How do I improve my practice of training midwives and nurses in the use of Q-Pulse?

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Abstract

This paper focuses on how, as a Midwife manager in a Tertiary Maternity Hospital I have endeavoured to generate a living educational theory of practice. As a practitioner, my research goal reflects my steadfast pursuit on "How do I improve my practice of training midwives and nurses in the use of Q-Pulse?" Q-Pulse is a document-management software used in our organization for managing policies and procedures. Midwives are responsible for familiarising themselves with their institution's policies, protocols and guidelines to provide safe, effective and evidence-based care for women and babies (An Bord Altranais, 2000).

As a health care practitioner, I believe that values such as respect and openness are essential as much in life as in midwifery care. My career as a midwife, midwifery tutor and midwife manager have contributed to the strengthening of these abiding values. This paper will enable the reader to see how personal values of respect and openness can become an embedded part of midwifery practice through the training process and this can well be achieved by the complementary listening and participatory approaches to become communicable standards of judgement (Laidlaw 1996). In the course of this research, I used technology to support midwives and nurses in the use of Q-Pulse. My research involved the design and evaluation of the e-learning tutorial for the use of Q-Pulse. I have used McNiff's (2010) action planner to explain my action research enquiry.

Keywords: e-Learning; Respect; Openness; Action research; Living theory.

Introduction

I undertook this research enquiry, as I desired to improve my practice in training midwives and nurses in the use of Q-Pulse, which is document control software designed to assist hospitals in managing their quality systems. For this purpose, I sought to answer my research question, 'How do I improve my practice of training midwives and nurses in the use of Q-pulse?' I will explain how I addressed my concerns, which involves training of midwives and nurses in the use of Q-Pulse and the design and evaluation of the e-learning tutorial to support such training.

Through reflection on my experience as a Q-Pulse trainer and discussions with my work-colleagues, I have come to realize that essential humane values such as respect and openness are core values, and I amplify these aspects under the following:

Respect: Respecting the views and opinion of others entails paying attention, reflecting on the expressed opinions, and consideration and due regard to the feeling and wishes of others. This value can be achieved primarily by listening. Listening includes paying attention, silence, and reflection on content without making a judgment, and accepting it. Listening results in a trusting atmosphere, in which learners feel free to participate in the learning process and to share their experiences and ideas.

Openness: This value includes accepting new ideas, methods and changes. This can be achieved by a participatory approach. The participatory approach can be defined as the involvement of users in planning, development and implementation of the project. A participatory approach assists in the identification and understanding of the users' needs and can be used to plan and evaluate projects.

In the course of this research enquiry, I will show how I have lived these values in my practice and how they became communicable standards of judgement (Laidlaw 1996). This action research enquiry involved two main cycles. The first cycle began as I attempted to understand the use of Q-Pulse among midwives and nurses in my organisation and the issues surrounding its use. Simultaneously, I commenced the process of designing an e-learning tutorial for the use of Q-Pulse. Having designed the e-learning tutorial based on the users' needs and expectations, the second cycle dealt with my attempt to evaluate how effective this e-learning tutorial was in relation to maximization the use of Q-Pulse.

My Research Context

The study was carried out in a large urban maternity hospital that provides one of the most extensive women and infants' healthcare services in Ireland. The hospital is also a teaching hospital that facilitates the educational needs of midwifery, nursing and medical students. Approximately 400 midwives and nurses are employed in the organisation. The Nursing and Midwifery Board of Ireland (NMBI) is the Irish Nurses and Midwifery Governing Body, which regulates the clinical practice of midwives and nurses. In order to provide best quality care to women and babies, NMBI advocates the use of policies, protocols and guidelines (PPGs) (An Bord Altranais, 2010), to ensure the provision of care that is safe, up-to-date and evidence-based. This is

further supported by the recently published report of the confidential enquiries into maternal deaths in the United Kingdom (Centre for Maternal & Child Enquiries (CMACE 2011), which recommends the strict adherence to national policies and guidelines.

In Ireland, PPGs were introduced to demonstrate an active aspect to midwifery and nursing decision-making after the publication of the document, 'Guidance to Nurses and Midwives on the Development of Policies, Guidelines and Protocols' by NMBI in 2000. This document recommends that each midwife and nurse is responsible for familiarizing themselves with their institutional policies, protocols and guidelines. An Bord Altranais (2000) also stipulates that PPGs must be readily available and easily accessible and advised that organisations need to consider innovative ways of keeping staff up-to-date on PPGs. To achieve this, my organisation has chosen to use a computerised system known as Q -Pulse.

Q-Pulse is electronic document-control software designed to assist hospitals in managing their quality systems. In my hospital, it is being used to assist in the management of documents, particularly PPGs. This system allows staff to create, view and update documents such as PPGs, thereby making them available electronically rather than as hard copies. It acts as a storage facility for PPGs, and allows PPGs to be accessed, created, revised, approved and distributed to the relevant staff. When a staff member wants to access a document, they can now use the Q-Pulse to find the most up-to-date documents. Documents can be viewed on-screen or be printed to read at a later stage. It is also easy to retrieve older versions of documents stored in the system.

However, it does not come without its challenges: it requires staff motivation, training, and a certain level of computer literacy. As I was interested in information technology, I was given the responsibility of training midwives and nurses in the use of Q-Pulse, which formed the basis of my research enquiry.

My Context/Role

In my role Midwife Manager in a tertiary maternity hospital, I am responsible for training midwives and nurses in the use of Q-Pulse. I am strongly influenced by deeply-held values such as respect and openness. I believe the coordination of my experience as a midwife, midwifery tutor – and in later years as a clinical placement – has strengthened these values. My midwifery training gave me an understanding of the importance of sensitivity to a woman's feelings and her choice for continuing pregnancy, labour and the postnatal period. This is essentially achieved by active listening (Madden, 2002). As my career developed, I came to appreciate the value of listening during care provision, which further encouraged me to develop my values of respect and openness. After three years of nursing and midwifery practice, I decided to pursue my career as a nursing/midwifery tutor as I had always held a particular interest in teaching and attending to the educational needs of students. As a nursing/midwifery educator, I deeply held these values and my focus was on respecting the students and understanding their needs. I also encouraged my students to provide feedback, which enabled me to improve my teaching skills and professional practice. This being the 1990s and in a country other than Ireland, it was at a time when, in my opinion, the education system in midwifery and nursing didn't

support the practice of listening and gaining students' feedback/experiences, and where autocratic management took a dominant role. This, as a result, has often led to situations in which I felt I was a living contradiction in terms of my values.

In 2005 I started my career in Ireland as a midwife, later due to my interest in education; I pursued the role of Clinical placement Coordinator, which involved supporting students to achieve their learning outcomes in the clinical area. This role enlightened my understanding of the education system in Ireland. There was more emphasis on listening to students' concerns and actively encouraging them to express their feelings, experiences and learning needs, which has given me renewed enthusiasm to live my values of respect for students' views by listening and being open to their suggestions via participatory approaches.

Moreover, I have taken a particular interest in the use of Information Technology in the workplace. This has led me to develop a database for the allocation of midwifery students to the clinical area and I also pioneered the development of an electronic 'off duty' database for midwifery and nursing staff. During the process of the development of the database, the participation of the Clinical Midwife and Nursing Managers (users) and the utilization of technology enhanced the effectiveness and utilization of the database.

My Research Methodology

In this research enquiry, my main aim was to encourage and motivate midwives and nurses to use Q-Pulse, to enhance the quality of midwifery-care provided to mothers and babies. In order to achieve this, I needed to secure the cooperation of the midwives and nurses. This was a most challenging task. I believed that my values of respect and openness would assist me to gain the support and cooperation of the midwives and nurses. This motivated me to live my values, and therefore I chose to use the relatable action research using living theory research methodology.

Construction of an action plan entails asking the primordial or the critical questions and then by considering various possible answers that have the potential to enhance professional practice (Whitehead and McNiff, 2006). In line with the postulates of McNiff (2010), I de-constructed the entire hypothesis into an articulated question-format, which is part of the scope of my action research enquiry. My preliminary questions at the outset are as follows:

    What is my concern?
    Why I am concerned?
    How do I explain the situation as it is and as it develops as I take action?
    What can I do? What will I do?
    How do I check that any conclusions I come to are reasonably fair and accurate?
    How do I explain the significance of my action research?
    How do I modify my ideas and practices in light of any re-evaluation in the course of research?

    (Whitehead 1989; Whitehead and McNiff 2006; McNiff 2010)

What are my concerns?

As a Midwife Manager responsible for the training of midwives and nurses in the use of Q-Pulse in my organisation, I identified two main challenges, which include:

1. Achievement of 100% training of midwives and nurses in the context of varying work shifts, activity levels, staff and resource limitations.

2. Retaining information by midwives and nurses who have been trained.

My primary concern was to improve my practice in training midwives and nurses in the use of Q-Pulse. In order to solve the above-listed challenges, I developed a complementary e-learning tutorial to enhance training thereby enabling midwives and nurses to gain more understanding of the Q-Pulse. I envisaged that the design and development of this e-learning tutorial would serve as the prototype for other e-learning tutorials that would cover specific areas e.g. breastfeeding, care of the newborn beside management of women with gestational diabetes, all of which are core concerns in midwifery care. My secondary concern is to use the appropriate technology to design and develop this e-learning tutorial.

In order to achieve this, I sought to utilise my technical knowledge instead of relying exclusive on feedback from the midwives and nurses, as overtime surmised that the goal was not being achieved. My task plans in terms of achieving the objective of engaging practitioners meaningfully in the Q-Pulse were gaining only a very marginal result in the absence of feedback.

Why am I concerned?

My experience and interest in using computers enabled me to become competent in the use of Q-Pulse. When I was given the responsibility of training midwives and nurses in the use of Q-Pulse, I anticipated that I would be able to provide effective training. In practice, however, it was not the case. My concern started to grow as midwives and nurses were reluctant to use Q-Pulse. One of the main reasons for their reluctance was their lack of confidence in using Q-Pulse. As Midwives were reluctant to use Q-Pulse, it brought in a question: 'How can midwives and nurses be confident that they provide evidence-based care to women and babies?' This limits our endeavour to fulfill the mission of our hospital, 'Excellence in the care of woman and babies'. The practitioners needed encouragement and confidence to embrace technology for their own professional development. This was the impetus for my education of digitalization, and in this I feel passionate about my responsibility towards training midwives and nurses to embrace technology.

In the practice of midwifery, our actions depend on our beliefs, values and education. For example, if I respect a woman's choice, I should organize the care around her choice. It is a truism that actions reflect our values. I share the values of 'respect' and 'openness', which are essential values in midwifery (Clift-Mathews, 2010) and necessary for becoming a holistic professional practitioner (Leamon *et al.,* 2009). During the process of providing Q-Pulse training, I didn't provide opportunities for midwives and nurses to contribute to Q-Pulse training and as a result, may not have engaged them meaningfully. Therefore, I became increasingly concerned that

these values were not being realized sufficiently in my present role as I train midwives in the use of Q-pulse.

In order to facilitate deep learning and increase the use of Q-Pulse by staff, I felt it was necessary to respect midwives and nurses by carefully listening to their opinions, experiences and suggestions (Rogers, 1983). Freire (1996) also concurs that dialogue is very important in training, which will enhance a co-operative activity. In order to influence change in practice and to develop the culture of using technology, the midwives and nurses need to be motivated (Masrom, 2007). According to Rogers (1983) motivation can be enhanced if the participants are involved and their views heard. Therefore, I developed the e-learning package by actively involving the midwives and nurses. Q-Pulse's E-learning tutorial will be beneficial as it is available all the time and users need not depend on me to learn how to access it.

How do I explain the situation as it is and as it develops as I take action?

Training all the midwives and nurses working in my organisation in the use of Q-Pulse is a challenge. Midwives' and nurses' experience in using computer software is varied. Many midwives and nurses prefer a hard copy of the policies, guidelines and protocols. There are various disadvantages of using the hard copy. The hard copy available may not be the current version of the PPGs. Therefore it has been vital for midwives to use Q-Pulse to update themselves on the relevant policies, guidelines and protocols. My primary concern was to train all the midwives and nurses in the use of Q-Pulse, in a way that they would be able to retain the information regarding how to use Q-Pulse. To achieve this, I believe that an e-learning programme could support the training. My secondary concern was to use technology appropriately to design an e-learning tutorial in a way that would facilitate the learning of midwives and nurses in the use of Q-Pulse.

E-learning is increasingly incorporated into midwifery and nursing educational programmes (Adams, 2004) and continuing professional education for midwives and nurses (Peterson *et al*., 2008). An Bord Altranais (ABA) (2010) encourages midwives and nurses to utilize potential resources to facilitate life-long learning and demonstrate a commitment to on-going professional education. The official web site of the regulatory body for midwives and nurses (ABA) has a dedicated area called 'The E-learning Zone', which provides links for available e-learning programmes. The Health Service Executive (HSE) has launched a dedicated website for e-learning called 'The HSELand'. The project has been in existence since 2005 in pilot-status and has been fully functioning since 2007. It provides training programmes for all disciplines of the health care professional in the HSE. The most popular programmes are medication-management, venepuncture and peripheral intravenous cannulation, which are applicable to the midwifery and nursing professions. Therefore e-learning has been encouraged and supported by the Nursing & Midwifery Board of Ireland (NMBI) and also by the HSE. The National Council for Nurses and Midwives also recommend e-learning as a strategy to provide opportunities for nurses and midwives to partake in continuing professional-development programmes (O'Shea, 2008). This further supports my decision to develop an e-learning tutorial in the use of Q-Pulse.

As a midwife manager involved in the implementation of Q-Pulse training, I have a particular interest in teaching, and devise the best approach to take to it. As I was introduced to various e-learning technologies during my Masters in Education, I began to consider the use of technology as being an innovative way of training staff to use Q-Pulse. The focus of my research was to design and develop an e-learning tutorial for midwives and nurses using the appropriate software. My values of respect and openness motivated me to collaborate with the midwives and nurses during the designing and evaluation of the e-learning tutorial. I believed that this would demonstrate my values.

I undertook my research enquiry using action research methodology using my values as the standard of judgement (Whitehead 1989). I used questionnaires, focus-group interviews, and one-to-one interview to gather evidence of my practice. Ethical approval was sought from the maternity hospital and the university where I undertook my Master's in Education.

What actions did I take? What did I do?

I undertook my action research enquiry in two cycles. In cycle one I evaluated the Q-Pulse usage and identified the users' view in relation to the development of the e-learning tutorial. In cycle two I evaluated the e-learning tutorial in terms of usability. Involving the users of Q-Pulse (midwives and nurses) in my research is one of the cornerstones of my personal values as I pursue my research enquiry. It would be a contradiction of my values (Whitehead, 1989) if I did not involve the users, and respect and listen to their views from the outset of my enquiry. I believe that the involvement of the learner (McGill & Klobas, 2008) and respecting by listening to the learners (Rogers, 1983) will enhance the success of the Q-Pulse e-learning tutorial.

Upon receiving ethical approval to undertake my research, I distributed a 'paper format' questionnaire (Appendix A) to all the clinical areas for midwives and nurses, and via emails for all clinical midwife-managers. I received 59 completed questionnaires. I also send invitations to randomly selected midwives and nurses to participate in the focus-group interviews. Twelve agreed to participate, of whom six didn't participate due to personal/work commitments.

Cycle one: Evaluation of Q-pulse usage and training

I used the findings of the questionnaires (Appendix A), focus group interviews, dialogues with midwife/nurse managers and email-correspondence to identify the various issues and views surrounding the use of Q-Pulse as consulting with learners will enhance their commitment to learning (Cook-Sather, 2009). My value of respect and openness was achieved by my listening and participatory approach. Nichols (1961) a listening 'legend', postulates that, 'listening is the best way to understand people and their needs'. During the research process, I actively listened to the participants, and the participants who actively participated in the development of the e-learning module. My values stated above are espoused from my midwifery values, such as birth as a normal physiological process, respect for women, trust, confidence in, and empowerment of, women. In this research process, I will be able to enhance my midwifery values of respect and openness, thereby gaining trust, the confidence of the participants and empowering them.

The initial questionnaire and focus-group interview-results indicated that the Q-Pulse is not utilized effectively, and users find it difficult to use

([Click here to listen to the voices of the midwives and nurses expressing their difficulties in the use of Q-Pulse](#)). Email correspondence and dialogues with midwifery/nursing managers also suggest that users found it difficult to use Q-Pulse (Jesudason, 2011). The participants acknowledged that e-learning has various advantages such as 1) learning at learner's pace; 2) easy to review; 3) retention of knowledge is increased; and 4) convenient for the learner (Jesudason, 2011). After collecting the data from the initial questionnaire I conducted a focus-group interview with six midwives and nurses to gain more understanding of the difficulties midwives and nurses encountered while they used Q-Pulse. I also used this opportunity to discuss their opinions, views and preferences regarding the layout and content of the e-learning tutorial. All the help them to become familiar with Q-Pulse.

([Click here to listen to the midwives' and nurses' views about the e-learning tutorial](#)). This also concurs with various studies by Huckstadt and Hayes, 2005; Chang *et al.,* 2008; Brunero & Lamont 2010; Jeffries 2001; Tait et al., 2008; Sun et al., 2008; Peterson 2008; Mayer & Moreno 2003; Mayer 2008 conducted to evaluate the benefits of e-learning tutorial.

Reflection of Cycle one

Reflecting on my practice based on the data collected from the questionnaire and focus group, I realized that I have not lived my values, as I was not aware of the issues encountered by the users when using Q-Pulse. The task of training the midwives and nurses in the use of Q-pulse was given to me as the management expressed confidence in my technical and teaching skills. As I was too focused on imparting the technical training, I failed to realize the pain-points of users in imbibing the digital module of the Q-Pulse. I was training midwives and nurses in the way I learn. I was not considering individual skill-levels and didn't involve the target group in customizing the training session in order to make the module user-friendly and easier to assimilate. Involvement in this research-enquiry helped me to understand that every individual has different ways of learning and is essential for their active involvement and participation for effective learning to take place. It also made me realise that I had not made sufficient effort to listen to the midwives' views and have not involved them in planning the training. Conducting the focus-groups and involving the users in the development of the e-learning tutorial is evidence of my progress and a further step towards living my values, wherein I was able to respect midwives' concerns and views by listening to them, and was also open to their suggestions by involving them.

Data from the questionnaire and the focus-group provided a deeper understanding of the users' issues and needs. Engaging in constant dialogue with the learners improved my learning in relation to the use of Q-Pulse (Rogers, 1983). The focus group data gave me insights regarding information that needed to be discussed during training sessions. I was able to identify certain concepts, which were not emphasized in the training sessions. One example of this is, 'search using keywords' I assumed that search to be an easy task and that everyone would be capable of searching for documents. My training did not provide clear instructions regarding carrying out a search using Q-Pulse. This search differs from other search-engines such as Google, which appears to have confused Q-Pulse users. The focus

group also gave me the confidence to proceed with the development of the e-learning tutorial as a means of assisting staff to utilise Q-Pulse. This was evident from the comments made by the focus group participants. The focus group interview also provided me with information regarding the important contents to be included in the e-learning tutorial.

The next phase of my research sought to address my concern regarding how the e-learning tutorial would serve the desired effect of enhancing the use of Q-Pulse amongst midwives. This stage of my research was concerned with the designing and usability evaluation of the tutorial.

### Cycle two: Designing and evaluating the e-learning tutorial

I developed two Q-Pulse e-learning tutorials based on the information collected from the focus group and design principles of e-learning tutorial. I utilised the multimedia design principles (Mayer, 2008) and Motivation principles (Keller, 2008) to develop the e-learning tutorial. The screenshots of the tutorial are as follows:
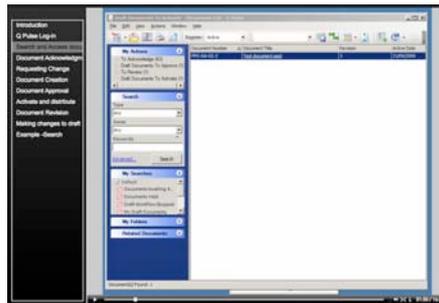

Figure 1: Screenshot of tutorial one opening slide
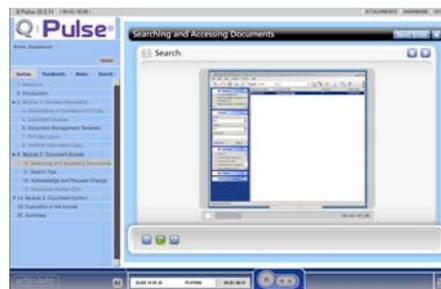
Figure 2: Screenshot of tutorial one slide with interacting items
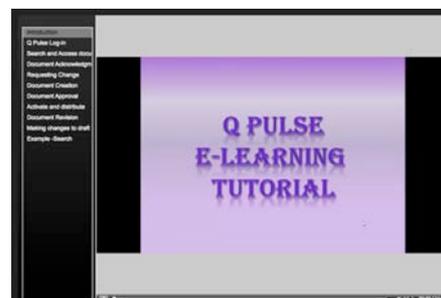
Figure 3: Screenshot of tutorial one with Quiz

Figure 4: Screenshot of tutorial two with a table of contents

As I was not sure which tutorial to finalise, I decided to evaluate both tutorials. For the purpose of evaluating the tutorial, I used the Likert scale and one to one interview with the seven participants.

Evaluation of the tutorial using the Questionnaire (Likert scale)

For the purposes of evaluation, I used a five-point Likert scale (Appendix B) with 13 statements. The first four statements were adopted from the Technology Acceptance Model (TAM) (Masrom, 2007) to estimate their acceptance of the e-learning tutorial, and the remaining nine statements were utilized to evaluate the usability of the tutorial (Zaharias and Poylymenakou, 2009; Sandars, 2010). As most of the study group preferred Tutorial Two, they evaluated the tutorial using the Likert Scale.

The results of the first part of the questionnaire evaluating the acceptance of the e-learning tutorial showed a strong acceptance of the e-learning tutorial. No one disagreed about the usefulness of the e-learning tutorial in learning to use Q-Pulse. The results of the second part of the questionnaire, which evaluated the usability of the tutorial, were positive. The participants largely agreed on the usability standards of the e-learning tutorial. The main weakness of the tutorial concerns the technical problems they encountered. The technical problem was due to the unavailability of the updated version of Adobe Flash in the computers in the hospital. In order to solve this issue, I have contacted the information technology (IT) in our hospital to rectify it.

One-to-one interview

In order to gain a better understanding of the learners' view about the e-learning tutorial in terms of their likes and dislikes, I conducted one-to-one video-interviews with seven of the participants. I was confident that that I would gain more knowledge about designing the tutorial if I listened to the users. (Click here to listen to the participants' evaluation of the e-learning tutorial). This was another step taken by me to live my values of respect and openness. All of the Participants preferred the second tutorial as they felt it was easy to access, comprehensive and clear. They also felt that the e-learning tutorial would enhance the use of Q-Pulse and they would definitely use it. Features such as the table of contents and mouse clicks showed as an arrow and a red spot, with the ability to skip from one section to another. In addition, a voiceover was found to be beneficial.

Based on the evaluation and suggestions provided by the participants, I amended the e-learning tutorial. The tutorial is divided into three modules, such as introduction, document access and document control. Document access is for all

midwives and nurses. Document control is for managers who will be creating and approving the documents. Clicking on the tab opens the appropriate document. The quiz is included, as shown in Figure 6. The learner can navigate the tutorial using the table of contents.
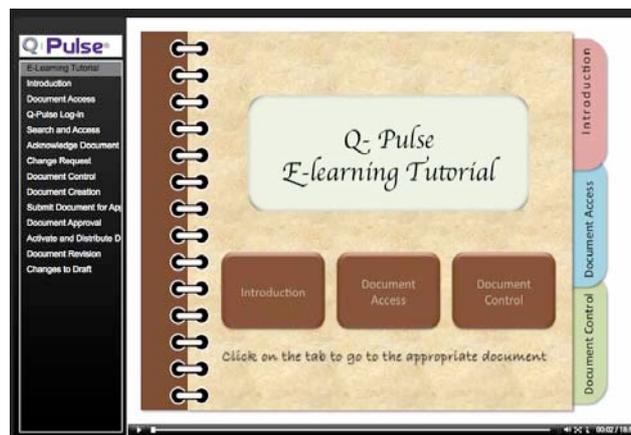
Figure 5: Screenshot of tutorial three opening slide
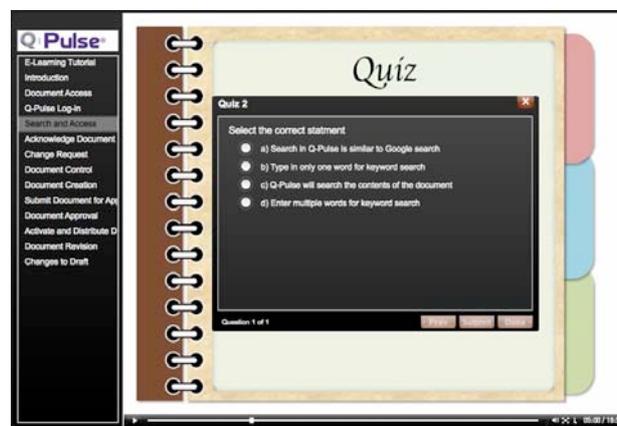
Figure 6: Screenshot of tutorial three slides with a quiz

Reflection of cycle two

The second cycle was significant because I was developing and evaluating the e-learning tutorial. During the process of development, I realized it was not an easy task. The first hurdle was the decision regarding the choice of the software. I believed that Captivate was the appropriate software, as I wanted to include an aspect of simulation in my content. Unfortunately, I was not able to procure 'Captivate' at the appropriate time. Therefore I decided to use 'Camtasia' for recording the screenshots and 'Articulate' to make the content more engaging for the users. After completing the tutorial I was not satisfied as the size of the video was small. As a result, I developed another tutorial using 'Camtasia' exclusively. I didn't want to discard

Tutorial One before getting consensus from the focus group. Through the process of developing the tutorial, I was able to understand how I learn, which gave me insights about how others learn. The video tutorials of 'Camtasia' software available online at http://www.techsmith.com/learn/camtasia/7/ were beneficial for understanding the software. Therefore, I concluded that the Q-Pulse tutorial, which consists of a screen-recording of the activities of Q-Pulse, will be beneficial for using Q-Pulse.

The evaluation of the tutorials by the users using a Likert scale (Appendix B) and one-to-one interview enabled me to identify the strengths and weakness of both tutorials. (Click here to listen to midwives' and nurses' evaluation of the e-learning tutorial.) Listening to the user's feedback regarding the tutorials made me aware of the features that were user-friendly, and those that were not. When I reflected on the feedback, I realized the need to explore further the features of 'Camtasia' in order to develop a user-friendly tutorial. This encouraged me to review the 'Camtasia' tutorials on the Internet and to participate in 'Camtasia' online forums. As a result, I was able to design the tutorial with most of the descriptions requested by participants using 'Camtasia'.

I believe listening and respecting the users' views and needs and involving them has enabled me to develop a tutorial, which will significantly enhance the training of midwives and nurses in the use of Q-Pulse. I believe that it would be impractical to develop an e-learning tutorial without any involvement with the users. As I began to reflect on my learning and to articulate my own values, I began to realize how these values had contributed to my learning. Developing my values will increase my learning, thereby improving my practice and being influential to others in the use of Q-Pulse.

As I developed the e-learning tutorial, I could be accused of influencing the responses of users. Practising my value of respect and openness, I believe I didn't influence the individual participant's response, which was evident from the validation meeting. (Click here to listen to the participants' views about me living my values). Participants acknowledged that they were able to express their positive and critical feedback. Reflection on their feedback encouraged me to make the necessary changes.

Reflection on my research

I began this research with the commitment to enhancing the use of Q-Pulse in my organisation, as I could see the importance and value of using it in midwifery and nursing practice. I value openness and respect as a means of improving my practice, which is evident from the way I became aware in the first cycle of this research, in which I was contradicting my values in practice. In order to address this contradiction, I have been continuously engaging with the literature and reflecting on my own learning in order to improve my practice. I believe it is possible to develop an effective e-learning tutorial by respecting the views of the users and being open to their suggestions. I understand that I must continue to reflect on my practice and to live my values, thereby continually improving my practice.

I believe I have influenced the learning of my colleagues. The claims I have made, supported with relevant evidence and validation, are my contribution to Living Theory. Participants were able to understand the significance of the e-learning

tutorial in the use of Q-pulse. Participants were able to use and evaluate the tutorial. The data from the evaluation of the tutorial suggested to me that my learning around these areas of designing and developing an e-learning tutorial and their application had a positive effect on the users in the use of Q-pulse.

I also began this research in an attempt to live my values of 'respect' and 'openness'. I stated my concerns that I was not always able to live these values in my practice, but I could begin to address this contradiction by developing the e-learning tutorial, wherein I involved the users to participate with the designing and development of the tutorial by listening to their experiences, attitudes and suggestions. By actively listening to the learners, I was able to respect their views and concerns. Involving them during the process of developing the e-learning tutorial through my action research, will inform the future development of e-learning tutorials for midwifery and nursing staff. It is my goal to use this research as a platform to drive the development of similar e-learning tutorials for midwives and nurses by living my values of respect and openness.

The focus group and the one-to-one interviews provide evidence that I have listened to the users' views, thereby showing I was respecting their views and opinions. I also have taken into account all the users' suggestions in the development of the e-learning tutorial; this shows I was open to the users' views. This had a positive effect on the learning of the participants. I believe that the participant's involvement in the design of this e-learning tutorial has encouraged them to become more pro-active in utilizing other e-learning programmes, and I anticipate they will encourage their colleagues to do so as well.

How do I check that any conclusions I come to are reasonably fair and accurate?

To ensure issues of validity, I met with my supervisor on many occasions between March and June 2011, to discuss my progress and elaborate and clarify my living educational values. My critical friends and validation group used my values of respect (listening) and openness (participatory approach) as standards of judgement in my practice, in order to scrutinize the evidence and validate my claims. The comments made by my critical friends (Appendix C) and the validation group confirm that the conclusions I came to were reasonably fair and accurate.

The living standards of judgement were identified as follows:

a. Is my value of respect manifested clearly by listening to the users in my practice?
   o The evidence generated from data from the focus group interview, one to one interview provide evidence of my listening. The developed e-learning tutorial is evidence of my listening. The changes made to the tutorial were based on the feedback of the participants. The following comments made by the participants in the validation group also supports that my value of listening is manifested in my practice.
   o *Participant 1: - "You were able to listen to us and you were able to take on board and design the third tutorial*. *You stayed quiet and allowed us to continue our feedback"*

     ○ *Participant 2: - "You encouraged us to provide feedback. You didn't ever inhibit us"*

     ○ *Participant 3: - "When I opened the tutorial three I could see straight away that you have taken on board anything I have mentioned"*

b. Is my value of openness manifested clearly by involving the users in my practice?

     ○ The participants were involved in the very early stage of the development of the e-learning tutorial. They were involved in the various methods of data collection such as questionnaire, focus group interview and a one-to-one interview. Participant 2's comment highlights the value of the participatory approach. *"The fact that we are involved in the group setting and on an individual setting, it was a good way of allowing us to interact as we have to focus on specific issues".*

I have engaged in a reflective approach to my enquiry, and have provided evidence of this in my research, which I have presented in the form of cycles of action and reflection, questioning my approach and motivation at every stage (Winter, 1998). I have placed myself and my values at the center of my enquiry (Whitehead & McNiff, 2006).

My explanation is truthful, sincere and appropriate, as it illustrates the emergence of my embodied consciousness of my values as I began to recognize the contradictions in my practice and focused on adapting the tools to promote respect by listening and mutual learning and openness, by a 'participatory approach'.

How do I explain the significance of my action research?

The significance of my research lies in my capacity to theorize my practice as contributing to others learning. I have identified areas in which I have improved my practice using my values as living standards of judgement (Laidlaw, 1996). As my claim has been validated in relation to these standards, I feel justified in claiming that I have generated an original living-educational-theory (Whitehead, 1989) to identify how I take responsibility for my practice, from which others may learn and benefit from it.

The significance of the involvement of midwives and nurses in the development of the e-learning tutorial

The involvement of the midwives and nurses who will be using the e-learning tutorial contributed enormously to its success. Initially, I drafted a design for the proposed tutorial based on my learning experience during my course for the Masters in Education. When I commenced my enquiry and involved the midwives and nurses in the focus group interview, I came to recognize the value of their input in the development of the e-learning tutorial. This has been recommended by Peterson *et al*. (2008), who suggest having an active steering-group composed of a range of people who make the target audience when developing e-learning programmes in order to understand the user's needs.

One of my values, which I mentioned previously, is openness. I have achieved this by a 'participatory approach'. I have made every effort to involve all grades of

midwives and nurses in my research. Although a cohort of six midwives and nurses consented to participate, they were unable to be involved in my enquiry due to shift-patterns and personal commitments, which could be seen as a disadvantage. Eight midwifery managers participated in the research enquiry and made a huge contribution to the success of the e-learning tutorial. This could be considered an advantage since midwifery managers are the leading force in any initiative within the organisation. All participants volunteered their time and effort selflessly and with enormous enthusiasm. Involvement of midwives and nurses was a positive step, whereby the participants' learning and my own learning benefited enormously. It is my hope that midwives and nurses will be involved in the development of further e-learning programmes.

The significance of action research in midwifery

I have conducted this research using an action research methodology, which was informed by my values of respect and openness. Over the course of my research, I have come to believe that the living-theory approach of using action research methodology would benefit my profession. The practice of Midwifery is underpinned by values that guide the way in which midwives deliver care. My values have developed from the espoused midwifery values such as caring, woman-centredness and partnership in care, respect, client-first, evidence-based care and advocacy (ABA, 2000). All of these values mentioned can only be lived by listening to and involving women in their care, which is why and how my values of respect and openness evolved. Every midwife as a professional is committed to adopt and live these values. I believe that positivist and interpretative research approaches, which are currently adopted in many midwifery enquiries, reduce the woman or midwives to mere research subjects and doesn't encourage practitioners to live their values. The process of a practitioner's action research, which seeks to understand the complex process rather than seeking to produce any generalized theory (McNiff and Whitehead, 2000), can be used to transform the individual and in turn the organisation. For this reason, I would recommend that other researchers into midwifery adopt an action research approach to their studies in order to be actively involved in change with a view to having a positive influence on practice and care-provision.

How do I continue to transform my practice in light of my findings?

By undertaking this action research, I have identified ways I can continue to transform and improve my practice in future as a practitioner reflecting in and on the action. As discussed I value respect and openness, both of which were used to improve my practice as Midwife Manager involved in the training of Q-Pulse. These values, which have buttressed my research and renewed perspectives, will contribute towards improving my practice in the future. Addressing my values and applying those to my practice had an effect of moving towards living out my values more fully, which in turn has made a valuable contribution to my own living-educational-theory.

I have positively influenced the Centre of Midwifery Education (CME) at my organisation to embrace technology by designing and developing the website for the CME during my first year of the course, which has led to the implementation of MOODLE (Modular Object-Oriented Dynamic Learning Environment) which is a

learning management-system educators can use to create effective online sites. This will be implemented in the coming months. The Accreditation Officer of my organisation has endorsed a commitment to include the tutorial on the new hospital website, so it can be used by all the hospital employees and not just midwives and nurses. The procurement of the software Captivate has been sanctioned, therefore enabling me to refine the tutorial. According to Wiemer (2006), Captivate allows the addition of clickable areas to a screen-capture video in order to create an interactive activity, thereby increasing the understanding of the users. I will use Captivate to include further simulation-modules in my tutorial, which will assist learners to practice the use of Q-Pulse in the tutorial. I also hope to further refine the tutorial and have options applicable to the various levels of users. I hope to involve midwives and nurses, who are not at management level in future developments of e-learning tutorials, as I now consider that inclusion is one of the core values if I continue to consider openness as a personal value. I aspire to live my value of inclusion in my future projects. I wish to continue to develop my ways of learning to improve and understand my practice as Whitehead & McNiff (2006, p. 24) describe it, *i.e.* a form of praxis, that is, 'purposeful and morally committed practice'. By doing so I can continue to bring in a transformative influence amongst users of official digital software in conjunction with their professional duties. I envisage that e-tutorials – duly fine-tuned with the contextual changes – will continue to contribute to the continuing professional medical education and help in achieving the larger mission of the hospital, 'Excellence in the Care of Women and Babies'.

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Appendix A

Q Pulse Training

Please tick the appropriate boxes for questions 1-8

1. How often do you use Q pulse?
   a. At least once a day
   b. At least once a week
   c. At least once a month
   d. Never
2. Please select the activities you have used Q-pulse for
   a. Accessing documents
   b. Creating documents
   c. Revising documents
   d. Approving documents
3. Have you been trained in using Q Pulse?
   a. Yes
   b. No
4. If yes, please indicate how would you grade your proficiency in using Q Pulse after the training?
   a. Average
   b. Good
   c. Excellent
5. Do you 'refer to' the hard copy help documentation?

      a. Always
      b. Never
      c. Occasionally

6. What is your preference for Q Pulse training?
      a. Self-directed e-learning
      b. Group instruction
      c. Classroom situation

7. At what grade do you work in the hospital?
      a. Staff Midwife/Nurse
      b. Clinical Midwife/ Nurse Manager 1
      c. Clinical Midwife/Nurse Manager 2
      d. Clinical Midwife/ Nurse Manager 3
      e. Assistant Director of Midwifery & Nursing

8. How old are you?
      a. 20-30 years
      b. 31- 40 years
      c. Above 40 years

9. If you have difficulties using the Q Pulse, what do you do to trouble shoot?
_____
_____
_____
_____
____

10. Have you taken part in an e-learning programme before? Yes/ No
11. If Yes, please comment on the advantages and disadvantages of the e-learning programme.
_____
_____
_____
_____
____

12. Any other comments
_____
_____
_____
_____
____

Thank you for completing the Questionnaire

Appendix B

Questionnaire two - Usability Evaluation

Please tick the appropriate box.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	NA
1	I found the e-learning tutorial easy to use						
2	Using this e-learning tutorial will enhance my effectiveness in using Q-Pulse						
3	I believe it is a good idea to use this e-learning tutorial						
4	I intend to use this e-learning tutorial as a guide for using Q-Pulse						
5	Vocabulary and terminology used are appropriate for the learners						
6	Font (style, colour) are easy to read						
7	Learners are always aware of which aspect of the tutorial they are presently at.						
8	The tutorial allows learners to exit whenever desired and easily return to the closest logical point of the tutorial.						
9	The course is free from technical problems						
10	The e-learning tutorial use activities to gain attention and maintain the motivation of learners						
11	The learners can commence the tutorial with ease.						
12	The tutorial incorporates novel characteristics.						
13	The tutorial provides learners with						

frequent and varied learning activities.						

Appendix C

Email Correspondence from critical friends

Critical Friend 1 response

Dear Anne,
First of all well done on such an innovative development for the CWIUH. From my own experience working there, I can comprehend, first of all, the difficulties experienced by staff to access policies, procedures and guidelines and more importantly keeping track of those that need updating and secondly the reluctance if not fear in staff to involve themselves in information technology.
With regard to validating your thesis, to answer your first question;
your account is written in simple comprehensible language presented in a logical format that makes for easy reading for both academic and non-academic staff.
It certainly represents a truthful and sincere account. This is evident in your inclusion of paraphrases from your focus and interviews, also in your reflective discussions, your supporting literature and your realistic timeframe to undertake the project.
Its evident that you have undertaken this research with due professional and ethical considerations. You have a high professional status in the midwifery profession task a result of your extensive qualifications and years of experience in the nursing and midwifery profession. This professionalism and experience are evident in your research as you incorporate your values of listening and educational beliefs into your project.
Ethical considerations are evident by the anonymity of participants and granting of ethical approval from the CWIUH and university.
Wishing you every success Anne

_____

Critical friend 2 response

Dear Anne,
Attaching my feedback

1) Is this account comprehensible?

Yes, I believe the study is very comprehensible. The study flows and reads well. I can understand the background, context and justification for the study. The research question, the method in which the study was carried out, how the e-learning tutorial was designed/developed and how the researcher established her findings and came to conclusions is clear and easily understood.

2) Does it represent a truthful and sincere account?

Yes, I believe it does. The researcher provides an explanation of her rationale for the enquiry. From reading the study I get a genuine sense that the researcher wishes to utilise her interest and skills in the use of IT to assist her midwifery and nursing colleagues to embrace IT also as learning tools to enhance their professional practice. By using focus groups and one to one interviews the researcher ensured that midwives and nurses were 'listened too' and their needs are taken into account

when the tutorial was being designed/developed. The researcher explains her own values regarding learning as being 'listening and participation' – this was taken into consideration at all times by the researcher during the process of the enquiry.

3.a) Is it appropriate? b) Been drafted with due professional and ethical consideration?

a) Yes, I feel the enquiry is very appropriate to the midwifery and nursing profession and the organisation in which the study was conducted. Up to date, evidence-based PPGs are essential in midwifery and nursing practice. Any means of encouraging staff to familiarise themselves with and implement the same is very appropriate. Hence the need for Q Pulse and the e-learning tutorial to assist staff utilise same. The researcher explained her concern and difficulties meeting each midwife and nurse to teach/instruct them on the use of Q Pulse – so she decided to be pro-active and develop an e-learning tutorial for same.

b) In my opinion, the means by which this study was conducted was completely professional and ethical. Staff were not coerced into participating and confidentiality and anonymity was maintained at all times. There is evidence that the researcher reflected during the course of the study and constantly strived to ensure the correct content was included in the tutorial ie: asked the users what they wanted/needed. The research acknowledges participants in her concluding chapter, complimenting them on the value of their involvement and how their participation enhanced the development of the e-learning tutorial.

Ethical approval was granted by both the University and Organisation in which the study was conducted prior to the researcher conducting her enquiry.