Research capacity for everyone? A case study of two academic nursing schools' capacity building strategies

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Julie is a Lecturer in the School of Nursing & Midwifery, Keele University, England, UK, where she contributes to pre and post registration teaching. Her clinical background is in adult intensive care. She is currently Vice Chair of the School Research Committee and is a member of the acute and critical care and education evaluation research groups within the School. Julie's main research interests lie in the field of pre-registration education and health policy. She is currently registered on an MPhil / PhD with Liverpool John Moores University where she is investigating the impact of extended nursing roles on junior doctors in Intensive Care Units.

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Sara is Programme Lead for Pre-registration Nursing and a Lecturer in the School of Nursing and Midwifery at Keele University, England, UK. Sara teaches on both pre and post-registration adult and children's nursing programmes at degree and diploma level. Her special interests are in acute care, health assessment, role development and professional relationships in healthcare. Sara's MA research used qualitative methods to consider A&E nurses' responses to women who have experienced domestic abuse. She is also Chair of the Acute and Critical Care Research Group. Sara's clinical experience is in Accident and Emergency Nursing, Children's Nursing and Trauma.

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Abstract

This paper reports the findings of a comparative case-study project which evaluated the development of nursing research capacity in two academic schools in the United Kingdom. The research compared the approaches used, explored the experiences of staff during the implementation process, and identified the outcomes which were achieved. The methods employed were in-depth interviews, focus groups and documentary analysis. A literature review was undertaken to inform the design and conduct of the study (Segrott, et al, 2006).

The project's findings are divided into five sections. We begin by discussing the strategies implemented by the two schools, and their overall success. We then examine the wider development of a research culture, explore the problems and challenges experienced, and consider the management and organisation of capacity building. The final theme concerns the role played by the schools' wider institutional and political contexts.

The paper explores the relative strengths of inclusive and exclusive approaches to staff development, and the importance of integrated academic leadership and effective management. The study highlights the need for academic schools to forge strong connections between experienced researchers and novices, as well as between teaching and research activities.

Key words: nursing research, research capacity, staff development, case-study

Introduction

This paper reports the findings of a comparative case-study which evaluated the development of nursing research capacity in two academic schools in the United Kingdom (UK) – one in Wales, and one in England. Building nursing research capacity is a worldwide challenge, and is pivotal to the development of the profession and the care it provides (Byrne and Keefe, 2002). Research plays a part in the provision and equity of healthcare – particularly, in

developing countries (Sitthi-amorn and Somrongthong, 2000), demonstrates the efficiency of healthcare, develops evidence-based practice (Bryar, 2003; Finch, 2003), and enhances students' learning experiences (Newell, 2002).

Whilst research capacity is a global issue, capacity building strategies are implemented in ways which differ according to local cultural and politico-professional contexts (Wilson-Barnett, 2001). For instance, the UK Research Assessment Exercise (RAE) (which grades research activity to inform the distribution of government funds) shapes how academic schools focus and articulate their research (Bishop, 2006). To fully understand research capacity development, therefore, we need to explore it in different local settings.

The research on which this paper is based examined strategic approaches to capacity building in two schools, the experiences of staff during implementation of these strategies, and the outcomes achieved. It builds upon earlier work undertaken in the Welsh school. Both schools became part of the university sector in 1991 (in Wales) and 1995 (in England), reflecting the transfer of nurse education into higher education (HE) in countries such as the UK and Australia (Gething and Leelarthapin, 2000; Burke, 2006).

The schools faced the challenge of building research capacity from a baseline of limited capability, with the need to develop staff and cultivate a research culture. The Welsh School is multidisciplinary, with nursing and midwifery sitting alongside other disciplines, whilst its English counterpart is a standalone nursing and midwifery school. The former has approximately 150 academic and academic-related staff, distributed across five sites, with its main base on the University campus. There are around 100 nurse and midwife educators working in the School. The English School has approximately 60 academic and academic-related staff, all based at a hospital, close to its University. The structure of the latter school involved transferring a single organisation into the University, and has remained relatively stable, but at the Welsh school the move involved amalgamating and integrating three nursing colleges and one nursing and midwifery college.

This School has been restructured several times, incorporating other non-nursing academic units.

The Welsh School has in the region of 900 pre-registration nursing students at any one time, with two intakes into the Adult branch each year. In the academic year 2005/06 it delivered 10 taught Masters courses (to approximately 700 students), and in excess of 20 undergraduate courses (with a total undergraduate population of about 2000). In addition, 43 students were registered for research degrees. The English School normally has approximately 300 pre-registration nursing students, with 375 post-registration students studying for six BA and BSc degrees, professional development courses and a suite of five Masters programmes.

Literature Review

A literature review was undertaken to explore the challenges of developing research capacity in academic nursing, and the strategies schools adopt (Segrott et al., 2006). Reasons for nursing's limited research capacity include a shortage of funding (Cleverly, 1998; Mead and Moseley, 2000), small numbers of nurses with research qualifications and experience (Gething and Leelarthaepin, 2000; Gill, 2004), the profession's low status in comparison with other disciplines (Carlisle et al., 1996; Miers, 2002), attitudes and feelings about research, and nurse educators' inability to devote time to research due to heavy teaching loads (Fyffe and Hanley, 2002).

Although academic schools utilise a range of strategies to develop research capacity, Nchinda (2002) captures three areas which must be addressed: the mapping of current capacity (Crookes and Bradshaw, 2002), the training of individuals, and the cultivation of research infrastructures and support mechanisms (Cormack, 2000; Jootun and McGhee, 2003). Academic schools need to develop clear, well communicated strategies (Gething and Leelarthaepin, 2000), with effective leadership and management (White, 2001; Jootun and McGhee, 2003). Formal strategies must contribute to the cultivation of an all-embracing research culture (Feldman and Acord, 2002; Jootun and McGhee, 2003; McKenna, 2005).

Traynor and Rafferty (1999) consider the choice between 'inclusive' and 'exclusive' approaches to capacity development. Inclusive approaches provide opportunities for all staff to develop research skills and conduct research, while exclusive approaches place limits on the number of people who can be supported, or identify staff whose primary role is teaching (Traynor and Rafferty, 1999; Green et al., 2005). Trying to include all members of staff in research activity can be construed as a form of empowerment, but may place pressure on staff whose primary interest is in teaching (Traynor and Rafferty, 1999; Clare and Hawes, 2001).

Cooke (2005) and Farmer and Weston (2002) point to the absence of evaluative frameworks to judge different approaches to capacity development, which arguably stems from a lack of local, empirical research studies (White, 2001). The need to study the complex process by which strategies achieve particular effects and the way in which these strategies are enmeshed in the development of schools' research cultures were key drivers for our study. Whilst numerous studies have described the perspectives of those who design and implement capacity building strategies (e.g. Gething and Leelarthapin, 2000; Feldman and Acord, 2002), there has been less research into the in-depth experiences of nurse educators during the implementation of research capacity-building.

Methodology

The project adopted a comparative case-study approach to explore the situated process of research capacity development, as well as understanding outcomes (Yin, 1994) in the two schools. The following research question was devised: "How do academic schools develop the research capacity of their nursing staff; what approaches do they use; and why are the outcomes as they are?" To answer this question multiple sets of data were analysed and synthesized. Case-study methodology offers an effective framework for the utilisation of multiple methods (Vallis and Tierney, 1999; Keyzer, 2000). The project compared two schools which had adopted differing approaches to research capacity development, involving a theoretical replication (Yin, 1994).

Data collection

Thirty-four in-depth interviews and two focus groups were conducted with nurse educators and senior managers (see table 1) (table 1 goes about here). Approximately 300 documents were analysed to identify capacity building strategies, their outcomes, and the challenges faced. Two main kinds of documents were included in the analysis. Firstly, 'stand alone' documents, including departmental plans, research strategies, RAE submissions, and briefing papers. The second group comprised sets of meeting minutes, from senior management teams, research committees and groups, and academic centres. Meeting minutes comprised approximately 75% of the total number of documents analysed, given their repetitive, longitudinal nature.

Data analysis

Interviews and focus groups were interrogated using a thematic approach, whilst documents were analysed using a specially designed data entry form, which is attached as Appendix 1. Data entries for each group of documents (e.g. research committee) were condensed into summary sheets, which were analysed to identify the key capacity building strategies adopted by the schools, the outcomes achieved, and challenges encountered. This method of analysis allowed the researchers to move between different levels of detail in the data (Miles and Huberman, 1984). The data from the interviews, focus groups and documentary analysis was then brought together to highlight key issues and deviations, with the Welsh School case analysis being undertaken first, mainly because data collection started at this site first, and was thus completed earlier (Green, et al., 2006). Once the case analysis at the English School had been completed, the overall findings from the two cases were compared and synthesized.

The project was conducted by researchers from both schools, including a number of neophytes (see Priest et al., in press). The project could be characterised as 'insider research', raising important ethical issues (Thomas et al., 2000; Platt, 1981). Particular attention was paid to maintaining confidentiality and participant anonymity, whilst still maintaining the 'essence'

and uniqueness of the cases under investigation (LeGris et al., 2000). Ethical approval was obtained at both sites.

Findings

Strategic approaches to capacity building

Both schools had formal written strategies, although some participants were unaware of their existence. While there was informal awareness of the strategic intentions there was some dissension regarding the strategies adopted.

The Welsh School's approach to research capacity development was inclusive - all lecturing staff were encouraged to engage in research. The English approach was more focused on those who showed potential or sought to undertake further studies. Both schools used similar strategies (summarised in table 2), including staff development opportunities to build research capabilities, and allocated research time. (table 2 goes about here). Table 3 indicates that high numbers of staff in both schools had postgraduate degrees, or were studying for them (table 3 goes about here). Both had increased levels of research income and published research outputs considerably since their initial formation in 1991 and 1995 respectively. For the period 2001-2005/06 there was clear evidence of an overall increase in research income and outputs at the Welsh School (see tables 4 and 5) (tables 4 and 5 go about here). The School had also improved its RAE rating, from a grade 2 in the 1996 Research Assessment Exercise to a grade 3b in the 2001 Exercise. At the English School an early increase in research income and outputs appeared to have 'levelled off' to some extent after the departure of the inaugural chair in 2001, though significant project funding had been secured during 2002 and 2005. Detailed analysis of the statistics for the English School is complicated further by the lack of comprehensive data for some years, and the reconfiguration of its university's research activities and recording into cross-disciplinary institutes in 2005. The English was entered into the RAE for the first time in 2001, and achieved a grade 2.

Some Welsh school staff felt that despite the positive nature of egalitarianism, being research active was not necessarily good or feasible for everyone, whilst at the English school some thought the focused approach was divisive. The rationale underpinning the research capacity strategies and justifying being research active was similar for both schools. This was to be academically credible, to support teaching, to develop critical evaluation and problem solving skills in students, and to foster evidence-based practice, benefiting patient care.

The strategies adopted were seen by staff from both schools as having a measure of success although there was a perceived difference in the overall success of the institution as opposed to the success of individuals. In the Welsh school the desire for research credibility was perceived as realistic. In the English school there was a perception of not being in the same league as other more research credible nursing schools. The Welsh institution was marginally more successful than the English School, in terms of its external research assessment rating. Table 6 suggests that the Welsh School had been more successful in terms of staff promotion at senior level (i.e. to reader and professorial positions), which may be linked to its multidisciplinary nature, and the presence of experienced researchers from outside nursing. (Table 6 goes about here)

Building a Research Environment and Culture

The move of nursing education into HE resulted in changes in the expectations and roles of academic staff at both institutions. It also necessitated changes in physical location and an interface with a different culture. The former schools were not without cultural diversity with different groupings such as pre- and post-registration. Some of this was carried over into the new institutions and did not ease the changes in relationships and governance.

For the Welsh School where staff were based on multiple sites, there was the twin challenge of being part of the new School and the wider University. The English School also needed to metamorphasise into something different whilst

continuing to operate from its existing premises, distanced from the University.

The Welsh School comprised those who clung to the cultural values and norms inherited from their original bases, those who adapted to changing roles and expectations, and those who had always been part of an academic community. In the English School there were similar divisions – new appointees; staff who were transferred and had a teaching role; and those who were offered accelerated development opportunities. In both schools these differences were exacerbated by contractual arrangements, with some staff on academic contracts, and others holding academic-related appointments, whilst fulfilling a joint teaching and research role.

The Welsh School complemented its staff development strategy by recruiting academic leaders (e.g. professors), including nurses and social scientists. This had an effect on the nature of the research undertaken, which was more broadly based in healthcare and facilitated a significant change in strategic direction during the life of this research project, including the formation of a Research Institute. This shift to a more focussed approach was viewed by some participants with caution because it would concentrate resources and opportunities within a small group and exclude less experienced colleagues. As part of a multidisciplinary school, some nursing participants at the Welsh School identified the challenge of building a distinctive *nursing* research capacity at the same time as deriving the benefits of working with, and learning from, non-nursing colleagues.

The English School's approach to developing a research culture was grounded primarily in nursing. A Research Development Team (RDT) was formed in 1995, led by a professor to fast-track a continually evolving group of staff undertaking PhDs. This was designed to foster a research culture within the team and the school. Relocated onto the main university campus, documentary analysis suggested that the RDT was created as a 'culture carrier', to integrate the School into the wider university, in the belief that all

staff would eventually be based at the University. It was disbanded in 2001 when the School's inaugural chair left.

The formation of the RDT created tensions within the School and some staff saw it as divisive, creating a schism between research and teaching, and concentrating opportunities and resources. The group had a measure of success and stimulated a debate about inclusiveness and exclusiveness which resulted in other strategies being adopted to promote the research in the wider School, including research interest groups.

Whilst both schools started at different points on the continuum between inclusiveness and exclusiveness, both progressed to a more intermediate approach, the catalysts being the formation of the Welsh Research Institute and the move to a more individually-determined approach towards accessing research opportunities and doctoral studies in the English School.

Nursing lecturers from both schools were given opportunities to participate in research projects. This was an attempt to bridge the divide between teaching and research and foster the belief that research was within their capability. However the veracity of everyone being research active was challenged by both schools. The consensus was that no one should be forced to do research, however those who were not research active risked loss of parity of esteem with research active colleagues. There were also issues around contractual imperatives for staff and opportunities for promotion.

The Challenges and Problems Encountered

A significant challenge was the interface between teaching and research. Striving to attain credibility in both was perceived as worthwhile because of the benefits attributed to their symbiosis. There were tensions in the schools in terms of the relative value placed on teaching and research. At the Welsh School participants who felt that the promotion of research had devalued teaching perceived a greater balance over time. In the English School the pre-eminence of research over teaching occasioned by the formation of the RDT had diminished with its disbandment. A number of participants

described how teaching was now the School's core work, with research characterised as an individualised, personal activity.

High teaching loads and lack of time were identified as key barriers to undertaking research, and questions were raised about equity of workload. At the English School there was a belief that staff research interests should be factored into workload calculations, and some attempt made to delineate teaching and research time. Participants believed that the task of balancing teaching and research activities fell largely to individual members of staff. In both schools several participants suggested the existence of a 'culture of caring' in which students were over-taught, and provided with excessive support. It was felt that moving away from didactic lectures to styles of teaching that encouraged students to be more independent would improve the quality of the education they received and free up research time.

The provision of nominal days for lecturers' research activity at both schools had been one response to these problems, though at the English School the time was more broadly defined as being for 'scholarly activity'. Whilst individuals attempted to 'block out' these notional days, this was challenging due to other pressures and responsibilities. An isolated research day was not perceived as effective as blocks of time, because doing research required sustained focus. However the English School had a policy of not allowing staff to 'save up' their scholarly days. At the Welsh School individuals attempted to create time for research through organising teaching activity into concentrated blocks, challenging negative attitudes towards research, and not automatically agreeing to take on extra teaching duties if they had their quota.

Organising and Managing Capacity Building

The implementation and evaluation of research capacity building strategies was achieved largely through delegation to groups and individuals. The implementation was problematic for both schools. The infrastructure at the outset lacked the robustness to support the management of change and the monitoring and evaluation of the strategies, although progress was made during the conduct of this research project.

Both schools were aware of the need for academic leadership, in tandem with a supportive infrastructure and effective communication, and mentorship and support for neophyte researchers. In the Welsh School academic leadership and management of developing and implementing research capacity strategies were seen as needing to be symbiotic, although tensions and conflicting issues were perceived. In the English School there was recognition of the need for this, but the priority was to sustain strong academic leadership, principally through a professorial appointment.

The lack of a senior research leader since the departure of the foundation chair at the English School inhibited the continued development of research capacity. Key benefits associated with such leadership were strategic direction for research; formal research support; and a champion for the School within the wider university. At the Welsh School where there was an established cadre of professors (see Table 6) there was more concern with how academic leaders made connections with less experienced researchers, and a feeling that more formalised support structures were needed. At both institutions the symbolic significance of academic leaders was noticeable. For instance, participants in the Welsh school suggested that alongside offering practical support, academic leaders also played an important function as positive role models, and their presence raised staff morale and generated credibility in the wider academic community. At the English school the departure of the foundation chair raised issues about the sustainability of its research development, but these were not only about issues of staff development and training. Whilst the school's more experienced researchers (via the research committee and interest groups) provided a framework of support for research development, participants described some aspects of academic leadership that they linked more specifically to a future professorial appointment. This included promoting the visibility and importance of research in the school at a senior level, offering formalised support structures, and providing strategic direction - a kind of 'research champion'.

The inclusive approach adopted by the Welsh School intended all staff to have an opportunity to develop research skills and become research active, despite their contractual differences. In reality if every member of staff had availed themselves of these opportunities this would have been problematic because of research funding deficits. The English School's more focussed approach was probably more realistic. Concentrating limited resources (to a greater or less extent) to 'fast track' a small group of individuals (as the RDT did) may develop a group of people with research training more quickly. It could be seen as a more effective way of using finite funds to build research capacity, by providing a new generation of academic leaders who can 'cascade' their knowledge sooner. Having said this, the Welsh School's experience suggests that even if support is offered to all staff, not everyone will avail themselves of it.

Managing support and workloads was an important issue for both schools. The English School adopted a more informal approach to the management and co-ordination of support for research. There was little monitoring of whether individuals took their entitlement of scholarly time, or evaluation of outputs. Workloads did not appear, on the whole, to be managed by the School to take account of this time – rather it was the individual's responsibility to achieve this, whilst ensuring that their teaching work was undertaken. The result was that teaching work often ate into people's research days. A positive outcome was that individuals had a large degree of autonomy in terms of how they managed their research, despite not being allowed to roll up scholarly days to create blocks of time. At the Welsh School there appeared to be a greater degree of management of staff workloads in order to release lecturers to undertake research, but there were challenges in redistributing workload and ensuring equality of opportunity.

The mix of staff on different contracts created tensions, with those on academic-related contracts finding it difficult to transfer onto academic contracts (which required a research profile), particularly in the English School. New lecturers in both schools received academic contracts automatically, contingent upon being research active. It was suggested that

staff on academic-related contracts felt pressured to do research in the English School as increasing numbers of their colleagues did so. This was counterbalanced by the fact that they were not formally expected to do so and their managers were not always supportive of them doing research. The findings from the Welsh School contrasted with this, and there was little evidence that staff on academic-related contracts felt pressured to engage with research. Indeed one senior member of staff felt that the deliberate policy of not placing pressure on staff to undertake research immediately following the move of the School into higher education had even led to some individuals feeling 'left behind' when they began to take an interest some years later.

The Welsh School's structure comprised groups of staff with cognate expertise led by a centre head. This provided a framework within which time for research was managed and distributed. Ensuring that individuals were supported and released from teaching duties when engaged in research was difficult, especially since work often had to be redistributed amongst colleagues. One important issue which also emerged at the English School was that the make-up and size of a centre/team made a significant difference in terms of the opportunities and support that could be provided to individuals, with very small centres/teams facing particular challenges. There was a belief that academic leaders needed to be strategically placed so that each academic group of staff had a dedicated senior researcher to provide subject-specific advice. At the Welsh School there were wide variations in the capacity development of different centres with some comprising a good mix of abilities, and others without senior researchers. At the English School some staff undertaking postgraduate degrees lacked subject-specific research leadership meaning that they looked outside the School for specialist advice, and were less engaged with colleagues in the School.

A number of participants at the Welsh School felt that it was necessary to 'capture' staff interests and research activity, and then provide information regarding opportunities for research involvement or funding to individuals in a more targeted way. There was also a belief that individuals needed to do

more to share personal research interests and activities with colleagues and make a greater effort to involve novice researchers in funding applications.

An area of difference between the two schools was in the corporate versus individual stance in terms of school direction and individual responsibility. The English School had overall a much more 'hands off' approach. However, for both schools, credence was given to balancing support and guidance with the importance of individuals taking responsibility for developing research. Lack of confidence and fear of failure were demonstrated by those that clearly needed support.

The Wider Context

At the English School the low status of nursing research within the wider university was a matter of concern. It was felt that other academic disciplines were better established in research and that the University could do more to support the development of nursing research. The development of multidisciplinary Research Institutes through which the University's research would be managed gave rise to uncertainty as to how nursing research could fit into them. An alternative view was that the formation of the Institutes presented opportunities for collaboration with and integration into the wider university. The appointment of a nursing professor was seen as essential to push forward the status and direction of research. There was a potential conflict between the School's desire to use the chair to develop its own research capacity, and the possibility that the University would want the appointee to concentrate energies within the new institutes to maximise published outputs and income generation. It was suggested that if the University gave the School greater support to develop its research capacity and profile this might bring new pressures and force people 'out of the comfort zone'.

Managing the requirements of multiple external bodies was an additional pressure for both schools. Their income derived largely from health service commissioning specifically to provide nursing education. Whilst the Welsh School had accessed some limited research specific finances, its English

counterpart had no specific funding for research activity, although money had been made available for staff development and educational audit. As part of their Universities the Schools were expected to undertake research, and promotion criteria and contractual stipulations required it.

At the Welsh School there was a more explicit expectation on the part of the University that the School would undertake research, with greater pressure evident in terms of achievement through external assessment. As most lecturing staff were on academic contracts there was pressure at the individual level to undertake research to secure promotion and tenure. The University's probation system was not seen to take sufficient account of the developing status of nursing research. Some participants felt the University's emphasis upon research achievement had overlooked the distinctive roles that nursing lecturers performed, particularly in relation to maintaining clinical interests and activities. It was suggested that the need for achievement in the external research assessment should be married with the desire of nurse lecturers to develop research focused around clinical practice. Participants felt that both schools should be proactive in influencing the culture of their wider institutions and take advantage of the resources they offered.

Discussion

These findings highlight the importance of examining the process of research capacity building in specific settings. A distinctive contribution of the study is that it explores the connections between the capacity building approaches adopted by two academic schools, the experiences of staff during the implementation process, and the outcomes achieved. Specifically, the study contributes to debates about the effectiveness of different strategic approaches to building research capacity, the challenge of managing the process, and how wider institutional contexts impact on schools' strategies. Whilst the two schools have faced similar challenges, their experiences of building capacity also display differences, derived from their organisational and local structure. For instance, the location of nursing within a wider multidisciplinary schools at the Welsh study site has shaped the nature of the

nursing research that has been undertaken, and the speed at which its capacity has developed.

Our findings indicate that questions of inclusiveness and exclusiveness are central to the development of research capacity, reflecting previous work in this area. Clare and Hawes (2001) portray their inclusive approach as a way of empowering all staff to become part of an HE culture in which career progression depends upon research performance. If the aim of nursing research is to inform (and be informed by) teaching and clinical practice this would lend credence to the inclusion of all staff in research activity (Newell, 2002). But Traynor and Rafferty (1999) indicate that this approach can leave staff feeling under pressure to engage with research, and the work of those wishing to remain in a teaching-focused role devalued (Logue, 1996; Barton, 1998).

Alternatively schools can adopt a more exclusive approach, concentrating resources on certain staff, sometimes with the aim of fast tracking a group of individuals who go on to develop others (Gething and Leelarthae-pin, 2000). This underlines the point that inclusive and exclusive approach may differ in means as much as ends. Traynor and Rafferty (1999) suggest that a more exclusive model can be responsively exclusive, acknowledging that not all staff want to undertake research (see also Feldman and Acord, 2002), allowing them (and valuing them) to develop their 'natural talents' in other areas, such as teaching. It supports the view that excellence is more likely when people concentrate mainly on teaching or research (Carlisle et al., 1996; Ramcharan et al., 2001; Conn et al., 2005). It allows opportunities and resources to be concentrated on those staff with an interest and ability in research, thus maximising their chance of developing a successful research career (Traynor and Rafferty, 1999). But such an approach risks causing resentment, either because research is seen as an elite, high status activity being supported to the detriment of teaching, or because not all staff showing an interest can be supported simultaneously, leading to feelings of marginalisation (Feldman and Acord, 2002).

The findings from this study suggest that there is no simple, absolute choice between inclusive or exclusive approaches. The most appropriate point along this continuum will depend on each school's circumstances, and the extent of its research capacity. What this study adds to ongoing debates about inclusion and research capacity building is the importance of connections, between different groups, and different activities. The challenge common to inclusive and exclusive approaches is ensuring that the energy and strategic drive needed to develop research capacity do not devalue teaching and teachers (Feldman and Acord, 2002). We need to consider who is included or excluded from research activity, and think through how different groups of people are connected. The challenge of forging connections between experienced and novice researchers is crucial to both inclusive and exclusive strategic approaches (Cooke, 2005). Whilst expecting all nursing lecturers to conduct research may be unrealistic (Gill, 2004), there is much to be gained from building effective interfaces between research and teaching. Good managers and teachers who help create an environment that is supportive of research can play a major role in the development of research capacity.

Capacity development requires a combination of good management (White, 2001) and strong academic leadership. Strategies depend on adequate infrastructures, including human and financial resources, with robust systems to monitor progress (Conn et al., 2005). Academic schools need to view research as a corporate enterprise, and central to their business, rather than an individualised activity. As Cleverly (1998) argues, the development of a research culture requires that institutions actively encourage staff to undertake research and provide suitable rewards. Another aspect of the good management of capacity building is making the development visible, both to colleagues, and the wider academic and clinical community.

The alignment between the aims and values of academic nursing schools and their wider universities is crucial (Waugaman and Schneiderman, 2004). In the UK the emphasis upon research and the RAE is sometimes in tension with nursing schools' focus on teaching, and developing research close to clinical practice and education. Alongside this, a crucial question is how

academic nursing schools manage their research roles as university schools, whilst being funded mainly by the health sector specifically to teach nursing students. They lack the dedicated finances for research, but are nevertheless expected to produce research outputs (Traynor and Rafferty, 1999; Mead and Moseley, 2000). Despite these restrictions and contradictions, our research suggests that academic schools can find ways of negotiating them, emphasising the need to explore how research capacity building takes place at the local level.

Study Limitations

The first limitation concerns the inevitably partial nature of any attempt to describe and evaluate the complex and multilayered process of building research capacity. We have chosen a case-study approach to capture the in-depth experiences of the schools themselves, since this sheds light on how building capacity actually works. But it would be equally possible to concentrate on the effects of particular strategies, and to track identifiable changes as a result of structural reorganisations. The second limitation was the study's 'insider' status at both study sites, necessitating restrictions on who could be involved in data collection, and involvement as participants.

Conclusion

Whilst research capacity is widely discussed in the existing literature, far less has been written about its local implementation. Hence the aim of this study was to investigate the effectiveness of different approaches to developing research capacity in academic nursing schools, and to add new understanding of how such approaches achieve particular results in specific settings. The findings suggest that both schools achieved significant increases in research capacity. Here we draw a subtle, but important distinction between research capacity and research outputs, the former being the enabler for the latter. As we have shown, both schools have carried through a sustained programme of staff development, which has increased staff capability and qualifications. For instance, when the Welsh School was founded in 1992, only 43% of lecturing staff held academic degrees, whilst by 2007 this figure was close to 100%. Research capacity is also crucially about

building infrastructures and cultivating cultures that will enable future research activity. Capacity building is by its very nature hard to measure, and its results are typically seen in long term, sometimes indirect outputs. For example, those staff (in both study sites) who had developed their skills and subsequently moved on to be successful academic leaders in other universities are a product of research capacity development, but not one easily captured in official statistics or RAE submissions.

Providing staff with time and financial support to undertake research training stand out as key ingredients in both schools' success. The main difference lies in the way they have sought to organise and manage opportunities. There is no single answer to the question of how research capacity development should be organised. On the one hand, offering opportunities for all staff to become research active seems positive. It emphasises that doing research is not an elite activity, but rather something relevant to and achievable for nurse educators. In contrast, a more exclusive approach which concentrates opportunities and resources on those individuals showing most interest might be more cost effective, and allows those who want to remain in a teaching-focused role to do so, without feeling that they too must become researchers. The risk inherent in both approaches is that teachers and teaching become devalued. Research may be seen to have become more important or valued than teaching, either because everyone is expected to become research active, or because only certain individuals are allowed to do so. Our findings demonstrate that neither school in the study fits into these rather rigid typologies, with both located at different points around the middle of the continuum.

Rather than recommend one way of building research capacity, our analysis points instead to two key challenges. Both need to be addressed in the *building of capacity*, and in future *research into capacity building*. Firstly, creating an effective interface between teaching and research is crucial. Our findings suggest clearly that tensions between research and teaching can be reduced when the benefits to teaching of increased research capacity are emphasised. Secondly, academic schools need to find effective ways of

linking together researchers with different levels of experience, particularly neophytes and academic leaders. The findings of this study suggest that meeting these challenges is difficult yet achievable, where there is a long term commitment. Future research needs to develop current understanding of these interfaces, both at the local and national level. Given its relatively short tradition in higher education, the development of nursing research in countries such as the UK represents a real achievement. Our research highlights the importance of making this achievement visible, both to nurse educators, and the wider healthcare sector.

Key Points

- Building research capacity requires a combination of academic leadership and effective management. Academic departments need to view research as a core organisational activity, as well as an individualised pursuit requiring support.
- Extending opportunities for research training to all nurse educators can promote equality of opportunities, but risks placing pressure on teaching-focused staff, and reducing the perceived status of their current roles.
- Focusing opportunities for research training on certain individuals in academic schools can be an effective use of limited resources, but may create the impression that research is a high status activity, marginalising some aspiring researchers and devaluing teaching work.
- The challenge common to 'inclusive' and 'exclusive' approaches to research capacity development is to forge effective connections between teaching and research, and between experienced and novice researchers.
- Studying the in-depth implementation of research capacity in local settings is crucial if we are to increase current knowledge of the effectiveness of different strategic approaches in this area.

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Table 1: Summary of data collection methods at each site

Welsh School	English School
21 in-depth interviews (nurse educators and senior managers)	13 in-depth interviews (nurse educators and senior managers)
1 focus group (lecturers and tutors)	1 focus group (lecturers and tutors)
Documentary analysis (approximately 150 documents)	Documentary analysis (approximately 150 documents)

Table 2: Nursing and Midwifery Research capacity building strategies adopted at the English School and the Welsh School

Strategy	the Welsh School	the English School
Appointment of chairs and other academic leaders	✓	✓
Research Development Fellow		✓
Appointment of research assistants/officers	✓	✓
Research Committee	✓	✓
Research Development Team		✓
Research Institute	✓	
Research Interest / Cognate Groups / Research focus groups	✓	✓
Research Strategy	✓	✓
Weekly day for research, scholarly activity or staff development	46	35
Study leave	✓	✓
Staff Development Group		✓
Research Intelligence Group		✓
Research Student Monitoring Committee	✓	

Sabbatical Leave/Conference Committee	✓	
Research Manager	✓	
In house undergraduate and postgraduate programmes, including a Masters in Nursing and taught Doctorate in Nursing	✓	
Financial support for conference attendance	✓	✓
Research seminars and workshops	✓	✓
Research support group.	✓	✓
Pump priming funding for small research projects	✓	✓
Appointment of social science/biological science academics	✓	
Opportunities for neophytes to participate in formulating bids	✓	✓
Opportunities for neophytes to participate in research projects	✓	✓
Poster displays of research undertaken by Schools' academic staff	✓	✓
Facilitating research collaborations – local, national and international	✓	✓
Management of staff through a Centre or Team structure	✓	✓

Table 3: Qualifications among by nursing and midwifery educators (2005)

Qualification	Number of staff (Welsh University)	Number of staff (English University)
No academic qualification	3	2
1 st degree only	19	7
Master's degree	63	31
PhD	13	6
Studying for a PhD/taught doctorate	14	8
Approximate total ¹	95	48

¹ These figures are approximate because the total number of staff is constantly fluctuating across any single year, and due to the fact that it is difficult to match postgraduate student data and staff records to exactly the same date.

Table 4: Published outputs¹ for the period 2001-2005

Year	English School	Welsh School
2001	23	82
2002	19	104
2003	21	125
2004	20	149
2005	Not available	124

¹ This includes articles in professional and academic journals, conference proceedings, book chapters, book reviews, books and editorships.

Table 5: Research income received¹ for the period 2001/02 – 2005/06

Year	Welsh School
2001/02	£306, 489
2002/03	£292, 662
2003/04	£273, 165
2004/05	£454, 341
2005/06	£495, 556

¹ Comparable data is not available for the English School.

Table 6: Promotions between 2001 and 2005

Nature of promotion	Welsh School	English School
Tutor to Lecturer	2	0
Lecturer to Senior Lecturer	8	3
Senior Lecturer to Reader	2	0
Senior Lecturer to Professor	1	0
Reader to Professor	2	0

Appendix 1

DOCUMENT DATA ENTRY SHEET	
Document no.	
Document name	
Type	E.g. Minutes, Report
Date	
Purpose (what the document is seeking to do)	
Broad Research Capacity Strategies identified (Aims)	
Specific Research Capacity Strategies identified (Objectives)	
Future Broad Research Capacity Strategies (Aims)	
Future Specific Research Capacity Strategies (Objectives)	
Rationale (why have certain strategies been implemented)	
Challenges and Issues	
Outcomes (how successful/unsuccessful have the strategies been)	
Author	
Intended audience	
How was the document disseminated?	
What action does it call for?	
How is the document laid out?	
What is the tone of the document?	
What are the key words or phrases used?	
Cognitive clusters*	
What is missing or omitted?	
What assumptions does the document make?	
What does the reader need to know to make sense of the document? (What does the author take for granted about the reader?)	
What other documents are referred to?	
Any other thoughts	

Key sources

Miles and Huberman (1984)
Iannantuono and Eyles (1997)
Hammersley and Atkinson (1995)
Silverman (2001)

*- Drawn from Iannantuono and Eyles (1997). This refers to the way in which a word becomes defined by its coupling with another word. For example, when the term 'health' is connected to, and constructed as a 'challenge', it takes on certain meanings.