Dr Winifred Oluchukwu Eboh
Fellow 2005
Winston Churchill Travel Fellowship Report

Use of blended learning to teach undergraduate nurses and midwives research
## Content

### Section 2

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>Rationale</td>
<td>1</td>
</tr>
<tr>
<td>What is blended learning</td>
<td>1</td>
</tr>
<tr>
<td>Teaching research to undergraduate student nurses and midwives</td>
<td>2</td>
</tr>
<tr>
<td>Travels to Institutes in Europe engaged in blended learning</td>
<td>2</td>
</tr>
<tr>
<td>Pedagogical Seminar at the University of Goettingen</td>
<td>2</td>
</tr>
<tr>
<td>Institut Paoli Calmettes in Marseille, France</td>
<td>6</td>
</tr>
<tr>
<td>INSUP Bordeaux, France</td>
<td>7</td>
</tr>
</tbody>
</table>

### Recommendations

Implementation of blended learning for an undergraduate nursing Research Module
Conclusion

### References


### Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 1</td>
<td>List of el3 partners</td>
</tr>
<tr>
<td>Appendix 2</td>
<td>Blended learning Design matrix</td>
</tr>
<tr>
<td>Appendix 3</td>
<td>e-learning matrix</td>
</tr>
<tr>
<td>Appendix 4</td>
<td>Self-evaluation inventory</td>
</tr>
<tr>
<td>Appendix 5</td>
<td>Storyboard</td>
</tr>
</tbody>
</table>

### Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Doctoral students, the Fellow and Professor Hans Dieter Haller</td>
</tr>
<tr>
<td>Figure 2(1)</td>
<td>Kolb Cycle as developed by David Kolb</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Isabelle Dauvillier &amp; Colleagues</td>
</tr>
<tr>
<td>Figure 3 &amp; 4</td>
<td>INSUP Bordeaux</td>
</tr>
</tbody>
</table>
Winston Churchill Travel Fellowship
Report

Title: Use of blended learning to teach undergraduate nurses and midwives research

Introduction
The Winston Churchill Travel Fellowship was received to enable the Fellow to visit Centres in Europe (namely, Germany and France) that offered blended learning approaches in education. In so doing the examples observed will be used to inform undergraduate education in research. Before discussing observations made at centres visited and what the Fellow learnt, the rationale behind this project and the definition of blended learning will be discussed in Section 2 of this report.

SECTION 1
Domestic Aspect of the Fellowship
The visit to the centres discussed in Section 2 of this report enabled the Fellow to experience teaching and learning from a different cultural perspective. Despite language differences, the Fellow was able to mix with PhD students in Germany and discuss various aspects of their projects. Starting the trip at the University of Goettingen was very productive because the Fellow was able to acquaint herself with theories of teaching and learning before moving on to the second leg of the trip which involved the observation of practical application of e/blended learning. The purpose of the Fellowship was achieved because findings observed in the course of travels are currently being implemented within the Fellow’s place of work within designated modules.

The Grant was more than adequate in covering flights, hotels, travels and sustenance. It was important that the Fellow considered her mode of transport very carefully and where possible public transport was used. This was an empowering experience because one was able to commute with local people and appreciate the environment and culture to its fullest extent.
The grant provided was also adequate to secure comfortable living in the three European cities visited.

Perhaps, one area that would benefit future Fellows is learning the language of the country or countries to be visited. Whilst in Germany and France all meetings were conducted in English, however during day to day activities such as commuting between destinations and grocery shopping, to name but a few it would have been beneficial had the Fellow spoken local languages. Some attempt was made to learn common phrases in French and German before leaving for the travel fellowship but this proved difficult particularly German. However, by the end of each stage of the trip the occasional ‘tschüs’ and ‘danken’ in German and ‘bonjour’ and ‘Merci in French went down well with the locals however, the opportunity to interact further with local people was limited due to language barriers. The Fellow met many wonderful and kind people in the two countries visited.

The Fellow plans to disseminate her findings through this report which will be sent to the Head of School of Nursing and Midwifery at the Robert Gordon University; a copy of Section 2 will also be sent to all Centres visited in Germany and France. Other plans to disseminate include a Learning Conference planned for next June for which an abstract has already been accepted. The Fellow also plans to submit a paper for publication in a leading nursing education journal. Word of mouth is also a powerful medium; this is and will be an ongoing mode of dissemination.

SECTION 2
BACKGROUND

Rationale

The teaching of research to undergraduate student nurses and midwives has proved challenging because of feeling amongst learners that it has little or no relevance to their practice. Such sentiments are understandable when one considers that the Fellow’s nurse education twenty years previous did not include research as a separate subject as it is taught today. However, nurses today face
a different population, well informed through the media, internet, magazines etc. about medical advancements thus ask for the best possible evidence from healthcare professionals to enable them to make an informed choice. To that end healthcare research should inform practice for the better, if critically reviewed and applied by knowledgeable clinicians. Nurses and midwives need to understand the process of research, associated methodologies and how to source and critique reputable articles which addresses clinical situations.

However, despite these good intentions, motivating learners to appreciate the reasons for teaching this subject can prove difficult. The module team involved in teaching research to second year undergraduate student nurses and midwives at the Robert Gordon University Aberdeen, decided to review the whole didactics (teaching and learning) for this module.

The learning outcomes of this module had been clearly defined in course documents ratified by the University and professional regulatory body, it was therefore important for the module team to look at the best mode of delivering the module materials to students, stimulating active participation and in due course learning. Adding to this situation was the fact that learners entering nurse/midwifery education come from a varied and diverse background, educational qualifications, life experiences catering and ages (from school leavers to mothers entering education after raising their children). Similar situations are found in the United States of America where blended learning approaches are widely reported (Barakzai & Fraser, 2005).

The blended learning approach was the most suitable to meet these needs and requirements.

**What is blended learning?**

The author perceives blended learning as a combination of different approaches used to deliver and maximise student learning; this could include face to face lectures, project work, Poster presentation (advocated by Deck, 2005) as it stimulates critical thinking amongst learners Problem-based learning, internet e.g. virtual campus or intranet to source materials or provide chat room
facilities for students to exchange ideas. Lecturers can also provide designated telephone time for students to discuss issues concerning their individual learning needs. The most important objective of blended learning as perceived by the author is that it combines various approaches for teaching with the overall aim of maximising learning.

Blended learning is certainly not on-line courses or distant learning in itself but these approaches can be an integral part of blended learning.

Teaching research to undergraduate student nurses and midwives

The challenges presented by the teaching of research to student nurses and midwives have been well documented over the years with different schools of thought on the best way to deliver this subject. However, little evidence exists which evaluates the teaching methods used and how these may influence nurses knowledge, attitudes and willingness to use this acquired knowledge to change or enhance their practice.

The drive toward an evidence based health service has resulted in increased emphasis upon undergraduate curricula delivering on issues such as facilitating awareness and understanding of research and its application to practice. This drive has become such that it can no longer be ignored and as providers of pre-registration nurse education accountable to the Nursing and Midwifery Council, teachers must address such issues within their curricula (Johnson & Mowatt, 2005 module team communication).

TRAVELS TO INSTITUTES IN EUROPE ENGAGED IN BLENDED LEARNING

The Robert Gordon University is a partner in a European funded project el3 developing blended learning materials to be shared by all involved. The partners are listed in Appendix 1. The Robert Gordon University is represented by Dr Bernice West a colleague who provided all the contacts for the Fellow’s visits. As a module leader along with a colleague Neil Johnson, the Fellow plans to include some of the module materials on the el3 platform managed by
BUPNET (another European partner) to be made available to other European-wide healthcare institutes for educational purposes.

The first point of contact was with Professor Hans Dieter at the Pedagogical Seminar at the University of Goettingen, to look at the theoretical underpinning to didactics and to see from his vast knowledge acquired from over thirty years of pedagogical research whether the plan by the module team to adopt this varied approach to teaching is justified.

**Pedagogical Seminar at the University of Goettingen**

Before looking at the knowledge gained at this institution, it is important to give a brief but interesting historical perspective to this old and traditional university. The University of Goettingen is one of the largest in Germany with a student population of over 24,000. It retains its old architecture and the new within very beautiful university campuses. The university was founded in 1737 by King George II of England and Ireland and Georg August elector of Hanover. Famous for the Goettingen Seven great contributors to scientific knowledge and amongst Noble Prize winners who were dismissed from the University for their Protest of the suspension of the Hanoviarn constitute in 1837.

I was privileged to be able to join Professor Hans Dieter Haller’s meetings with doctoral students (*see Figure 1 Han Dieter Haller second from the left with doctoral students and Fellow centre back*) undertaking research into various forms of blended learning; learning using music, film and media, evaluation of blended learning tools to name but a few and Tim Scholze (working on European projects at BUPNET one of the partners in the el3 project). This meeting offered some insight into the diverse and interesting methods used in blended learning and also the partnership which Hans Dieter had with business in the form of BUPNET. The doctoral students were of different nationalities which demonstrated the international nature of teaching and learning and transferability of knowledge to other cultural context.
During conversations with Hans Dieter the Fellow was introduced to two words which up until then their true meaning had not been fully appreciated. These were pedagogue taken from the Greek word paidagÔgos meaning a slave who looks after his master's son. In his duties the slave would lead the boy, helping him with homework and generally guiding him through life learning. Likewise the term didactic (Greek word didaskein) meaning two sides. Hans Dieter likens this term to a coin because although it is one coin with one value it has two sides. This applied to education illustrates the two integrally linked components of education, teaching and learning. Learning must occur from teaching otherwise the latter is a futile.

This may seem over simplified, of course teachers 'teach' and learners 'learn' but is it so simple? Unfortunately not, the process of learning is an individual process. As humans we learn all the time from observations, conversations, interaction with others and the world around us, through smell and touch. This individuality means that we all have our own learning styles which need to be met. Haller (1997) highlights this issue by stressing the point that instruction or teaching must be varied because of historical, cultural and inter-individual diversity. Therefore, a blended approach to teaching allows for such differences. The Catalogue of Instructional Models contains 20 expressions taken from German and interpreted into English as the following:

1. Activity method, assignment method.
2. Disputation, debate.
3. Exploration, excursion, field-experience approach.
5. Apprenticeship, assistance.
6. Distance study, correspondence instruction.
7. Classroom teaching, teacher-directed learning, expository teaching, frontal teaching.
8. Programmed instruction, personalized instruction.
9. Individualized learning centre, laboratory plan.
10. Small group discussion, micro study circle.
11. Educational exhibition, exposition.
13. Clarifying educational environment.
15. Educational network.
16. Project method.
17. Instructional simulation.
18. Peer tutoring, proctor method.
20. Educational workshop.

(List taken from Instructional Design, International Perspective, Vol.1, Chapter 18, pages 371-379)

Whereas, some of these terms may be used interchangeably, their meaning in German can be different. Given all these possible methods of instruction for effective learning to take place, teachers must apply the most suitable method to the right learner environment. The method one uses to deliver a course or module will depend on many factors, the educational level of learners, prior learning, life experiences, age, gender and motivation of learners, available resources amongst others. To conceptualise all this information and decide on the best methods can be difficult, however a framework which was developed by Professor Haller *The blended learning design matrix* (see Appendix 2) can be used to decide the best format to deliver a course or module.

Hans Dieter has worked on so many other tools which he was extremely happy to share with academics and students alike. Although many are written in German, he has translated some into English. Some of these tools include:

- Evaluating e-Learning matrix (see Appendix 3) which gives a comprehensive overview of what e-Learning entails and evaluative processes.
- Self evaluation inventory for e-Learning producers (see Appendix 4) an excellent tool which asks pertinent questions to those wishing to embark on e-
learning initiatives to ensure that it is what is right for them and their institutions.

The Kolb Cycle revisited

In looking at theories of learning, Hans Dieter offered a slightly different observation of the Kolb Cycle developed by David A. Kolb 1984 who was inspired by Jean Piaget, Kurt Lewin and John Dewey, illustrated in a circular form the Kolb Cycle had four component as illustrated below in Figure 2.

Figure 2 – Kolb Cycle as developed by David Kolb adapted from Dauffenbach et al. (2004)

The diagram in Figure 2 shows the concept of learning from experience through to reflection, contemplation and then refinement; one could go round this cycle as often as is necessary to achieve learning. Following this cycle clockwise as the
red arrows denotes one is said to be using inductive reasoning when one attempts to build a theory (from abstract) and moves to concrete and deductive reasoning following the blue arrow in an anti-clockwise direction, one is said to be testing an existing theory (starting from concrete moving to abstract). Hans Dieter explains that those who are deductive in their learning style are very proactive in their learning and tend to have a more impulsive nature whereas the inductive learner maybe more passive, using observation and reflection. Given these distinct styles, is it possible to allow such individualised learner styles to grow and develop their knowledge? The author believes that learners may not necessarily fall neatly into these categories but may have a leaning towards one more than the other. Nursing and midwifery students will also show similar learning characteristics; therefore courses or modules need to accommodate diverse learning styles. The use of blended learning as a means of delivering courses or/and modules allows for different teaching formats to be employed.

**Institut Paoli Calmettes in Marseille, France**

The next stop of the travel fellowship was Marseille situated on the Mediterranean coastal line of France. This part of the trip entailed meeting el3 partners who have implemented e/blended learning into their respective programmes. The above named institute is a private hospital partly funded by the French government specialising in the care of cancer patients with 4 missions:

- Research
- Care
- Prevention including detection
- Teaching

Isabelle Dauvillier is the training manager at the institute or (Responsible Enseignement) for all health professionals including nurses and doctors working for Institut Paoli Calmettes. She works with her colleagues (see
Figure 2) to produce e-learning training materials accessible via the internet for over a 1000 staff, as mentioned above nurses and doctors (420) as well as administrative staff. This training forms part of the staff development programme for the Institute but training can also be made available to other institutions caring for cancer patients. Their ethos of e-learning or e-training as it is also known is the use of new communication technologies within the training process with the recognition that this system brings an additional tool to help learning but cannot replace basic teaching practices (personal communication with Dauvillier, 2005).

To that end, the development of this programme required careful consideration of the modules suitable for this system of delivery, the type of knowledge likely to be gained through e-learning, the long-term benefit and financial implications of developing this programme. The institute do not reinvent the wheel, where materials already exist they will buy the module or work with others with the required specialism to develop their modules. Isabelle Dauvillier highlights the need for adequate resources as listed below:

- Human
  - Teaching, administrative, financial management….
  - Technical maintenance
  - Personalisation of the platform (system of delivery)

- Financial
  - Purchase of a platform
  - Purchase of a module
  - Development of modules

- Materials
  - Adequate computer facility
  - Multimedia room

Demonstration from Isabelle’s colleagues of the platform showed a very organised and transparent system which allows nursing managers to identify modules needed for their staff and register them online. Likewise, nursing staff
can access the platform and view modules available online, place a request to attend a specific module, this will instantly send an email to their line manager who can approve or decline the request and a response will then be sent back to the nurse with the manager’s decision. The system allows a manager to view all staff they have managerial responsibilities progression or attainments to ensure that they have the necessary knowledge and skills to carry out their jobs efficiently. Doctors are allowed more autonomy as they are able to register themselves on a training programme without senior authorisation.

As this institute is a non-profit making organisation, modules and courses are free, however international companies may fund individuals such as doctors to spend some time at the hospital and undertake some of the online modules or courses at a fee.

Depending on the nature of the module and its target audience various format can be used to aide learning, one such example is the story-board which as shown in Appendix 5 includes diagrams or animations together with text. Although the extract shown in Appendix 5 is in black and white, when viewed on the platform in colour it makes the picture come to life and extremely user friendly.

**INSUP Bordeaux, France**

The final part of the travel fellowship involved a visit to INSUP through contact with Corinne Ruddle; this organisation specialised in the virtual classroom for people with special needs such as physically disabled or mobility impaired, unemployed or single parents where learning within mainstream facilities are impossible or extremely difficult to access. Through funding from Department Councils, private donations, Regional Councils, Employment sector and European Social Fund, INSUP have developed learning titled:

- **STEP and STEP BY STEP** tele-training and tele-working for people with ‘special needs’ including the disabled using new technologies.
- **YOUTHSTART** a pilot project on information for young people, counselling and training.
• EUROFORM, LEONARDO & ADAPT STEER for the training of young people and adults in companies from different sectors in Bordeaux and areas in the Aquitaine region of France.

Through 15 learning Centres in Bordeaux and Aquitaine, INSUP first established in 1978 now provides over 770,000 hours of training a year to approximately 4,600 course participants using blended learning, this with 200 members of staff to a client group who would otherwise be unreachable.

The blended learning approaches include, visual/tele-conferencing, distant learning, face to face courses, set exercises in grammar which may entail the learner reading short articles, role play, feedback group meetings. However, as stressed by Corinne Ruddle who manages the platform and materials at INSUP Bordeaux, physical or face to face contact is essential.

The organisation was extremely well structured with the Director who had an office on site (Bernard Garrigou) and welcomed me to the organisation; the Manager responsible for INSUP Bordeaux Marie – Noelle Garcia and Giesele Massol responsible for language courses within the organisation. There were many examples of good practices in blended learning that cannot be fully appreciated in this report. The Fellow was opportune to meet participants attending computer skills training on Wednesday; these four learners came from different backgrounds (e.g. of the four, two participants came for different reasons, one was released from her role as a secretary and the other was unemployed looking to gain IT skills to improve employment opportunities) (see Figure 3).

A very informative meeting held at INSUP premises was with Émeric Pividori (see Figure 4) who was responsible for designing a platform used by Professor Andre Taytard from the University of Bordeaux another el3 partner to deliver e-learning materials on respiratory disorders. The platform can be located on www.respir.com accessible to students, patients and others with a special log on password. It is written in French at present but an English translation is in progress. This platform provides comprehensive e-learning materials for all
respiratory disorders written by professors in the field. The platform is easy to navigate and materials laid out in a user friendly manner. After covering each set of materials students may test themselves with links to correct answers and further information to clarify points. Students are also able to contact Professor Taytard for further clarification.

Recommendations
The Fellow has identified four areas of recommendations which include:

1. Assessing courses/modules for suitability for blended learning approach;
2. Planning the introduction of blended learning with all academic staff involved in module and course delivery;
3. Assessing resources associated with delivering and sustaining the varied blended learning approaches;
4. Constant evaluation of approaches used within blended learning to ensure that it enhances teaching and learning within the designated modules and/or courses.

1) Assessment of modules and courses for suitability to use a blended learning approach should be paramount as an integral part of module and course development. By its very nature, blended learning combines traditional modes of teaching with less conventional styles to facilitate learning. However, learning should not fit around teaching methods; on the contrary teaching should be geared towards what is best suited to learning. Nursing and midwifery are both hands on professions with theoretical underpinning, therefore theory informs practice. For this balance to be attained, educationalist in this area has a professional responsibility to ensure that practitioners at qualification are ‘fit for practice’. To this end teaching for these two professions should combine face to face classroom teaching, computer simulation, clinical skills practice within both educational and clinical settings, group projects, discussion forums and workshops to mention a few. By using these varied
approaches learners can be assisted to appreciate the dynamic nature of healthcare professions.

2) It is crucial to enlist the support of all academic staff involved in nurse and midwifery education within respective institutions in the first instance when considering a change to teaching methods. Subsequently the support of clerical staff is also paramount to ensure that extra demands made on their time and resources are communicated and planned. Blended learning as observed in both Germany and France worked well when all involved in its delivery were in agreement. Therefore, consultation should be at every level, stage of planning and development to ensure congruence of the course. Lack of consultation and discussion can lead to **fragmentation and overloading of learners without yielding desired learning outcomes**.

3) It is essential to look at and decide on the necessary resources required to implement an effective blended learning programme for nursing and midwifery students before serious time and effort has been invested in considering this system of delivery as a viable option. The visit to Institute Paoli Calmettes in Marseille clearly demonstrated the need for adequate funds to purchase the necessary Information technology (IT) for all e-materials, training for staff operating and utilising the programme and maintenance of all components of the system. This may seem logical but one cannot underestimate the amount of monies needed for IT and human resources to make such innovative approaches to learning work efficiently and effectively. Training staff to support students engaged in blended learning is essential as well as instructing students on the rationale behind the approaches to be employed in their learning, showing them how they can make the most of the available learning media and ensuring that they have a named contact in event of difficulties in accessing or utilisation of the materials.

4) The Fellow strongly advocates the evaluation of blended learning approaches by students, lecturers and others involved in resource
provisions. Part of the evaluation process should include looking at learners’ achievements on completion of formative and summative assessments. This evaluation process should feedback to course and module development teams who should use the findings to refine or progress blended learning if it is established as a success. As the School of Nursing and Midwifery already have a Senior lecturer responsible for taking forward e-learning within the School, the potential for a co-ordinated discussion forum for lecturers involved in blended learning to share experiences should have a positive impact on student learning.

**Implementation of blended learning for an undergraduate nursing research module**

From the findings of the Travel Fellowship, it was evident that blended learning does work when selectively used to deliver courses. The Marseille example demonstrated that it can work for healthcare professionals including doctors and nurses. On return to the UK the Fellow had discussions with her module team resulting in a planned phased introduction of various teaching methods to compliment existing approaches used to deliver the research module to undergraduates. Phase 1 includes the introduction of various formative crossword quizzes for students to practice during the course of the module.

Other planned changes include the training of the module team to facilitate online discussion forums between students. The idea behind this is to encourage students to share ideas or assist each other in learning (peer guided learning). The last part of the development for Phase 1 is the introduction and use of visual learning aides such as a model used to demonstrate the various components of the research process. The model will then be used to design a simulation which students can use to undertake a formative assessment to test their own understanding of the research process. Phase 1 will be implemented in January 2006 and evaluated at the end of the module in March 2006. Depending on findings from evaluation of Phase 1, more blended learning components will be
added such as the use of Story-boards, role play and field studies in Phase 2 of implementation of blended learning.

**Conclusion**

In conclusion, the Travel Fellowship was an experience of a lifetime which enabled the Fellow to encounter blended learning within an educational setting as observed in Goettingen Germany and the practical application in Marseille and Bordeaux in France. The Fellow returned to the UK, inspired to utilise positive components of her findings. At all the Centres it was stressed time and time again that face to face contact with learners is an essential component of blended learning.

The care and support provided by the professional staff of the Winston Churchill Memorial Trust was priceless. Their thoughtful and friendly advice ensured that the value of the Fellowship was fully realised.
References


