



# European Academy of Nursing Science

## Summer School for Doctoral Studies

Witten Herdecke 2010

## Handbook for Participants



## Introduction

We are delighted to be able to welcome you as a participant to the European Academy of Nursing Science (EANS) annual summer school for doctoral nursing studies

This handbook contains information on the summer school. It includes some background information about EANS, the aims of the summer school, some information about the curriculum and details of preparation work you must do before attending the summer school. During the summer school you will be asked to give a number of presentations and it is essential you prepare for these before you arrive.

- Section A** gives an overview of the EANS summer school.
- Section B** describes the EANS summer school curriculum in detail
- Section C** informs you about the preparation work you must do before the EANS summer school
- Section D** describes the Problem Based Learning approach
- Section E** outlines the timetables
- Section E** includes a selection of relevant references



# Section A

## Overview of the EANS Summer School

## **The European Academy of Nursing Science**

The European Academy of Nursing Science (EANS) is an independently organised body composed of individual members who have made significant contributions to the advancement of nursing science in Europe.

The purpose of the Academy is to sustain a forum of European nurse scientists to develop and promote knowledge in nursing science and to recognise research and scholarly achievement.

The Academy links individual nurse scientists from University Departments of Nursing across Europe in which there are active doctoral programmes. It provides a forum for established and developing nurse researchers to meet, network and develop a European perspective to their work.

Established nurse researchers may become Fellows of the Academy. Fellows are individual nurses who have made significant contributions to the advancement of nursing science in Europe through scholarship and research.

Developing nurse researchers may become Scholars of the Academy. Scholars are individual nurses who are starting out on a career dedicated to the advancement of nursing science in Europe through scholarship and research. Potential Scholars will not yet have achieved the same breadth and depth of achievement in publications or grant funded research of Fellows. Nurses are eligible to become a Scholar as soon as they have completed their doctoral studies or if they have attended all three years of the EANS summer school.

In the case of both Fellows and Scholars, the term 'nurse' is used as shorthand to include the broad spectrum of professional qualifications such as nursing, mental health nursing, midwifery, health visiting, community and family nursing.

Details of how to apply to become a Fellow or a Scholar are available on the academy's website: [www.european-academy-of-nursing-science.com](http://www.european-academy-of-nursing-science.com)

## **The EANS Summer School for Doctoral Studies**

The summer schools were established in 1998 to encourage nursing students undertaking PhD study to add a European dimension to their research and to receive advanced research training. The summer schools are self-financed by participants, although EANS and the host Universities are always looking for funding to support the summer schools, which in the past has been provided by the EC Framework 6 Marie Curie Programme. EANS also occasionally provides support to participants in financial hardship.

### **Aims of the Summer School Programme**

Each summer school is hosted by one of the EANS partner Universities and has the following aims:

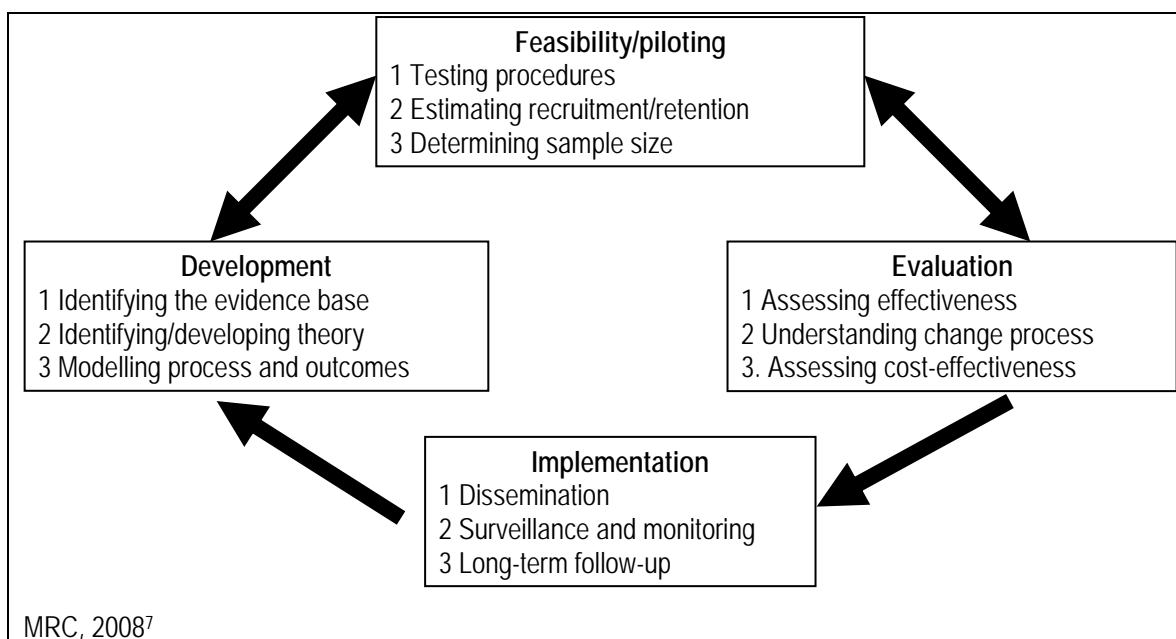
- to provide a common European perspective for doctoral nursing research;
- to create a multinational learning environment for nurses who are doctoral students;
- to improve the quality of nursing practice by increasing the research evidence used in nursing within Europe;
- to enhance the opportunities for doctoral students to study, work and undertake research in other European States.

The summer school course is structured around four themes which reflect the complex nature of nursing activities and the challenges this poses for research. Section B describes these in depth and lists the learning objectives of the curriculum. The next page outlines the background to the curriculum.

## Nursing as a Complex Activity: Background to the EANS Summer School Curriculum

In a series of recent editorials, Hallberg<sup>1,2</sup> has challenged nursing researchers to re-focus their activities to develop knowledge for nursing that is useful for practice and that can be translated into practice in *'a step wise manner, a series of studies from descriptions, theory development, testing, exploring possible explanations, refining models or theories and testing them and implementing valid knowledge in practice. In particular, we need to learn more about the implementation process and about how to make it successful.'*<sup>2</sup> (p410). She characterises most current nursing research as: descriptive rather than experimental; cross-sectional rather than longitudinal; context specific rather than generalisable; and introspective rather than implementation focused. For example, between 2000 and 2006 studies from the top ten scientific nursing journals were mainly descriptive<sup>3</sup> and did not report the impact of nursing interventions on patients. Of 210 papers published in two international nursing science journals annually, only 15% were addressing *'research that may carry strong evidence for practice'*<sup>1</sup> (p924).

Nursing has a critical role in meeting health and social care challenges such as aging populations, chronic diseases and new endemics at the fore of European health concerns. Increasingly, nurses engage in a wide range of activities, many of which are highly complex and take place in multiple care environments including acute medicine, chronic care facilities, community and residential care homes. Changes in health care organisation internationally (e.g. short hospital periods, growing responsibility for patient self-care) are placing more health care in the hands of nurses, increasing the scope, the overall need for nursing care and for that care to rest on a solid evidence base. Nursing is, moreover, the quintessential 'complex intervention' – an activity that contains a number of component parts with the potential for interactions between them which, when applied to the intended target population, produces a range of possible and variable outcomes. In the last ten years,<sup>4-7</sup> guidance has been issued which recommends that complex interventions should be investigated through a process of development, feasibility/piloting, evaluation and implementation, where there is a dynamic interchange between stages.



The EANS curriculum has been designed to reflect this guidance in order to meet Hallberg's recommendations.

## Organisation of the EANS Summer School

The EANS summer school is a three year programme. Each year, the summer school will be hosted by a different European University. The summer schools are residential. Participants ***must attend three summer schools***. On completion of the three-year programme, participants are awarded, over and above their degree from their own university, a certificate which details the European dimension of their work. This certificate is recognised by the European Academy of Nursing Science in applications to become a Scholar of EANS.

Summer school participants will take part in educational activities which address the four curriculum themes through learning opportunities such as workshops, seminars, participant presentations and discussion groups. The course consists of 120 hours of study in total.

- **Year one** is a two-week programme of 60 hours of study
- **Year two** is a one-week programme of 30 hours of study
- **Year three** is a one-week programme of 30 hours of study

**Note:** Some Universities also recognise attendance at the summer schools as a contribution towards credits required for participants' doctoral degrees. However, this is the responsibility of participants' own home universities. EANS cannot provide accreditation itself. Summer school participants may wish to discuss this with their home university and use the summer school curriculum in this handbook as evidence for home university credits.



## Section B

# The EANS Summer School Curriculum in Detail

## Learning Objectives

### 1 Development stage:

This stage of the curriculum is designed to help you clarify a number of important preliminary questions. What are you trying to develop and/or understand? What outcome(s) are you aiming for, and how will you bring this about? Do your nursing activities or health care intervention have a coherent theoretical basis? Have you used this theory systematically to develop or understand the activity/ies? Can you describe the activity/ies fully, so that it/they can be implemented properly and replicated by others? Does the existing evidence – ideally collated in a systematic review – suggest that the activity/ies are likely to be effective or cost effective? Can it/they be implemented in a research setting, and is it/are they likely to be widely implementable if the results are favourable? This set of learning objectives sets the scene for the pilot, evaluation and implementation stages and each sub-section will, therefore, be related to the overall complex interventions framework. You will:

#### 1. Demonstrate a critical understanding of key concepts in the complex interventions research process in nursing, including the role of the existing evidence base, theory and modelling.

##### 1.1. Identifying the evidence base<sup>8-10</sup>

- Demonstrate a critical understanding of the contributions of different methods of identifying the evidence base relevant to the development of nursing activities and/or different types of nursing interventions
- Demonstrate sufficient knowledge to undertake all stages of a systematic review
- Be familiar with the theoretical and practical aspects of conducting systematic reviews, meta-synthesis and meta-ethnographic reviews, and integrative reviews

##### 1.2. Identifying/developing theory<sup>11-13</sup>

- Be critically aware of the importance of a theoretical understanding of the process of change in health care interventions and/or nursing activities in terms of what changes are expected, and how change is to be measured and achieved
- Understand how to identify and appraise existing measures of key concepts or to develop suitable scales and methods of measurement where required
- Appreciate how to use new primary research, for example interviews with 'stakeholders' (those targeted by the intervention and/or activity, or involved in its development or delivery) to develop and test theories of change

##### 1.3. Modelling process and outcome<sup>14-19</sup>

- Demonstrate knowledge and understanding of the concept of modelling as applied to complex interventions/activities to provide important information about the design of both the intervention and the evaluation prior to a full scale evaluation
- Become critically aware of the process of determining whether a nursing activity would be possible to implement in routine nursing practice in terms of who needs to know about the outcome of the evaluation, what kind of information they will require in order to implement the changes that might be indicated by the new evidence, who (or what) are the facilitators and what (or who) are the likely obstacles to implementation?
- Be aware of a range of formal modelling frameworks such as MOST, RE\_AIM, economic modelling or other guidance on the development and evaluation of activities and interventions to foster behavioural change

## **2 Feasibility/Pilot Stage:**

This stage of the curriculum is designed to help you understand how to plan the evaluation of a complex nursing activity. This vital preparatory work is often skimmed but is required to avoid failures in research programmes and rejection by funding agencies. Evaluations are often undermined by problems of acceptability, compliance, delivery of the intervention, recruitment and retention, poor choice of outcome measures and smaller-than-expected effect sizes, all problems that could be anticipated by thorough piloting. The feasibility and piloting stage includes testing procedures for their acceptability, estimating the likely rates of recruitment and retention of research participants, and the calculation of appropriate sample sizes. Depending on the results, a series of studies may be required to progressively refine the design, before embarking on a full-scale evaluation. This set of learning objectives follows on from the development stage and they are vital before the evaluation and implementation stages are undertaken. Each sub-section will, therefore, be related to the overall complex interventions framework. You will:

### **2. Demonstrate a critical awareness of the role of a pilot study in addressing the main uncertainties that have been identified when developing complex interventions.**

#### **2.1. Testing procedures<sup>20-23</sup>**

- Demonstrate an in-depth awareness of the procedural intricacies in undertaking evaluations of complex interventions and/or nursing activities
- Critically appreciate the range of mixed method designs to test the acceptability of proposed activities and interventions to patients and health care staff
- Understand methods to assess the degree and variability of intervention compliance when assessing the delivery of a complex intervention or nursing activity

#### **2.2. Recruitment/retention<sup>24-26</sup>**

- Critically appraise ethical considerations in the conduct of evaluations of complex interventions and nursing activities in health and social care
- Demonstrate knowledge of participant recruitment and retention strategies
- Critically evaluate methods used in pilot trials for estimating the likely recruitment rates in full scale evaluations of complex interventions in nursing

#### **2.3. Determining sample size<sup>27</sup>**

- Demonstrate understanding of the principles of sample sizes in terms of evaluating complex interventions
- Develop knowledge and understanding on different methods of calculating sample sizes appropriate for evaluating complex interventions
- Understand the contribution of cluster, superiority, non-inferiority or equivalence and cost-effectiveness factors in calculating sample sizes

### **3 Evaluation Stage:**

This stage of the curriculum is designed to help you undertake the evaluation of a complex nursing activity. There are many study designs to choose from, and different designs suit different questions and different circumstances. Awareness of the whole range of experimental and non-experimental approaches can lead to more appropriate methodological choices. This stage of the curriculum exposes you to the critical decision making processes involved in designing the least biased and most feasible evaluation. Considerations of randomisation, bias, control, process evaluation and economic evaluation are covered in this section of the curriculum. This set of learning objectives follows on from the development and piloting stages. Each sub-section will, therefore, be related to the overall complex interventions framework. You will:

#### **3. Demonstrate a critical awareness of the important outcome, process and economic considerations when designing and conducting full-scale evaluations of complex interventions and nursing activities**

##### 3.1. Assessing effectiveness<sup>28-34</sup>

- Develop a critical appreciation of the range of randomised, pragmatic and non-randomised designs suitable for assessing the effectiveness of complex interventions and nursing activities in terms of the relative strengths and weaknesses of each design and their susceptibility to bias
- Understand which situations and issues are best suited to non-randomised designs and how to maximise the validity and reliability of the results of such designs
- Critically appraise the value of guidelines for reporting and evaluating research reports (e.g. CASP, CONSORT) as a means to plan high quality research studies

##### 3.2. Understanding change process<sup>35,36</sup>

- Develop knowledge of the range of methods which can be used to understand processes within a research study
- Critically appraise how best to assess fidelity and quality when implementing a nursing activity or intervention
- Demonstrate understanding of how process evaluations can clarify causal mechanisms and identify contextual factors associated with variation in outcomes

##### 3.3. Assessing cost effectiveness<sup>37-40</sup>

- Critically evaluate core health economic concepts in the evaluation of complex interventions and activities in health and nursing
- Understand the role of economic evaluation in estimating the scale of economic benefits from complex nursing and health care activities or interventions
- Demonstrate understanding of how such analyses can be incorporated in the design of evaluations of complex interventions and activities

#### **4 Implementation stage:**

This stage of the curriculum is designed to help you understand why and how findings from research studies can be implemented and whether the benefits of complex activities are persistent in the 'real world'. Studies designed to provide robust estimates of effectiveness may not provide accurate estimates once the intervention, treatment or activity has been routinely adopted, for example because studies have used highly selected patient populations or a restricted range of settings. Implementation research, therefore, seeks to identify which techniques are effective for encouraging the translation of evidence into practice, and to provide information about 'real world' variability in effectiveness and cost effectiveness of interventions, and about the practicalities of introducing and sustaining new treatments, activities or services. As a consequence, long-term follow-up may be needed to determine whether short-term changes persist, and whether benefits inferred from outcomes in the original study do in fact occur. This set of learning objectives follows on from the previous three stages. Each sub-section will, therefore, be related to the overall complex interventions framework. You will:

#### **4. Demonstrate a critical awareness of behavioural change strategies for getting evidence into practice and of the importance of surveillance and long-term monitoring to identify unexpected or rare effects, and the persistence of original study outcomes.**

##### **4.1. Dissemination<sup>41-43</sup>**

- Critically appraise the principles for improving the quality of dissemination (e.g. CONSORT guidelines) including how to report complex interventions research, and the evidence for effective dissemination of research findings into practice, policies and guidelines
- Critically appraise specific behavioural change methods by which evidence-based complex interventions and activities can be implemented effectively
- Demonstrate understanding of a range of specific research methods by which evidence on effective implementation and behavioural change processes may be gathered

##### **4.2. Surveillance & monitoring<sup>44</sup>**

- Describe the use of routine data sources and health care records to provide evidence for the effectiveness of implementing evidence-based complex interventions and activities
- Understand the use of audit data to maintain standards and collect data on the implementation of complex interventions and nursing activities
- Critically appraise cross-sectional and longitudinal data analyses to understand patient and service level outcomes in routine practice

##### **4.3. Long-term follow-up<sup>45,46</sup>**

- Understand and critically appraise the importance of follow-up in relation to study design and method of outcome assessment
- Consider how strategies for the measurement of long-term outcomes can be designed to uncover unexpected or rare effects
- Appreciate the ethical considerations involved in the use of routinely collected data in health and social care settings

### 5 General learning objectives:

This aspect of the curriculum is designed to help you develop general and collaborative research skills to enable you to participate fully as early-stage researchers and then to progress in your post-doctoral careers. They represent the aims of EANS to equip you with a broader, pan-European and collaborative ethos to your research practice. To do so, you will be assisted in working on a series of collaborative projects with your peers as well as developing presentational skills about your own projects. This set of learning objectives is in addition to those which relate to the four aspects of the complex interventions framework. However, the overall complex interventions framework will provide the context by which you will meet these learning objectives. You will:

5. Develop collaborative and presentational research skills to enable future active participation in the European Research Area
- 5.1. Demonstrate skills in making presentations via poster and lecture-based media to audiences of peers and senior researchers
- 5.2. Recognise and begin to develop the skills required for writing funding proposals and peer reviewing such proposals on grant evaluation boards
- 5.3. Demonstrate skills in working collaboratively with peer representatives from across the European Research Area
- 5.4. Demonstrate knowledge and critical awareness of the importance of multidisciplinary working in research teams and the contribution of a wide variety of clinical and methodological research disciplines
- 5.5. Demonstrate the ability to marshal and present critical arguments for and against methods and philosophies as applied to research in nursing

## Section C

# Participant-Led Activities in each Year Group for the EANS Summer School

## Preparatory Work before the Summer School

### Years 1, 2 and 3

During the EANS Summer Schools you will be required to produce examples of your PhD studies for discussion with your year group peers and your teachers. This takes the form of a Microsoft power point or acetate presentation for the first year, a short summary (one A-4 page) during your second year and a poster during the third year. In the first year, you are also required to bring a short summary (one A-4 page approximately) about your own country and its health care system,

We have set out a number of specific issues and advice notes in the next few pages (for example, timing, number of slides/acetates). The reason for this is twofold:

- it is good practice to plan and time presentations in order to practice for future presentations at conferences and scientific meetings
- the summer school timetable is full and it is unfair to other participants if presentations overrun. In fact, course leaders will be very strict with timing.

Presentations are an excellent opportunity to practice the transferable skills necessary for a research career. They are also a very good opportunity to initiate conversations with other participants about research and nursing issues. Feedback and advice will be given by course leaders and other participants.

### Preparatory reading

Please download the reference list and obtain core reading material from the EANS home page

**You must complete this preparatory work before you attend the summer school.  
Ensure you bring it with you!**

## Summary of Participant-Led Activities

### Year 1

#### 1. My PhD: Making a Start

An individual ten minute verbal presentation on your doctoral studies, consisting of five Microsoft PowerPoint slides or acetates, plus five minutes of questions from teachers and participants. You must prepare this presentation before arrival at the summer school using a template from the EANS website. Further guidance is available at the end of this section of the handbook.

#### 2. Our Health Care Systems

A group presentation on the similarities and differences between European health systems and the organisation of nursing in different European states. You must individually prepare one page of A4 information before arrival at the summer school. The template for the structured summary should be downloaded from EANS webpage. Some guidance on the preparation of this is also available at the end of this section of the handbook. You will then work in multi-state groups during the first week of the summer school to prepare the group presentation, consisting of five Microsoft PowerPoint slides or acetates for ten minutes plus five minutes of questions from teachers and participants. You will be given a PowerPoint template for this presentation

#### 3. Improving the Quality of Research in Nursing

Group presentation following Problem Based Learning (PBL) exercise exploring how complex interventions research thinking can address the concerns voiced by Ingalill Hallberg's two recent IJNS editorials, that only 15% of articles in the best peer reviewed nursing journals address '*research that may carry strong evidence for practice*'.

#### 4. Applying the Complex Interventions Framework to our Clinical Area

A group presentation on the application of complex interventions thinking applied to you and your peers' clinical areas. This exercise is undertaken in integrated mixed year groups. You are allocated primarily by clinical subject area into 10 to 12 different groups of 8-9 people and these groups structured so that there is a mix of participants using different research methods in their PhDs. Your group will work on answering the question, "*How will you use the complex interventions framework to answer a key question and improve the health or nursing care of your clinical area?*" Group presentations are split between two auditoria.

## Summary of Participant-Led Activities

### Year 2

#### 1. My PhD: a Health Check

A group presentation synthesising the methods used, progress made, barriers to progress and common solutions to overcome these barriers in advancing your doctoral studies. You must individually prepare and bring seven copies of a one A4 page (300 words) information sheet on your own doctoral progress before arrival at the summer school. The template for the structured summary should be downloaded from EANS webpage. Some guidance on the preparation of this is also available at the end of this section of the handbook. You will work in multi-state groups of six people to synthesise this information and prepare the group presentation, consisting of five Microsoft PowerPoint slides or acetates for a maximum of 15 minutes plus ten minutes during which your group will lead a discussion around one issue coming out of your group work.

#### 2. The Summer School Debate

Year 2 will lead a debate for the whole summer school. You will be divided into four groups, two will prepare material in support of a motion, two against it. You will be told what the motion is when you arrive at the summer school and will be given materials. During the debate, the two groups for the motion will provide a proposer and seconder each, who will speak for five minutes per person, the other groups with a primary and secondary reply speaker each against the motion. The debate will be chaired by a member of teaching staff who will then invite contributions from the floor. A vote will then be taken.

#### 3. Applying the Complex Interventions Framework to our Clinical Area

A group presentation on the application of complex interventions thinking applied to you and your peers' clinical areas. This exercise is undertaken in integrated mixed year groups. You are allocated primarily by clinical subject area into 10 to 12 different groups of 8-9 people and these groups structured so that there is a mix of participants using different research methods in their PhDs. Your group will work on answering the question, "*How will you use the complex interventions framework to answer a key question and improve the health or nursing care of your clinical area?*" Group presentations are split between two auditoria.

## Summary of Participant-Led Activities

### Year 3

#### 1. My PhD: the Poster

You must prepare a bring with you a poster. Some guidance on how to prepare a good quality poster is given at the end of this section of the handbook.

You will take part in a mock poster session at a conference where you must present the latest aspects of your studies including any results. The poster session will be divided into three separate two-hour periods (12 posters per session). You have to stand beside your poster, describe your study briefly and answer questions from your non-presenting year group peers for 60 minutes as they visit all the posters displayed. After 60 minutes, non-presenting participants will withdraw. For the remaining 60 minutes, participants who are presenting will have an opportunity to go around the posters as a small group and review them, taking turns to present to the group. This two-hour process is then repeated twice more, 12 posters per period. During the mock poster session, all participants will be given a rating scale with which to rate the posters. Teachers will collate the scores and the person who has the best combined score will receive a prize at the summer school formal dinner.

#### 2. The Research Proposal

You will work in four groups of eight people to design a research proposal, located in one or more phases of the complex interventions research framework, addressing where the proposal addresses issues of complexity and how to research it. The proposal must link to previous work that has been done to justify the project in terms of the stage of prevailing knowledge, its deliverability, plan, costing, acceptability, feasibility and contribution to knowledge. You will present your proposals to the 'Karina Lovell Research Foundation' – a panel of summer school teachers – who will decide on the winning proposal.

#### 3. Applying the Complex Interventions Framework to our Clinical Area

A group presentation on the application of complex interventions thinking applied to you and your peers' clinical areas. This exercise is undertaken in integrated mixed year groups. You are allocated primarily by clinical subject area into 10 to 12 different groups of 8-9 people and these groups structured so that there is a mix of participants using different research methods in their PhDs. Your group will work on answering the question, "*How will you use the complex interventions framework to answer a key question and improve the health or nursing care of your clinical area?*" Group presentations are split between two auditoria.

## A Few 'Top Tips' for Microsoft Power Point And Acetate Presentations.

### As easy as ABC!

**Attention** to your audience. When giving a power-point or acetate presentation you will have an audience, a computer screen and a projected image to look at. The rules are: always look at your audience (you must engage them), sometimes look at the computer screen (to remind yourself what to say so you don't get lost in your presentation) and occasionally look at the projected image (just to point to a word or image to make a special point). Never stand with your back to the audience looking at the projected image and talking to the wall.

**Balance** of your talk. This should reflect your studies and your progress so far and the research process (short background, question, methods, progress/results, issues and implications). Remember that this is a research presentation not a presentation about your special subject. The audience wants to know about your research.

**Clarity** of your slides. Keep the slides simple and clear. Use just a few lines, bullet points and only a few words in each line of text. Never let your text go below 20pt font size. Avoid the Microsoft design templates supplied with power point ('Dad's Tie' is a favourite and always makes people groan!). Use the EANS template instead. Yellow and white text on blue backgrounds is a very good colour scheme. Avoid animation. It irritates and distracts people, gets in the way of your message and can often go wrong. Get spellings checked. Even native English speakers struggle with the differences between practice/practise, advice/advise. Is it 'older persons', 'older people' or 'the elderly'? Ask someone who knows (the correct term is actually 'older people'). Be careful with using commas or full stops in numbers (1,3 or 1.3?). And finally, *practice, practice, practice.*

## Preparing a Good Poster

### What is a good poster?

The ideal poster is designed to provide a brief overview of your work, initiate discussion, attract attention, give you something useful to point to as you discuss your work, stand alone when you're not there to provide an explanation and let people know of your particular interest. A good poster should pay attention to layout, content, handouts and a range of other factors. A poster should be no larger than 1200 x 800mm. A few hundred words is generally more than enough text.

### Layout of the poster

Does the layout of the poster make it easy to read and understand?

- how '*appealing*' and '*striking*' the poster is: if the poster '*draws you into it*' and makes you interested in it
- do not use too many colours
- the number of words (too many, too few?),
- the size of the font (can anyone read it or do you need to get really close?)
- diagrams/tables/figures (do they make the poster clear or are they irritating and unnecessary?)

### Content of the poster

Does the content of the poster get the message across to the audience?

- the structure (is it logical, e.g. background, research question, method, sample, measures, results, implications, references?)
- the content (is it methodologically correct, are results presented accurately, does the method answer the question?)
- the authority (are references broad, in depth and up to date?)

### Handouts

Are handouts given and if handouts are given, how clear are they?

- a handout can give more detail than the poster or can be a short abstract, it does not have to be just a copy of the poster

### Other factors

- Does the poster include contact details of the presenter, the names of their collaborators or supervisors and their institution? Does the presenter have business cards (or equivalent) to hand out?



## Section D

# Problem Based Learning

## Problem Based Learning

### What is PBL?

As a method of teaching PBL was first introduced at McMaster University in the late 1960's. It has since spread throughout other parts of the world, and is now becoming one of the major teaching methods used in many disciplines. Broadly speaking PBL is characterised by the use of problem scenarios, sometimes based around patients. This provides a context to learn problem-solving skills, and in doing so, acquire knowledge. The actual process involved in PBL is based upon the '7 steps', specified later.

### How Effective is PBL?

The use of PBL as a method of teaching has been the subject of much research. In general, research indicates that students find PBL a far more enjoyable learning experience than that encountered using a conventional lecture only based curriculum, whilst graduates have reported their training more positively in comparison with graduates from conventional curricula. In addition to positive ratings concerning the learning experience, clinical supervisors' ratings of the competence of graduates are also generally supportive of PBL. A number of studies have also reported the competence of PBL students either more positively or non-significantly different from students under conventional curricula. Reservations however have focussed upon the performance of PBL students on basic science examinations which have tended to be lower than scores obtained by students under conventional curricula. This is overcome within our programme by the checking by EANS Faculty and course leaders of learning objectives to ensure each group is on track to address the exercise.

### Roles in PBL Groups

Everyone within a PBL group has a role to play in what must be seen as a very active learning process. At the beginning of the PBL scenario participants in the PBL should elect two main roles.

1. **Chairperson:** The main job of the chairperson is to stimulate and keep the discussion proceeding, making sure the group strictly adheres to the '7 steps', and drawing people into the discussion when needed. At times the chairperson may need to use interpersonal and communication skills to ensure the group works effectively.
2. **Scribe:** The scribe's main role is to use a whiteboard or paper to record the group's deliberations and clarify the learning objectives. The scribe should take the lead from the chairperson.
3. **Group Members:** All members (including those with additional roles specified above) are responsible for fully contributing to the PBL process, both in discussions around the scenario, working towards setting learning objectives, independent study and finally discussion around the objectives. PBL really should be seen as a group way of working and any person who does not fully contribute to the group will be hindering the learning process.

## **PBL Group Process**

### **Group work (steps 1 – 4)**

1. All participants should read the scenario.
2. The group chooses a chairperson and scribe.
3. You will be allocated one and a half hours to complete the first session of the PBL. It is the role of the chairperson of each group to ensure that you do not run over.

### **Independent study time (step 5)**

1. As individual group participants, you will all undertake private study to identify, read and reflect upon information and use it to contribute towards answering each learning objective for the PBL scenario.

### **Sharing the results of private study and preparing for the presentation (Step 6)**

1. This session is conducted in an evening or other free time.
2. The chairperson and scribe remain the same as for the first half of the PBL scenario.
3. The chairperson should ensure that the learning objectives are clearly visible to all and that all group members contribute to discussion about their private study.
4. The group as a whole should agree the answers to their learning objectives.
5. The group should write and organise the presentation content.

### **The presentation (Step 7)**

1. Each presentation takes ten minutes with five for questions.
2. The whole group should be involved in the presentation.
3. The presentation should consider how complex interventions research thinking can be used to address the scenario topic.

## The '7 Step' Approach to PBL

### Step 1 Clarifying terms

- Process* Individual group members identify any words or concepts whose meaning they are unclear about. Other group members may be able to provide definitions. All participants should feel safe about declaring what they do not know.
- Reason* Unfamiliar terms may act as obstacles to learning and understanding. Clarification of even half-understood terms may start the learning process.
- Output* Words for which the group cannot agree a meaning should be listed as learning questions.

### Step 2 Defining the problem

- Process* Group members are encouraged to contribute their views concerning the nature of the problem. The chair may need to encourage participants to contribute to a fast-moving and wide-ranging discussion. Often the scenario will be broken into a series of sub-issues.
- Reason* It is quite possible for every group member to have a different perspective on the problem. Comparing and pooling these views broadens intellectual horizons and helps define the task ahead.
- Output* List of problems.

### Step 3 **Brainstorming and organising explanations to form a tentative solution**

- Process* Group members test out explanations for the problems and scrutinise the problem in fine detail and compare it against proposed explanations to see how well they match and where further exploration is needed. In doing so it develops higher level cognitive skills such as analysis, synthesis and evaluation. This begins the process of defining the learning objectives, although it is inadvisable for them to be put down in writing too soon.
- Reason* This is a crucial step in which group members retrieve information from memory and actively processes existing knowledge and identifies gaps. This allows the group to draw on each other's understanding and to form links between items of incomplete knowledge. When performed well, understanding rather than factual recall is promoted.
- Output* List of possible explanations.

#### **Step 4            Defining learning objectives/questions**

*Process*            The group agrees a core set of learning objectives, often in the form of questions which form the basis of their private study. Groups are encouraged to make the learning objectives specific, not too superficial and most importantly achievable within the time available. Some participants may have objectives not shared by the entire group in which they must add these to the group list. Learning objectives are shared with course leaders to check if they are appropriate for the scenario.

*Reason*            This process of consensus uses the expertise of the entire group to synthesise the foregoing discussion into appropriate and attainable learning objectives. This not only defines the learning task but pulls together and concludes the discussion.

*Output*            The written learning objectives are the main output of the group. All participants must take a copy.

#### **Step 5            Independent study**

*Process*            Using the learning objectives decided upon, group participants all individually seek out any available learning resources to obtain the information they feel will contribute towards understanding, explaining and solving the scenario. All participants are responsible for their own learning and must contribute to all learning objectives in Step 6, not merely focus upon one or two.

*Reason*            The requirements for each participant to work individually on all of the learning objectives helps the participants obtain experience of independent thinking and working.

*Output*            Individual notes.

#### **Step 6            Sharing results of private study and preparing for the presentation**

*Process*            Participants reconvene to discuss the written learning objectives. Participants all pool the output of their independent study, share information about sources and help each other understand and identify areas of continuing difficulty needing further study or expert help. Each participant should be prepared to discuss all of the learning objectives when contributing towards the group's attempts to provide a complete explanation to the problem. Groups then plan to present this information during step 7.

*Reason*            Discussion forces all participants to test how far they have understood and can explain what they have researched. To do this successfully they will need to expand and change their existing knowledge. This will synthesise the work of the group, consolidate learning and define areas of uncertainty for future learning. Inevitably learning is incomplete, but participants can use this to return to topics when appropriate triggers occur in future learning or practice. On occasional instances participants may want to seek help from others (academic, in practice or supervision) for further clarification of outstanding points.

*Output*            Individual notes and presentation materials.

**Step 7      The Presentation**

*Process*      Participants present their findings from the learning objectives to their year group. The presentation lasts ten minutes with five additional minutes for questions from the audience. All participants should contribute in some way.

*Reason*      Presentation allows you to test yourselves in presenting your knowledge succinctly and clearly to an audience who do not have the same knowledge as the group. This will further aid synthesis of the work of the group, consolidate learning and allow openness on the areas of uncertainty identified for future learning. It may be appropriate for groups to outline where they may want to seek help from others in the audience for further clarification of outstanding points.

*Output*      A presentation with accompanying slides and any other materials thought necessary by the group.

# Section E

# Timetables

## Year 1 Week 1

<b>Date/time</b>	<b>Monday 28.06.10</b>	<b>Tuesday 29.06.10</b>	<b>Wednesday 30.06.10</b>	<b>Thursday 01.07.10</b>	<b>Friday 02.07.10</b>
9.00–10.30	<b>Welcoming faculty &amp; participants</b>	Presentation My PhD: Making a Start x 6	Presentation My PhD: Making a Start x 6	Presentation My PhD: Making a Start x 6	Presentation Our Health Care Systems x 6
10.30-11.00	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
11.00-12.30	Introduction to the MRC complex intervention framework	1.1. Identifying the evidence base	1.2. Identifying/developing theory	1.1. Identifying the evidence base continued: meta ethnography	1.3. Process & Outcome
12.30-13.30	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13.30–15.00	Introduction to MRC complex intervention framework continued	1.1. Identifying the evidence base continued	1.2 Identifying/ developing theory continued	1.2. Identifying/developing theory continued	1.3. Process & Outcome continued
15.00-15.30	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
15.30–17.00	Introductions to Presentation 1-Our Health Care Systems and Presentation 2- My PhD: Making a Start	Presentation My PhD: Making a Start x 6	Presentation My PhD: Making a Start x 6	Presentation My PhD: Making a Start x 6	Introduction to integrated year group activity
<b>SOCIAL</b>	<b>GET TOGETHER</b>				

## Year 1 Week 2

<b>Date/time</b>	<b>Monday 05.07.10</b>	<b>Tuesday 06.07.10</b>	<b>Wednesday 07.07.10</b>	<b>Thursday 08.07.10</b>	<b>Friday 09.07.10</b>
9.00–10.30	<b>Welcoming Faculty &amp; students</b> <hr/> 2.1. Testing procedures	PBL: Improving the Quality of Research in Nursing: a Critical Analysis continued	PBL scenario 2.3: Determining the right sample size continued	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	PBL: Improving the Quality of Research in Nursing: a Critical Analysis. Presentation x 6
10.30-11.00	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
11.00-12.30	2.1. Testing procedures continued	2.2. Estimating recruitment/retention	2.3. Lecture: Determining sample size	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	The EANS Summer School debate
12.30-13.30	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13.30–15.00	2.1. Testing procedures continued	2.2. Estimating recruitment/retention continued	2.3. Lecture: Determining sample size continued	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations	<b>Evaluation &amp; Goodbye</b>
15.00-15.30	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break 15.00-15.15</b>	-
15.30–17.00	Introduction PBL: Improving the Quality of Research in Nursing: a Critical Analysis	PBL scenario 2.3: Determining the right sample size.	Introduction and start of Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area	<b>15.15 – 16.15</b> Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations continued	
				<b>16.30 – 17.30</b> <b>Prof Kettner:</b> Presentation on cultural reflexion	
<b>SOCIAL</b>	<b>GET TOGETHER</b>			<b>EANS GALA DINNER</b>	

## Year 2 (week 2)

<b>Date/time</b>	<b>Monday 05.07.10</b>	<b>Tuesday 06.07.10</b>	<b>Wednesday 07.07.10</b>	<b>Thursday 08.07.10</b>	<b>Friday 09.07.10</b>
9.00–10.30	<b>Welcoming Faculty &amp; students</b>  Introduction to the MRC complex intervention frame work	My PhD: a Health Check: preparation	2.1. 2.3. Feasibility and pilot staging	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	The EANS Summer School debate planning
10.30-11.00	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
11.00-12.30	Introduction to MRC complex intervention frame work continued	My PhD: a Health Check: preparation	2.1. – 2.3 continued 3.1. – 3.3. Evaluation stage	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	The EANS Summer School debate
12.30-13.30	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13.30–15.00	Introduction to MRC complex intervention frame work continued	My PhD: a Health Check: presentations	3.1. – 3.3 continued	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations	<b>Evaluation &amp; Goodbye</b>
15.00-15.30	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break 15.00-15.15</b>	
15.30–17.00	The EANS Summer School debate planning	My PhD: a Health Check: presentations	Introduction and start of Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area	<b>15.15 – 16.15</b> Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations continued	
				<b>16.30 – 17.30</b> <b>Prof Kettner:</b> Presentation on cultural reflexion	
<b>SOCIAL</b>	<b>GET TOGETHER</b>			<b>EANS GALA DINNER</b>	

### Year 3 (week 2)

<b>Date/time</b>	<b>Monday 05.07.10</b>	<b>Tuesday 06.07.10</b>	<b>Wednesday 07.07.10</b>	<b>Thursday 08.07.10</b>	<b>Friday 09.07.10</b>
9.00–10.30	<b>Welcoming Faculty &amp; students</b> <hr/> Introduction to the MRC complex intervention frame work	My PhD: the Poster	Introduction to 2 feasibility & piloting	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	Presentation: The Research Proposal
10.30-11.00	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
11.00-12.30	Introduction to MRC complex intervention frame work continued	My PhD: the Poster	Introduction to 3 evaluation stage	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area continued: self-directed study	The EANS Summer School debate
12.30-13.30	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13.30–15.00	Introduction to MRC complex intervention frame work continued	My PhD: the Poster	Introduction to 4 implementation stage	Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations	<b>Evaluation &amp; Goodbye</b>
15.00-15.30	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break 15.00-15.15</b>	
15.30–17.00	Introduction: The Research Proposal	My PhD: the Poster	Introduction and start of Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area	<b>15.15 – 16.15</b> Integrated year group activity: Applying the Complex Interventions Framework to our Clinical Area: presentations continued	
				<b>16.30 – 17.30</b> <b>Prof Kettner:</b> Presentation on cultural reflexion	
<b>SOCIAL</b>	<b>GET TOGETHER</b>			<b>EANS GALA DINNER</b>	



# Section F

# References

## Background

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