

From Soap Opera to Research Methods Teaching: Developing an Interactive Website/DVD to Teach Research in Health and Social Care

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Abstract: Research methods modules have become a core component of a range of nursing and allied health professional educational programmes both at pre-qualifying, undergraduate level and at post-qualifying and Masters' level, in keeping with requirements of professional bodies. These courses are offered both on a full time basis and part time for qualified practitioners working in the field accessing continuous professional development (CPD). Evaluation of these courses suggests that some students find research methods challenging to understand and the pace of sessions demanding, and has highlighted a need for additional ways to support learning and teaching. There are a number of existing electronic resources relating to research methods accessible to students via the internet, which could help to support learning and teaching in this area and meet the wide range of learning styles among students. However, many are not specific to health research. In addition, the quality of content can be variable and use/accessibility unpredictable. This, combined with the need for innovative ways to engage interest in research methods, suggested the need for a new electronic resource for health research, for use within the context of a classroom taught course. The process of developing an interactive resource incorporating a narrative element is described. A narrative approach recognises the power of story in capturing interest and transferring information and offers scope for imagination and intrigue within learning. A story of two fictional health practitioner characters working in a local health centre was created to weave around research methods theory. Interactive elements such as question-and-answer tasks, audio extracts, games and interactive graphics were added to offer varied and stimulating ways of presenting material to meet a range of learning styles. The resource also incorporates a number of self-assessment opportunities to reinforce learning. The use of voices heard in realistic scenarios arising in the health centre anchors learning in everyday practice aiming to help students appreciate the need for evidence and the value of research understanding.

Keywords: research methods teaching, evidence-based practice, elearning, nurse education, narrative

1. Introduction

The *Using Health Research* project was funded by the Department of Nursing and Midwifery at the University of the West of England, Bristol (UWE), a major provider of health and social care education in the south west of England and one of the largest in the UK. The aim of the project was to meet a need for an electronically based, interactive learning resource in research, a core component of the nursing curriculum (NMC 2004), for use within a module delivered to post-registration health professionals. It was carried out between October 2008 and February 2010 in collaboration with an external partner, whose previous work in developing a resource for teaching politics research had inspired the initial idea (Middleton & Bridge 2008).

This paper presents an account of the development of the web-based and DVD resource, designed for use within a specific research module at UWE. This paper offers an insight into the process of designing and developing the resource, and a perspective on the potential for this medium in research teaching more widely in the Department. It is also an exploration of the use of story in teaching research and in this sense represents a novel approach to this area of the curriculum which is commonly taught in lectures with seminars based on critiquing published research articles. At the time of writing, the evaluation of the resource is ongoing hence this element of the project cannot yet be reported.

2. Background

2.1 Nurse education

A major challenge in nurse education is the high volume of students. In 2008/09 registration on Higher Education (HE) nursing courses outranked all other HE courses by more than 40,000 (HESA 2010). This presents just one of several drivers for innovation in pedagogy in the field. Wider participation in higher education has brought larger and more diverse student groups and in turn, challenges ranging

from practicalities such as space and seating, to noise and comfort but also to pedagogical demands in delivering content in ways that meet the inevitably wide variety of learning needs and styles present in the classroom.

Alongside this, the current generation of students bring expectations of greater service and convenience (Garrison and Kanuka 2004) and of increasing use of technology in teaching and learning (Brown et al 2008), offering greater mobility, self-direction and interactivity. One response to these challenges is an expansion of elearning approaches in the field of nurse education which McVeigh (2009) asserts is essential to future educational development and the facilitation of life long learning, in keeping with wider policy objectives. Although there is rightly some caution around the promotion of electronic modes of learning (Atack, 2003, Farrell 2006, McVeigh, 2009) there is considerable appeal to those responsible for workforce development who are facing continual staff shortages and reduced training budgets making it harder to release staff from clinical environments (Moule et al 2008), which may further drive demand in this area. More widely technology-based practices are perceived to have the potential to transform HE in the 21st century. (Garrison and Kanuka 2004)

2.2 Research and evidence-based practice

A compulsory element of the nursing curriculum is the teaching of research and the role of evidence in practice, starting in pre-registration education (Department of Health 2006), and required by the Nursing and Midwifery Council which governs nurse education in the UK (NMC 2004). Given the high numbers of nursing students referred to above this results in a large number of modules in health research across pre-registration, post-registration and Master's level courses and thus a need to find imaginative ways to teach a complex subject at a variety of levels.

The module for which the resource was developed is a post-registration module currently taught using face-to-face sessions with a mix of didactic teaching, individual and group activities intended to help apply the ideas. As a core component of the curriculum research is a compulsory module ensuring full classrooms throughout the year. Students are traditionally in full-time employment in a health or social care role, usually nursing and midwifery but more recently the course has seen popularity with emergency-care professionals, bringing a mix of health service workers together for the course. Students attend one day per week for eight weeks, with two half-days free study time out of this timetable. Library and IT support are provided within this programme and access to course tutors. Students have little spare time to prepare for sessions or for individual study during the eight weeks and find the course intensive and challenging due to the technical nature of the subject, which few have studied before. They often express a need for ways to reinforce learning and at times convenient to working people. Although there are online resources to support research teaching/learning available on the web, the authors were not satisfied with those available at the time of the project, either in terms of accessibility or relevance to health and social care research or a match with course objectives. A key objective in developing a new learning resource was therefore to support learning outside the teaching sessions, with flexible access, in a way that complemented the materials used on the module and the students' learning context.

The greatest challenge, however, was perhaps the need to make this resource engaging, interactive and fun. Many students in nursing express the view that research is a difficult subject (Owens and Kelly 1998) and experience of teaching research bears this out, as well as revealing the struggle among learners to find research interesting, bringing considerable pressure for educators to develop stimulating and creative ways to teach topics such as sampling and statistics. Previous research in the field of research teaching has shown that an internet-based approach can result in better learning stimulation (Woo and Kimmick 2000) and more recently that a blended approach can be beneficial to the nurse learner (Johnson et al 2009). Other areas of the nursing curriculum have also found success with multimedia approaches and have shown how this can help meet individual learning needs and lead to a greater sense of control over learning and of self-achievement compared to traditional lectures. (Moule 2002)

Classroom experience further highlights the importance of engaging students during teaching sessions with the application of research to professional practice, leading to appreciation of the relevance of research to personal experience and thus to deeper learning (Kolb 1984). This may seem obvious and is, ultimately the point of teaching practitioners about research in the first place, but can be easily lost when the course focus is on understanding research rather than doing research,

typical of courses at this level. An approach used by one of the authors to achieve this has been to position a fictional patient in the learning materials such that research examples that are appraised are discussed in relation to this patient and their care needs. This has proved popular with students and further fuelled the idea of using story in research teaching.

2.3 Narrative and the use of story in learning

Within nursing education, there is an emerging field of narrative pedagogy which as Brown et al (2008) explain, is an approach that incorporates the use of art, film, music and literature in teaching which can bring more powerful and sensitive insights into illness and caring. Alongside traditional storytelling this approach has seen the use of personal narratives and stories to support reflective learning which is a core element in nursing education. McDrury and Alterio (2003) explain that storytelling provides students with the opportunity to engage in reflective dialogue through which reflexive capacity can develop and is gaining popularity in higher education more generally, perhaps because it incorporates elements of reflective, experiential and constructivist models of learning that inform adult education. It is not the intention here to argue the case for narrative pedagogy but to acknowledge a debt to this approach: firstly and most simply, the celebration of storytelling and recognition of the power of story in transferring information, to “capture interest and attention...and bring facts to life by putting them in personal scenarios” (Brown et al 2008:284), echoing Bruner’s (1996) notion of ‘narrative thinking’. Secondly, in seeking to connect learners and educators through shared stories and thirdly, in promoting reflection in learning. (Brown et al, 2008; McDrury and Alterio, 2003)

These were the foundations of the idea to create a ‘soap opera’ style narrative to weave through the teaching resource with the intrigue of a story intended to carry the learner through the theory elements. The original conception was to see characters in a story set within a primary health service setting, giving opportunity for representation of multidisciplinary roles as well as reflecting the current shift in UK health service policy to expansion of community-based services, and this remained unchanged. In addition, the particular context of the soap story within a health service setting was intended to capitalise on the great popularity of medical and hospital dramas on UK television.

3. Phase 1: The project team

The first phase of the project was the formation of a project group and period of consolidation. The team had not worked together before but the authors had established a common interest with the external collaborator at a conference, leading to discussions about developing a resource for health research. Agreement was reached to work together, with the collaborator bringing a consultant from the previous project to support software development, and a joint project was set up in 2008. The team brought together three distinct disciplines in addition to teaching and learning design: primary care nursing, health and social research, and politics research. There was a strong commitment by the four members of the group to the goal of producing a high quality teaching resource but the different disciplines represented in the group made it essential to spend the early part of the project reaching consensus on how to work together and manage the project but also more importantly, consensus on a vision for the project.

A period of ‘storming’ and ‘norming’ typical of a new group (Tuckman 1965) followed. Balance was negotiated between the strengths that each group member brought to the project – on the one hand knowledge of professional practice from the health and social care context – and on the other teaching politics research and production of elearning resources, in order to agree project tasks and leadership. Although this mix generated creative synergy, an area of complexity was navigating the roles of commissioner and client with responsibility for overall good financial governance and time management whilst also taking a full part in design and authorship.

A potential dissonance related to precedence of professional perspectives. In the interests of the narrative more dramatic events or story were suggested but the need to reflect professional standards within nursing and other professions demanded greater realism within the stories and characterisation. Furthermore the group were mindful that the end product would be associated with an academic institution. An additional challenge for the group arose from the geographical distance between all four team members which led to managing the project mainly through email with only monthly or less frequent face-to-face meetings. The remote nature of communication certainly slowed

the process of team building and trust, and compounded any potential miscommunication, in turn creating delays in the project timetable.

4. 4. Phase 2: Design of the resource

4.1 Learning content

Early meetings focused on clarifying an overview of all the tutorials in terms of the learning aims and objectives. Ideas were shared about options for how to present material and the team drew on their experiences of teaching in the classroom and discussed what would and would not transfer effectively to an electronic mode of learning. The need to meet a variety of learning styles among adult students of varying backgrounds, and needs relating to accessibility, were also discussed. The initial concept was to provide six tutorials covering research design and methods with four of these to be completed in the first year. At this stage it was anticipated that some of the theoretical content and activities from the collaborator's previous resource could be adapted to form material for tutorials in *Using Health Research*. However, this later proved impractical as the design of tutorials developed and the product evolved. This change, and the decision to develop all six tutorials in parallel for reasons of economy caused considerable pressure for the team.

The decision was taken to design the resource as a linear sequence of tutorials leading the learner on a pathway through the materials and unfolding story, although it could be used more loosely as a reference resource. The story itself was an archetypal 'boy meets girl' tale of workplace romantic intrigue in the context of a busy health centre, with the sub plots dominated by the pressing demands of frontline service delivery as delegated by the practice manager and a senior GP. It was originally envisaged that a key character in the story could be chosen by the learner and followed through the various topics giving an opportunity to identify with an individual and their role. This was later altered to having two main characters in parallel in the storyline with learners seeing both involved in different scenarios to make a clearer route through the tutorials. Alongside the discussion of learning content, the idea of professional 'dilemmas' emerged. A dilemma would be a practical problem encountered by characters in the story to help the learner adopt a problem-solving stance within the resource bringing further motivation to follow the theory elements to solve the dilemma. This approach would also serve to model the use of evidence in practice.

The development of the first tutorial took longer than planned. Considerable time at the first three meetings was given to reaching a shared understanding of the module and the specific elements relating to health research and evidence-based practice, to agree content and how the resource would fit with the face-to-face teaching as in a 'blended learning' approach (Bonk and Graham 2006). This determined the need for revisions to subsequent tutorials, leading to changes in content relating to research design and methods. The importance of not repeating content from the face-to-face teaching sessions in detail, was a key factor at this stage; material presented should refresh knowledge and develop understanding through opportunities for interaction with material and self-assessment to support students' learning. This put pressure on finding innovative ways of presenting material and an emphasis on interactivity where text would be in small chunks such as in a quiz or other question-and-answer formats interleaved with the presentation of the story element. Later on in the process, the design of the second tutorial showed that too much content was being presented such that it became necessary to have a separate tutorial on sampling. This necessitated the decision to postpone a tutorial on ethics for a second project.

An early online prototype was produced to illustrate the outline structure and options for navigating through the resource, which helped the authors with design of content for presentation on screen and the team as a whole with deciding layout and style, section headings, hyperlinks and menus. The final product includes a welcome page with introduction to the resource and the characters within the story. Each screen has a bold black header showing an ECG trace of a healthy heart rate alongside the title, and below this a row of brightly-coloured tabs for each tutorial, numbered and named. The six tutorials are: 1. Ways of knowing (covering concepts relating to types of knowledge and evidence). 2. Design and methods (including an overview of epistemology and the assumptions within qualitative and quantitative approaches, with activities relating to popular designs and methods in health research). 3. Sampling (with comparison and illustration of probability and non-probability methods). 4. Evaluating research I (questioning issues of validity and reliability in different designs and methods). 5. Evaluating research II (continuing from tutorial 4). 6. Working with data (which introduces ways to begin the interpretation of research data from different approaches). Each tutorial has up to

seven sub-sections, with buttons marked 'next' to direct the learner through the tutorial with the option to use a 'back' button to return to the previous page, with the coloured tabs for jumping directly between tutorials. At the top of each screen hyperlinked text advises which tutorial and sub-section the learner is currently viewing offering another way to navigate to previous sections.

4.2 Characterisation and writing the soap opera

Initially, ideas about the storyline were discussed in parallel with the learning design and content to help clarify the product as a whole. At the second meeting, it was decided that an introduction to the characters should be written to initiate characterisation and story-writing. Two fictional characters were devised as the two main people in the story. After much deliberation about roles, age, gender, experience and personality they emerged as a male health visitor, in his late 20s, newly qualified and keen, with an interest in research. The second was a female nurse practitioner, in her early 30s, more experienced but new to the health centre. The characters were named and a narrative about their lives and the wider primary care team and health centre evolved through discussion in the team, including a vision of the town in which the health centre was located and its demography. The names used in a first draft were kept except for the main female whose name was later changed to be more fitting with the character that had evolved. With names, the characters began to take on greater realism and group discussion at the face-to-face meetings was an important part of developing personalities for the characters and features of the story.

The first scripts began to be written in the second month of the project and the dilemmas were drafted. Script writing required blending of different styles and ideologies of the team members. The importance of realistic use of language and credible interactions between colleagues was the subject of much debate to balance the dramatisation with current primary care policy and practice. A subtlety of this was navigating the strands of entertainment and learning so that the story did not distract from the theoretical content. Script-writing extended over four months. Highly constructive editing ensured scripts and storyline were refined benefiting the credibility of the final storyline.

4.3 Audio-visual elements

The budget determined that the soap opera would have to be presented using audio recordings as the cost of video production was prohibitive. Originally it was envisaged that this aspect of the production might be created within the university, however the timescale precluded this option and the production team previously used by the collaborator was utilised. Professional actors played the characters in the scripts and a small production team comprising a sound recordist and media producer managed the highly professional and cost effective production. The six actors met for a day to read-through scripts together before the final recording. Hearing the written words come alive with actors' voices was hugely encouraging for the group at this stage. It also gave the opportunity to refine phrasing and advise on pronunciation of technical terms which enhanced the professionalism and quality of the final production.

Ideas for incorporating external video such as extracts from television programmes to bring further variety in the presentation of material had to be abandoned due to copyright costs.

4.4 Interactivity and learning activities

The commencement of script-writing and dilemmas for the characters initiated discussion of activities. This capitalised on the expertise in the team in designing elearning activities. The audio offered students a means to engage with and reflect on the ideas raised, being a key element of learning through storytelling (McDrury and Alterio 2003). However, additional activities and tasks were felt to be important in giving learners the opportunity to think more deeply about the concepts and importantly, to use them in ways that tested and developed understanding. Regular self-assessment activities should also help learners identify the strengths and weaknesses in their knowledge and understanding. Initially the team expected to incorporate various links to external resources such as research articles and other websites for example to view data or research tools such as questionnaires, but as the design evolved these options were abandoned, partly to avoid distracting the learner away from the resource but also to have greater control over the material presented. The range of tools in the final version of the resource includes: considering scenarios and ticking responses from a list; drag-and-drop activities to test knowledge and understanding such as definitions, simple concepts and material from the audios; a quiz presented in such a way that each

correct answer exposes a section of picture that the learner may seek to complete; entering text into forms and checking responses; interactive graphics where areas are selected and explanatory text pops-up; animated graphs to illustrate data and consequences of different options; simple answer selection with feedback; a fruit machine with winning payout for correct selection of terms. In addition to the necessary text around the activities throughout all the tutorials the learner is directed to listen to the short sections of audio with many of the activities linking to content heard. This variety in interactivity helps to meet preferences for learning through listening, reading, reflecting, decision-making and application.

4.5 Image

The importance of visual images emerged early on in the project with sharing of pictures and ideas about how the resource should look. The look and feel of the resource needed to reflect the setting of a local primary care health centre with images and characters to capture the atmosphere and business of such a setting. Ambitions were limited by resources as the group would have favoured a dynamic, audio-visual introduction, rather like the credits to a TV programme showing a wider setting of the health centre (town scenes with people, roads, homes, shops) accompanied by music, and then moving to close-up scenes of people arriving and entering the centre. In the initial stages the importance of not getting distracted by the design side of production was recognised and these ideas stayed at the discussion stage until more content was written.

A later phase of choosing visual images related to the presentation of the main characters in the soap opera. Images were needed to accompany audios to help the listener recall the speakers and contextualise the conversation. Also images would form part of the welcome page to introduce the characters, setting and location. As the copyright for so many photographs was too expensive, an artist was used to produce drawings that could be situated within photographic backgrounds to give the appropriate context and the variety of images needed. Background scenes were photographed by the authors at locally based health centres with their permission.

5. Phase 3: Implementation

Implementation of *Using Health Research* has recently commenced within the module for which it was designed. This involves providing students with the web address for accessing the resource and in the near future, they will be offered a DVD version that can be accessed offline to increase use among those without readily available internet access. Students can use the resource independently but will be directed to appropriate sections or activities within the website at the end of lectures to remind them of the opportunity for further interaction with the ideas and self-assessment. It is anticipated that lecturers may also wish to use some of the quiz-style activities within sessions. An evaluation among the students on the module is being planned. The resource was demonstrated at a Departmental advisory group for blended learning and received much positive comment. The Department are now intending to evaluate the resource for use within other research modules within pre-registration education.

6. Limitations

As with many projects it is possible to see the caveats before the first version is complete. The use of video instead of audio would have added greater engagement with the soap opera element and added more visual stimulation whilst listening to the conversations. However, it is conceivable that students might have been distracted by too much visual information relating to the story and not therefore fully appreciated the learning points about research. Although the modelling of the scenarios in relation to learning about research methods was accurate in relation to methodology, the team were aware that the complexity around undertaking research in a health care setting was not fully portrayed, especially around the requirements for ethics and research governance. A tutorial on ethics was cut to avoid overloading other tutorials with theory though this was partly rationalised by the assumption that a second project could follow to incorporate other topics not covered in the first version. Inevitably the scripts were, to an extent, driven by the need to give context and deliver research learning material at the expense of developing characterisation or story leading to some stereotyping at times. Enthusiasm for the story, an eye for dramatic detail and pace at times led the authors into internal debate where these posed questions of professional propriety. As a result certain details of the scripts are the product of three opinions which did not always converge, making some lines and story features disjointed. A further issue in relation to the production of a resource that attempts to contextualise learning by using a familiar setting and characters is the pace of change in

health and social care delivery and services management itself, threatening the currency of the context portrayed here, and necessitating regular review and updating. However, like any good story the possibility of a sequel has been built in and a further edition would be a possibility.

7. Conclusion

The development of *Using Health Research* has been a significant undertaking requiring huge commitment by the authors and taking over 18 months to complete. The work was made more challenging by the geographical distance between team members and concurrent workload of all involved and it is possible that without these hurdles the product would have been further enhanced. Nonetheless, the commitment has produced a novel, creative, high quality resource that helps to meet the range of learning needs and styles of the diverse student population, and with fairly modest funding. It is hoped the evaluation will reveal this to have been well spent in terms of the effectiveness and popularity of the resource, and potentially the value as a pilot product with wider marketability. The decision to roll-out the resource to other research modules will need to be underpinned by robust evaluation testing the effectiveness of the resource with other learners, but the product may have value beyond the initial intention.

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