree M. *Leadership is an art*. New York: Doubleday Currency; 1989.

10. Kanungo Rabindra N. Leadership in organisations: looking ahead to the 21st century. *Can Psychol* 1988;39(1/2): 71–82.
11. Kahai Surinder S, Sosik John J, Avolio Bruce J. Effects of leadership style, anonymity, and rewards on creativity-relevant processes and outcomes in an electronic meeting system context. *Leadership Q* 2003;14(4–5):499–524.
12. Loeffler S. Leadership characteristics and change seeker need of nurse managers as predictors of readiness for a participatory nursing management model. *Kentucky Nurs* 1994;42(3):23.
13. Sieloff CL. Nursing leadership for a new century. *Semin Nurs Manag* 1996;4(4):226–33.
14. Kerfoot K. On leadership: believing in followers. *Dermatol Nurs* 1997;9(3):194–5.
15. Senge PM. *The fifth discipline: the art and practice of the learning organisation*. New York: Doubleday Currency; 1990.
16. Leading an Empowered Organisation (LEO). Available from: <http://www.leeds.ac.uk/healthcare/consult/CDNPP/leo.htm>.
17. Bentley HB, Manning D. The consultant radiographer and a doctorate degree. *Radiography* 2003;9:3–5.
18. The Framework for Higher Education Qualifications in England, Wales and Northern Ireland Gloucester: QAA United Kingdom Council for Graduate Education, Professional Doctorates Dudley:UKCGE; 2002.
19. Quality Assurance Agency. The framework for higher education qualifications in England, Wales and Northern Ireland Gloucester: QAA; 2001.
20. Department of Health. *Making a difference: strengthening the nursing, midwifery and health visiting contribution to health and healthcare*. London: Department of Health; 1999.
21. Department of Health. *Continuing professional development, quality in the new NHS*. Department of Health; 1999. Available from: [http://www.info.doh.gov.uk/doh/point.nsf/0/c60b01da7e5e7471002567c300566590/\\$FILE/CPDQ\\_nhs.pdf](http://www.info.doh.gov.uk/doh/point.nsf/0/c60b01da7e5e7471002567c300566590/$FILE/CPDQ_nhs.pdf).
22. Department of Health. *The NHS Plan*. Department of Health; 2000. Available from: <http://www.doh.gov.uk/nhsplan/>.
23. Department of Health. *Meeting the challenge: a strategy for allied health professions*. Department of Health; 2000. Available from: <http://www.doh.gov.uk/meetingthechallenge/>.
24. University of Salford. *Institute of Health and Social Care Research/Faculty of Health and Social Care Professional Doctorate—taught and research components*. Salford: University of Salford; 2003.
25. Booth AL, Satchell SE. British PhD completion rates: some evidence from the 1980's. *Higher Educ Rev* 1996;28(2): 48–56.
26. Cabinet Office of Science and Technology. *Realising our potential: a strategy for science, engineering and technology*. London: HMSO; 1993.

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