

Abstract

Nurses, it is claimed, do not engage with articles about Information Technology, although the evidence is that they have poor knowledge of many of the issues involved in the use of information and technology in practice, and poor computer skills.

Three pieces of research into nurses and computers have been used to create fictional narratives of nurses' engagement with computers. They are presented in this way to encourage nurses to read the accounts, to reflect on their own attitudes and practice, and to aid the exploration of alternative possibilities. The basis of this approach is explored, along with the process of producing the narrative fictions.

Key Words

Nursing informatics, education, computers, research methods narrative fictions

Acknowledgments

Florence Nightingale Foundation Travel Scholarship awarded 2005, which contributed to the research underpinning this article.

Introduction

This article presents the findings from three pieces of research, undertaken in 2005 and 2006. As Mulhall (1997) states both the research process and the dissemination of the resultant findings are, as a rule, intertwined with the methodological paradigms underpinning the research. This article develops this convention by adopting a narrative approach to the dissemination of mixed methods research, carrying the mix of methods throughout the entire research process, rather than stopping at mixing data collection and analysis. The reasons for this are discussed later, although as Clough (2002) says when offering readers fictions as research it is a decision of the reader not of the writer how the offering will be approached.

My intentions are to explain the research used to underpin the creation of the narrative fictions, and then present them. After the narrative fictions I explore the issues that arose in their creation, and explain why I have chosen to present my research in this way.

The approach

It is important to stress that these fictional narratives do not represent a form of research narrative. The narrative is not the research methodology as discussed by McCance et al (2001). They do not seek, as Frid et al (2000) discuss, to accurately represent stories as told to the researcher by each of the characters. Nor are they, as Winter (2002) describes, a narrative of research, in that they do not seek to tell the story of the research.

They are a part of a true mixed methods approach to research. The narrative fictions have been created from three pieces of research, described in the next section. I have adopted the approach recommended by Clough (2002) in that these accounts have been

woven from the threads of lived experiences. Threads, or themes, that have emerged from the combined researches have been composited to create the fictions presented.

The Research

These fictional narratives have been created from three pieces of research. The first research was a doctoral thesis (Bond 2006a) which looked at, amongst other things, student nurses' experiences of using computers, and seeing computers used, in practice. This was a longitudinal mixed methods study. The information that contributed to the narrative fictions was collected in the third phase of the research project. This collected information from 129 students in their third year of a pre-registration nursing programme using questionnaires, with both closed and open questions. Three group interviews, with a total of 15 qualified nurses working in acute hospitals, community practices and nursing homes, were also held. None of these nurses had any particular informatics or computer expertise as part of his or her job role. We discussed their use of, and attitudes towards, computers in practice.

The second was undertaken in New Zealand with the support of a Florence Nightingale Travel Scholarship (Bond 2006b). One of the aims of the study tour was to discuss what nurses wanted from IT systems. This study included discussions with nurses in a variety of acute hospital settings. Some of these were individual discussions, some group discussions. Most of the nurses did not have any requirement for specific informatics or IT skills or knowledge, however a small number of the participants were nursing informatics experts.

The third project used in creating these narrative fictions was an unpublished piece of work undertaken within a UK hospital. In total 25 nurses participated, drawn from a variety of ward and clinic settings. The largest group (10) described themselves as staff nurses, although the interviews included auxiliary nurses, senior staff nurses, clinical nurse specialists and student nurses. The focus of this study was exploring nurses' use of the hospital computer systems, especially the Intranet. None of the nurses was included in this study because of any particular interest in computers.

The information collected was analysed separately for each project. The questionnaires used in the thesis were coded for entry into SPSS, and descriptive statistics were used to identify common aspects of the students' experience. The accounts obtained from the group interviews were analysed thematically.

Both the Florence Nightingale Travel Scholarship information and the UK hospital information were reported as narrative summaries, which sought to, as fully as possible, describe the information gathered from the people and organizations visited.

The two major pieces of work, the doctoral thesis and travel scholarship were completed within 4 months of each other, with the result that I was immersed in the subject and the content of both. The experiences of the people who contributed to each of the studies were remarkably similar, even though they were on opposite sides of the world. The elements that make up each of the narrative fictions were repeated in different ways by different participants. The similarities made me look back at the UK hospital work undertaken a few months previously. The notes of those discussions showed the same stories within them.

The Stories

Kate

Kate has been a nurse for longer than she cares to remember. She initially qualified as a State Enrolled Nurse, but about 5 years ago did a conversion course. It didn't make

much difference, she is still doing the same job, on the same ward, in the same hospital, as she was 10 years ago.

Kate's story

When I first qualified computers didn't really exist, or if they did I wasn't aware of it. I vaguely knew that some big companies used computers, one of my friends worked for the council and told me about the new computer room they had installed, it sounded massive, a special room, air conditioned, just for the machine. When I did my conversion course we were told that there were computers we could use. I guess that it was a computer that the library used for its catalogue, although this one sat on a desk. The librarian was very patient with me, I used to look along the shelves for books because I didn't know how to use the OPAC, no idea what that means, but he could use it to find if books were in stock so quickly that I thought it would be useful to know how to do it for myself, so he spent ages showing me. I never did really manage it without him there to help, but that would have been the first time that I ever used one.

Now? Well now they're all over the place, we've just had a new system brought in. We use them for patient records, for results, for emailing, for handover, we'll be using them to give the patients their medicines next. Ha! we, that's a joke. I've been on a few training courses, and I can do it in the training room OK, but I still struggle. I worry that I'll press the wrong button and do something to the system. It would be just too awful if I did something to a patient's record. Help is a bit of a joke. The helpdesk people are very nice, and know what they're doing, but, well, they don't understand what I'm trying to do. If I get stuck in the middle of doing something I need someone to come and help me. If I ring the helpdesk I usually get the voicemail. By the time they get back to me I'm with a patient and can't leave to sort the problem out. Then we get into a circle, I ring back and get the voicemail, they ring me back when I can't come to the phone, or when someone else is logged into the computer.

Sometimes I might eventually get to talk to someone, but then I can't make it go wrong in the same way again so I never find out what I did wrong. If someone could come onto the ward and show me while it still wasn't working I'd learn what I was doing wrong, and might even get the hang of using the damn kit. Sorry, I'm getting a bit excited about it, it's just that I really want to get to grips with it, but sometimes it just seems so hard.

John

John works on another ward in the hospital. He qualified with a diploma in nursing a couple of years ago, having tried a supermarket managers programme after school, but finding that it 'wasn't really him' as it was too office based and didn't have enough contact with the customers. He's very popular with both staff and patients.

John's story.

Ah, yes, computers. As I'm quite young, and not that long qualified everyone expects me to like computers, take to them like the proverbial duck to water. Well, I hated them at school. I did the compulsory IT GCSE when I was 14, but after that I had as little to do with them as possible. It was quite easy, when we did group work I had a mate who liked them so he did the computer bits and I did other parts, and we were both happy. I got by on my course without using them as well. Some of the lecturers wanted our assignments word processed, but I checked, it wasn't a requirement in the regs so I did mine by hand. Most of the lecturers didn't mind, some of them were pretty anti computers as well - still used OHPs rather than PowerPoint, and gave us photocopied handouts rather than sending us off to web sites to look things up.

What is it I don't like? It's not the computer really, I can use them, but they're so, so ... impersonal. I like spending time with my patients, not sitting over a keyboard. It's not

really my job, not a nurse's job, to be updating records, the ward clerk should be doing that. If they want to get value for money from nurses they should use us for what we are good at, looking after patients, and employ enough clerical staff to look after the computer.

They take so much time, time I could be spending with the patients. How do I mean? Well, think about the patient care record. I have to make handwritten notes as I go, then find a free computer and sit down and type everything into it. With the paper records I can take them to the patient's bed and do everything there – they can see what I'm doing as well, it just ... feels ... so much better.

Some nurses seem to prefer using the computer to looking after patients. Every time there's something to do you'll find them sitting at the computer. There's one new nurse who's so keen she even prints stuff off and takes it on her break with her. I asked her what she was doing one day, and she said she was looking up about a new dressing that we've started to use, but that she doesn't like sitting reading the information onscreen as she feels that it's not approved of. Too right! If she's got time to spare she should be with the patients, not the computer.

If the computer actually did anything that was useful, anything that saved time instead of taking twice as long, something that improved patient care, then I might be convinced to give it a try, but until then, it's not for me.

Sue

As a clinical specialist Sue has a roving remit. She qualified some 10 years ago, having entered nurse education straight after her A levels. Through doing regular courses at the local university she gained a BSc, and last year an MSc in nursing. As well as visiting patients on wards she holds her own outpatients clinics twice a week.

Sue's story.

How do I feel about computers? If you don't mind me saying that's a bit of an odd question. I don't really feel anything about them. They're well, just there. It's a bit like asking me what I think of a hospital bed! They're just there. They do a job, every so often someone comes up with a slightly better design – or at least what they think is a slightly better design, and then everyone wants the new version rather than the old one. Of course by the time we've got all the new style they're the old-fashioned ones and everyone wants the next model.

I use my computer every day. I expect that I'm a bit lucky as I have one in my office, and don't have to share so I can get onto it whenever I want to. It's just so useful. I can look up my patients' records before clinics, we use hard copy notes as well, but all the important bits are in the electronic one. It's just as well really. I can never count on having all of the files for a clinic. I've got the internet on the one in the office as well, so if there's ever anything I want to look up I can check it out before I see the patient. It's really useful knowing some good web sites, some of my patients come into clinic with pages printed out from the internet, and some of it is, frankly, rubbish. I go through it with them tactfully, and point them to some more reliable sites. I don't want to put them off, it's good that they want to know, but some of them need a bit of help, they tend to think that because it's on the internet it must be true.

How do I know what's good? I didn't at first, I was as confused as the patients. It's just too easy to stick a word in Google and see what comes up. I didn't know the difference between sponsored links and search results, or what the end bits of the web addresses – you know, the .co or .org bits – meant. I asked one of the lecturers on the course about it and she suggested that I did one of the Masters units. It really helped me. Not just

with the patient information, but with understanding research and where to find information for me and my patients.

Problems? Oh yes, often. The hospital doesn't always help. I wanted a report off the system so that I could audit my clinics, but what I wanted wasn't available so I needed to write a request for it to be developed. It was such a waste of time, although to be fair I know that the IT department are very busy as well, so no doubt they need that sort of thing to be able to prioritise their work. I had better things to do, but eventually it got approval.

The systems we use can be difficult as well, there's always things that don't work as well as I'd like. Things that the developers just haven't thought about. I sometimes talk to our IT people to see if they can do anything. At first I found that difficult, it was as if they were talking a different language but now I understand enough to be able to explain what I need from a nursing aspect, and then they talk to the system developers.

On balance I find that the computers make my life easier, they certainly help the patients. Of course there's improvements that I'd like to see. I'm thinking of asking if I can set up a users group where we could work out what we, nurses, want.

Rebecca

Rebecca is a 2nd year student nurse. She worked as a secretary for a few years before deciding that nursing might be a better career for her.

Rebecca's story.

I can type quite quickly, and can use the computer for word processing. I used one everyday in my old job. We didn't have the internet in my old office, not even email, so that's all completely new to me.

We have to be able to use computers on my course. The hospital is a couple of hours drive from the university, and although there's a good library here I find that using the online journals and books makes life a lot easier. I didn't realise how much more I would need to know, I thought being able to use a word-processor was being able to use a computer. I'm lucky that I'm on the course I'm on. In the first year we have a unit that includes computer basics, like how to use the online journals, and the internet. It includes PowerPoint as well. That's worrying actually. We learnt how to use it to support our presentations, but some of the lecturers who marked our presentation assignment don't have a clue, the stuff they put together is awful. And they're marking us? You know what I mean?

Lucky? Oh yes, went a bit off topic there. I meant I'm lucky because we had the sessions on our timetable. I've got friends on other nursing courses where they're just expected to know it, or if they don't then go to workshops in their own time. Nursing is a busy course, so they didn't bother, and now they're getting stuck.

I'm a bit worried about how I'm meant to find out about using computers in practice. My first placement was in a nursing home, and there weren't any computers around. The office had some, they ran accounts and all sorts of things on them, but the nurses didn't seem to use them at all.

My 2nd year placements have all been here. There are computers here, but I've hardly used one. My first mentor didn't seem to like them much, I did ask about them, but she said not to worry, so I just left it. My mentor on the next placement seemed to think that I'd already been shown the basics as I'd been here for a while. I didn't like to tell her that I hadn't, so I just avoided them. It really wasn't hard, all I saw them being used for

was updating records at the end of the shift. No-one asked me to do anything that I need to use the computer for.

I got a shock when I started this placement. Halima, who's my mentor and really nice and friendly usually, expected me to be able to do the handover sheets, and was a bit put out when I said that I didn't know how to do them on the computer. She said that I should know by now, and was just starting to show me how when she got called away. Sarah, who's on my course was on that shift as well, and she's pretty good with computers so I asked her if she knew how. She was just showing me when Halima came back. She asked Sarah if she was OK with showing me, Sarah said yes but she didn't only show me the handover sheets. She had found some other things as well, hospital policies, procedures, all sorts of useful stuff. Halima came back to see why we were taking so long, and was really surprised, Sarah had found tons of stuff that she hadn't got a clue was there.

As I'm nearly at the end of the 2nd year I've got to get my practice profile signed off. Other students say that it's really easy to get the ones that relate to IT done. As long as you know how to turn the computer on and, you know, know a bit more than your mentor, which let's face it isn't hard! they've had them signed off no problem. In that way it's good, one less thing to worry about, but then again, I do worry. This stuff is going to be important. I need to know it. I spent half a day in clinic with Sue, she was using the computer all the time, even talking about stuff with her patients. I wouldn't know where to start.

Whenever we log onto the system there's a box reminding us of this and that regulation about using computers, and we have to click and say we know before we can get on the system. I click because I have to, but I don't really know what it all means. I should know this stuff, but if my mentors don't know either then who's going to show me?

Ethical Considerations

The ethics of presenting the research findings in this way clearly needed to be considered, although what ethical framework to use was not as clear. In fictions, published or performed stories, a disclaimer is often used that any resemblance a character may have to a real person, living or dead, is mere coincidence.

This approach was however problematic. Whilst these stories are not narrative accounts synthesised from individuals' retelling of their stories they are also not fictional accounts arising from my imagination. They are best described as composites; no story belongs to any one individual, but they have been created from themes that arose from research data. That approach was therefore rejected, not only because it was not accurate, but also because it devalued the aspects brought to the narrative fictions by each of the contributors.

Two key ethical areas needed consideration; one concerning the information givers, and one the presentation of the information. The main consideration for the participants in each of the studies is informed consent. All the participants consented to sharing their information with me, and knew that the information they shared would be turned into a report in which they were guaranteed anonymity. At the time I did not specifically mention creating narrative fictions because that format had not been anticipated. Although the format is not the one I had in mind when people agreed to share information with me I do not feel that this approach moves outside of the agreement I had with participants. One essential consideration in reaching this conclusion is that the identity of the participants is not disclosed, and the anonymity promised has been maintained in this presentation of the data.

The second ethical area is the truthfulness of these narrative fictions. This is a dichotomy in that I am presenting them as fictions, which carries the implicit understanding that

they are not true. As Peterson & Langellier (2006) say; narrative is a text that is imagined, fashioned, and formed. These narrative fictions are however based on reality, and to that extent they need to, as Richardson (2000) says, seem "true", that is create a credible sense of the "real". In discussing authenticity in narratives Winter (2002) argues that the question that should be asked is not about the truth of an account, but rather the trustworthiness of its presentation. Does it persuade the readers that they can rely on the insights the account provides? One important consideration here is the bias of the researcher. In considering the results of any research Morgan (1986) argues that the evaluation will depend on the viewpoint of the person undertaking the analysis. As a nurse, and a lecturer in Health Informatics I cannot claim to be totally impartial and have adopted the approach of Mills (cited Bryman, 1988, p102) in that, 'I have tried to be objective, I do not claim to be detached.'

Rhodes & Brown (2005) consider that as well as having responsibilities to the research participants; authors also have responsibilities to their readers, saying that they must 'at the very least account adequately for their representations'. How these narrative fictions have been created has already been explained, however why this approach was adopted also needs to be explained.

Why?

I subscribe to the view of Wilson and Natale (2001, p4) that research methods should 'flow logically and conceptually from the terminology of the question'. That, however, does not address the question of what you do with the findings from research. The problem of research being seen as an elitist activity, that can be seen as irrelevant for day to day nursing practice, has been identified by Mulhall (1997). The conclusion of this line of reasoning must be that the presentation of the research should meet the needs of the intended audience. This means that it may need to be presented differently to different audiences.

The intended audience is practising nurses. In the opinion of Heather Tierney More, one of the clinical leads for the National Programme for Information Technology, nurses consider anything to do with IT to be 'a big turn off', saying 'If articles are branded as IT it's unlikely nurses will bother to pick them up, let alone engage with them (Davidson 2005). If presenting the article as a traditional research report means that the target audience are not going to read it, then a new approach is required. Although there is 'a reluctance to view academic research as a creative activity' (Manzi 2005 p116), I am hoping that, when reaching out to a nursing audience, Rhodes and Brown's (2005, p472) view that fictional texts can help readers to engage by encouraging imagination rather than presenting analysis and 'dry knowledge' will prevail.

Although it can be argued that this approach has weaknesses – indeed the novelty of the method may be considered to be a weakness as many readers will not be familiar with the use of fictions in presenting research and may therefore be unsure of how to approach it, the use of narrative fictions as a way of presenting the findings of research also has several strengths. The novelty may help the intended audience to engage with the research. Frid et al (2000, p697) consider that narrative is 'able to cast new light on that which has previously been experienced as familiar'. To the extent that fiction is an art they have articulated the aim that I had in producing these narrative fictions. I am hoping that nurses will think about what is a routine aspect of their every day working lives in a new way. Narratives should, according to Richardson (2000) have an effect on the reader, generating new questions and moving the reader to action. Picasso once said (cited Kaufman 1974, 124) that 'art is a lie that makes us realize the truth'.

Final Comments

Producing these fictional narratives has been an interesting part of my own personal research journey. Whilst I am familiar and comfortable with collecting and analyzing research data to date I have presented it in the traditional format of a research report. I

am confident about the robustness of the research, however am a novice writer, and hope that in reading this you will not be overly critical of my literary skills.

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