The theory-practice gap

I have spent the last 30 years working as a nurse in the United Kingdom (UK), firstly as an untrained nursing assistant, then as a qualified staff nurse, then as a university lecturer, and finally as a professor of nursing. During this time I have seen many changes in the UK in the relationship between those nurses who deliver care to patients and those who work primarily in colleges and universities, and whose job it is to support front-line nurses in various ways. When I first started out in nursing in 1980, nurse teachers in the UK were employed by the health service and worked alongside practising clinical nurses as equal colleagues. Nurse teachers regarded themselves first and foremost as nurses, and only secondarily as teachers. They had more or less the same aims, objectives and values as their clinically-based colleagues and saw their primary purpose as the improvement of patient care. They achieved this aim in a number of ways: through the education of qualified and unqualified staff in the classroom and clinical areas, at a strategic level through influencing practice at meetings and on committees, and to a lesser extent through research projects aimed at providing answers to specific nursing problems.

A number of factors and events have contributed to a change in this partnership between clinically-based nurses and nurse educators, particularly over the past 15 years in the UK. In particular, two events in the nineteen nineties, which occurred almost simultaneously, have resulted in a dangerous and perhaps irreparable split between the practice of nursing and the practice of nurse education. Firstly, a new curriculum for nurse education was introduced. This new curriculum, called Project 2000, emphasised theory over practice by structuring the timetable so that students spent the first six months in the classroom learning theory before being allowed on placements in clinical areas. It also introduced a range of new theoretical subjects such as sociology, psychology and philosophy into the timetable which meant that, for the first time in the UK, nurses were being taught by lecturers who were not themselves registered nurses.

The second big change, which happened at roughly the same time, is that nurse education moved from health into the higher education sector. This move was both geographical and professional. Many schools of nursing, which had previously been situated in hospitals, moved physically into university premises. At the same time, nurse teachers found themselves re-employed as lecturers on university contracts. They were no longer employed by the health service, and their new employers had quite different expectations of them.

This morning, I want to explore what it means to me to work as a professor of nursing in an institution that has little regard for nurses and nursing; an institution that values theory over practice, theorists over practitioners and researchers over
teachers. I want to examine a number of conflicts between the aims of higher education and the aims of nursing, particularly in relation to research. And I want to offer some suggestions for how lecturers and professors of nursing might rethink their views about the purpose and practice of research for the benefit of patients and nurses.

The rise of research

It is no coincidence that the transition of nurse education from the hospital to the university was accompanied by an enormous growth in nursing research and nursing journals. Whereas the former schools of nursing regarded teaching as their primary activity, almost all universities, and certainly those in the UK and the USA, consider research to be their number one mission. The top universities in the world: Oxford, Cambridge, Harvard, Yale, M.I.T., are famous not for their teaching but for their world-leading research. The mission statement of my own university states firstly that:

Swansea University will provide an environment of research excellence, with research being undertaken that is internationally recognised and that informs all other activities at the University.

And only secondly that:

Swansea University will deliver an outstanding student experience, with teaching of the highest quality, that produces graduates equipped for distinguished personal and professional achievement.

Promotion in most universities, including my own, depends to a large extent on the number of research grants I win and the number of papers I publish in the top research journals. Promotion to higher grades such as professor, require me to have a PhD, which is first and foremost a training in research.

Too much research

This emphasis on academic research has resulted in a number of unfortunate consequences for nursing. Firstly, research has become an end in itself. That is to say, more and more nurse academics are applying for research grants and doing research projects not because the findings will improve practice in some way, but merely because they realise that, in order to please their employers and to gain promotion, they have to do research. Too often I have seen colleagues make decisions about what research projects to bid for based on the size of the grant and the prestige of the funding organization rather than on the relevance or usefulness of the project to nursing practice. And even in cases where these researchers assure me that their main reason for doing a project is to inform nursing practice, they still usually publish their findings in academic journals which are read only by other academics.

As a result of this pressure to ‘publish or perish’, as we say in the UK, I believe that there are far too many research reports in far too many journals, and that most of it is unnecessary, unhelpful, and increasingly unread. This phenomenon is not recent,
and it is not restricted to nursing. As long ago as 1963, the American bio-scientist Bernard Forscher wrote a letter to the journal Science in the form of a parable in which he compared researchers to brick makers and theorists to builders. His complaint was that too many people are busy making too many bricks and no one is bothering to build with them. In other words, we have too many research papers and no one is using them to build theory or develop practice.

Let's take a nursing example. During the 1950s there was one research paper published on the subject of the therapeutic effect on patients of listening to music. During the 1960s a further 17 papers were published, with another 45 during the 1970s and 86 during the 1980s. The numbers increased rapidly over the last two decades, and there are now nearly one thousand published research papers on the subject in the discipline of nursing alone. To use Forscher's analogy, that's a lot of bricks.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Number of published papers</th>
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<tbody>
<tr>
<td>1950-1959</td>
<td>1</td>
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<td>1960-1969</td>
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<td>1970-1979</td>
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<td>1980-1989</td>
<td>86</td>
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<td>1990-1999</td>
<td>288</td>
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<tr>
<td>2000-2009</td>
<td>534</td>
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<td>TOTAL</td>
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*Numbers of papers retrieved from PUBMED using the search terms ‘music’ and ‘nurs*’*

The first question to ask, then, is ‘do we really need one thousand research papers on the subject of using music as a form of nursing therapy? The second question to ask is: ‘what use have we put all this research to?’ or ‘What have we built with all of these bricks?’ The answer to this question is not very impressive. A recent systematic review of the literature concluded that music can help to promote patient comfort and relaxation. However, it was also concluded that the effect is not well understood, and the author called for further research. So, after nearly one thousand research papers published over a 50 year period, we know that music can help to make patients feel better, although we don't as yet know why. Is it only me who finds this rather worrying? This is not an isolated example. Far too much of the research being conducted by nurse academics is being undertaken in response to the demands of the university to bring in research grants and increase publications rather than in response to the demands of nurses for work that will help them to improve their practice.

I am suggesting, then, that nurse educators like myself; that is, nurses who are employed by universities primarily to teach other nurses, are being pulled in two
often opposite directions. On the one hand, we feel a professional and perhaps a moral requirement to make a contribution to the care of patients. This does not mean that nurse educationalists should be doing clinical work or working directly with patients. It means that we should be making our own educational and academic contribution to patient care through teaching and research. On the other hand, we have a contractual obligation to our employers to meet the mission statement of the university for ‘world class research’, by which is meant research projects that are funded by eminent academic bodies and published in eminent academic journals.

I have suggested that this pressure to publish or perish has resulted in a flood of inappropriate and unnecessary research papers which are not read by practising nurses and which add little to the theory and practice of nursing. In short, the nursing research agenda is being driven by the needs of academics and by policy-makers rather than by the needs of nurses and their patients. My first point, then, is that there is too much research being done at the expense of other more important and more useful contributions that professors of nursing such as myself should be making to patient care.

**The wrong kind of research**

My second point is that not only are we doing far too much research, we are also doing research of the wrong kind. Let me explain what I mean. Many of the first generation of American nurse academics in the 1960s had degrees in the social sciences and were trained in social research methodologies and methods. It is therefore perhaps unsurprising that nursing research adopted the social science research paradigm rather than, for example, the more experimental paradigm of psychology and medicine or the more humanistic paradigm of the arts and humanities. The argument has always been that nursing is a social activity and that the social science research paradigm is therefore the most appropriate way of generating nursing knowledge. However, I believe that there is a flaw in this argument. Whilst nursing is undoubtedly concerned with social activity and social interactions, these are on a different level from the concerns of the social sciences.

The aim of social science research is to generate knowledge about societies in general. Social scientists wish to know, for example, about general similarities and differences at the level of whole societies or of large groups within societies. Social scientists wish to understand about differences, for example, between men and women, between the young and the old, and between the rich and the poor. And the research methods developed by social scientists tend to reflect this concern with large groups or whole populations.

If we think about the design of quantitative social research studies, they usually begin by selecting a research sample that represents the target population. Any findings from our sample can then be generalised to the population as a whole. For example, if we find that 70% of our sample of patients responds therapeutically to music, then we can assume with some degree of certainty that 70% of all patients will also respond therapeutically. This information is very useful if, for example, we wish to introduce the intervention uniformly across an entire hospital. However, our ideas about nursing have developed a great deal since the introduction of the social science research paradigm in the 1960s.
Ever since the 1970s, nursing has been moving away from a task-centred model where the nurse has been expected to perform the same task on every patient, towards a person-centred model which demands that we regard every patient as a unique individual and every nursing intervention as a unique therapeutic encounter. This shift is illustrated by the following definitions:

- Nursing is] a social activity, an interactive process between individuals, the nurse and the patient. (Chapman 1979)
- Nursing consists of interactions between unique individuals, with unique experiences, and it always takes place in unique situations. (Sarvimaki 1988)
- Nursing involves seeing the recipient as a holistic being, and using this view to meet his or her individual needs through meaningful interaction. (Pearson 1988)

As we can see from these definitions, nursing is a series of unique and different encounters which demand unique and different interventions. A social research study might tell us that 60% of all patients will respond therapeutically to music, but it will tell us nothing about how each individual patient will respond.

And we meet similar problems with qualitative social research. For example, a phenomenological study might appear to be exploring the ‘lived experiences’ of individuals, but in practice these individual experiences are usually sorted into general themes and categories in order to make observations and recommendations that apply to larger groups and populations. The problem, put simply, is that social research provides us with knowledge and theories about patients in general, whereas the most useful knowledge required by nurses is about specific, unique individual patients. To return to my earlier analogy, not only are nurse researchers producing too many bricks, they are bricks of the wrong shape and size for building knowledge and theory for practice. Rather than taking a research paradigm designed to produce general and generalisable knowledge about large groups and populations as our gold standard, the profession of nursing might have done better to look at other practice-based disciplines such as education social work and psychotherapy, which tended to start with a rather different concept of what constituted the most appropriate knowledge for practice.

Research has been separated from teaching and practice

My third objection to the current state of nursing research is that researchers have allowed themselves to become separated from teaching and from nursing practice. Prior to the move into higher education, nurse academics were first and foremost teachers and many of them were clinically-based. Some of these teachers were also researchers, but their research was informed and directed by their teaching and by their nursing practice. As the pressure to win research grants and publish research findings increased, the research component of the academic role has gradually become the most important and the most dominant. In some universities in the UK,
research institutions are being created in which academic staff are no longer expected to teach or to engage with practising nurses in any meaningful way. In these institutes, people spend their time either writing funding bids or else conducting funded research. Often, they are under pressure to earn enough money from research grants to pay for their own salary. One nurse researcher I spoke to recently had been set a target of £200,000 per year. The focus of the research projects that they are involved with is usually determined by the funding body rather than by practising nurses or theorists. Often, these projects are so large that they require a team of researchers, each working on their own small part of the project, for example, the literature review or the data analysis, without ever getting an overview of the whole project. Someone once described these institutes as research factories, and I think that sums them up very well.

More and more, the academic activities of teaching and research are being carried out by two separate groups of people who rarely communicate with one another. Therefore, despite the rhetoric from universities about teaching and practice being informed by research, this is not happening as well and as often as it might. More seriously, however, research is not being informed by teaching and by nursing practice. As I argued earlier, the research agenda is not being influenced nearly enough by practising nurses and by those academics who are teaching them, resulting in a body of nursing research that is out of touch with the needs of patients and nurses.

**Practice Development Units**

What, then, is to be done? Re-uniting research with the needs of teachers and practitioners of nursing is the joint responsibility of all three groups. Researchers, teachers and nurses must work together on a shared agenda and a shared strategy for achieving that agenda. There are many ways that this can be achieved, but I want to focus on one way in particular that researchers, teachers and nurses can form productive partnerships which meet all of their needs, but most importantly, the needs of the patients to which all three groups are accountable.

We have in the UK a growing network of Practice Development Units. These are clearly defined clinical areas or teams of nurses – and sometimes practitioners from other professions – whose aim is to develop innovative and effective practice through partnerships with researchers and educationalists. Practice Development Units aspire to be centres of excellence and pioneers in new methods and techniques of nursing care. Practice development units conduct research and evaluation into their own work. They publish their work and present it at conferences. They lead the development and innovation of practice in their own organization by offering mentorship and supervision to colleagues. They run seminars and classes locally and nationally. And they work with colleagues from other wards and clinical teams to help them to become Practice Development Units.

Practice Development Units require two things. They require a partnership between practising nurses, nurse researchers and nurse teachers with a full commitment from everyone to innovate and develop practice for the benefit of patients. And they require the imagination and intelligence to look at nursing practice, research and education from a new and different perspective. In other words, Practice
Development Units demand that we think again about what nursing might, and perhaps should, look like.

Firstly, we need to move away from the idea of nursing practice as a technology; the idea that nursing is merely the application of the findings from research. This technological model of practice has recently become more prominent with the introduction of evidence-based practice into nursing. The technological model of practice reduces nursing to a mechanical process of doing that requires little or no thought. The scope of practice is narrowed down to what researchers have shown to be effective; that is to say, what is measurable. We can see the results of this narrow approach in the UK in the way that the Advanced Nurse Practitioner role has evolved. Advanced practice in the UK is defined, measured and recognised in terms of the demonstration of competencies that can be ticked off as they are achieved.

This technical, competency-based approach to practice development simply means becoming more competent at more and more skills, for example, prescribing medication or making diagnoses, rather than becoming truly advanced at some of the core nursing activities such as building therapeutic relationships with patients. The problem for the technical model of nursing is that the core nursing activities such as relationship-building are not easily measurable and so cannot be turned into competencies. In order to develop practice, we need to move away from the technical idea of nursing as simply the application of research findings towards a concept of nursing as a form of experimenting in practice. This means making individual assessments of our patients, trying out new ideas and evaluating their effectiveness on an individual basis. It requires nurses to reflect on their practice and apply their learning back into practice. Practice therefore becomes a continuous reflexive cycle of doing and thinking.

As the name suggests, nurses in Practice Development Units do not simply apply the findings of researchers; they carry out carefully controlled experiments to develop their own individual practice in their own individual way with their own individual patients. Nurses in Practice Development Units are responsible for the development of new practices as well as the implementation and testing of old ones. But to do this, they need to form partnerships with researchers. However, if researchers are to work in partnership with nurses on this experimental approach to practice, they in turn need to re-think their ideas about the function and purpose of research. The technical model suggests that the purpose of research is to generate universal, generalisable knowledge which practitioners take and apply to their practice. The reflexive model suggests that the most important knowledge for practice is generated by nurses themselves directly from their own practice. This can happen on an individual basis, where individual nurses reflect-in-action (to use Donald Schöhn’s term) in order to shape and modify their practice as they are doing it. It can also happen away from the site of practice, through verbal or written reflection, that is, through clinical supervision or by writing reflective journals. It can happen through more structured reflective methodologies such as auto-ethnography and autobiographical writing. And it can happen through action-oriented methodologies such as action research and co-operative inquiry.

In all of these examples, nurses and researchers have to rethink the purpose of research for a practice-based discipline in a number of fundamental ways. Firstly,
they have to recognise that the ‘gold standard’ of large-scale, decontextualised, generalisable research does not necessarily produce findings that are of much use to individual nurses working with unique, individual patients in unique situations and settings. What is required is a philosophy and a collection of methods and methodologies that will address each specific nursing issue as it arises; what I have referred to elsewhere as a ‘science of the unique’. Large-scale research projects provide us with general, background information. What is more important and useful is local projects for local problems.

Secondly, and related to this point, we need to recognise that the most important research questions, along with the answers to those questions, arise out of practice itself. Rather than seeking to distance themselves and decontextualise their work, researchers need to immerse themselves in the practice that they are exploring. And thirdly, we need to recognise and accept reflexivity, the idea that our research can and should have an immediate effect on the nursing practice that we are researching, and that changes to practice will influence the shape and direction that our research will take during and as part of the research process itself. This suggests that research is not something that researchers do to or on nurses and patients, but something they do with them.

We must also recognise that these new ways of thinking about nursing practice and nursing research have implications for how we think about nurse education. We learn about, and come to understand, the world of nursing through experimenting, researching and reflecting on practice. Education, like research, is not something that is applied to practice, but something that arises from practice; something that is an intrinsic part of practice. It is impossible to practice in a thoughtful way as a nurse without learning, and the role of the educationalist is therefore to work with the practising nurse in order to facilitate that process of learning. Taken together, these ideas, philosophies and approaches to practice development constitute a new set of relationships between nurses, researchers and educationalists, and between each of these professional groups and the organisations for whom they work. If nurses, researchers and teachers continue along their separate paths, then ultimately it is patients who will suffer.