

## **Summary; the doctoral student's summer school in nursing, The first REFLECTION activity carried out by Lund University, 2011**

The first REFLECTION activity carried out is the doctoral student's summer school in nursing carried out by Lund University, between 27<sup>th</sup> of June and 8<sup>th</sup> of July, 2011. The activity was a great success in that the evaluation was extremely positive and it attracted many people from throughout Europe, dominated by representatives from the REFLECTION partner countries. The composition and the quality of the academic programs for the four groups were rated as consistent, coherent and including high quality teaching which closely followed the plan of the REFLECTION proposal. The message about how to set up and carry out complex interventions in health care using multi methods design came across clearly and was taken on board by participants as is shown in the evaluation.

The summer school had 167 participants altogether, distributed among doctoral students: 34 in the 1<sup>st</sup> year, 31 in the 2<sup>nd</sup> year, 30 in the 3<sup>rd</sup> year 30, plus 52 'scholars' (early stage researchers, mostly post-doctoral), and 19 teachers including the group leaders of respective year groups. In addition, the steering committee member Tomas Salo from Slovakia participated throughout the second week to get to know the program and follow the teaching. Two administrative and ICT personnel were available throughout the two weeks. The 1<sup>st</sup> year of the summer school took place between the 27<sup>th</sup> of June and the 8<sup>th</sup> of July and the 2<sup>nd</sup> and 3<sup>rd</sup> year took place between the 4<sup>th</sup> and 8<sup>th</sup> of July while the scholars program took place between the 4<sup>th</sup> and 7<sup>th</sup> of July. The students of the first year were recruited through an open call which attracted 70 applicants of whom 35 were selected and accepted to participate. One person dropped out the day before the start due to a death in her family and she has been secured a place in 2012. Of those already in the program (accepted in 2010 and 2009) most of them came back for a second and a third year. For the scholars program altogether 52 participants applied of whom some were doctoral students, ending the third year program in 2010 and thus now attending a fourth year.

The participants came from the partner countries in about 60-65% and among teachers 80% came from the partner countries. It should be noted that some of the doctoral students from non-partner countries like Spain, Portugal, Lithuania, Iceland, etc are studying as doctoral students in partner countries such as UK, Finland, Sweden and Belgium. The remaining participants represented a variety of people from all over Europe. In all 23 countries was represented. The broad representativeness, dominated by people from the partner countries is an important part of the aim of the summer school; i.e. strengthening participants' collaboration, networking and understanding of nursing research in a European perspective.

The program for the different groups followed the REFLECTION model with the overarching aim to understand and develop necessary skills for carrying out complex interventions in health care and being able to use multi-method designs. The curriculum is based on the UK MRC model but has been further developed by the faculty responsible for the program. It was evaluated very positively (mainly in means of around 4,5 or more in most aspects; using a scale ranging from 1-5, the latter being excellent). The evaluation was similar on aspects like information, administration, organization and balance between social and academic activities.

The funding was used to provide lunches, coffee, snacks and fruit free of charge for all participants throughout. Students in the three years programs had their accommodation subsidized at the level of 60% of the costs and teachers had their full accommodation paid. All participants had to pay their own travel expenses. Social activities were free of charge and paid by the extra funding obtained from various Swedish organizations. In total 152 people participated in the gala dinner.

Thus in summary the summer school was a great success, academically as well as with regard to networking, developing new collaboration and deepening the knowledge about researching complex interventions and in turn moving the research skills of future nurse researchers to a higher level, producing knowledge ready to be implemented in health care.

## **The doctoral student's summer school in nursing; the first REFLECTION activity carried out by Lund University, 2011; scientific content and discussion of the event.**

The doctoral students' summer school has been in place since 1998 and continuously developed to meet the needs of evidence based nursing care methods in health care. The organizer throughout the years has been the European Academy of Nursing Science (EANS) and the activities have taken place at different universities throughout Europe. EANS is an independently organized body composed of individual members who have made significant contributions to the advancement of nursing science in Europe through scholarship and research. It has been in existence since 1997. Each year about 100 doctoral students from across Europe gather at any European University and teachers are recruited among EANS Fellows as well as from the host university. In addition there is a scholars meeting open for EANS scholars or those having completed the three year's summer school. The summer school has previously attracted a four year grant from Marie Curie 2006-09 and by that it was also possible to recruit doctoral students from Eastern Europe as well as from the countries that have less opportunity to provide a doctoral degree in nursing at their universities. Students were reimbursed for travelling and costs of living. In 2010 a new program was implemented inspired by the debate about research that can inform practice, the guest editorial of the president of EANS (Hallberg, IR. Moving nursing research forward towards a stronger impact on health care practice, 2009) challenging the current designs in nursing research and the MRC report on Developing and Evaluating Complex Interventions; New Guidance (2008). From 2011 the secretary of EANS has been successful as main applicant in obtaining a five year grant from ESF that partially covers the cost of the summer school. The grant (REFLECTION) is to build up an interdisciplinary European Faculty network of researchers. Countries contributing to the grant are Belgium, Finland, Germany, Norway, Slovakia, Sweden, Switzerland and United Kingdom.

The aim of the REFLECTION doctoral students' summer school is to build strong research applying the concept of complex interventions in health care and mixed methods design. The host university normally contributes with teachers from other disciplines to obtain an interdisciplinary perspective and understanding among students and scholars. The purpose of EANS is to sustain a forum of European nurse scientists, Fellows and Scholars, to develop and promote knowledge in nursing science and to recognize research and scholarly achievement in the pursuit of excellence. It provides a forum for established and developing nurse researchers to meet, network and develop a European perspective to their work. Thus the doctoral students' summer school now based on the REFLECTION program financed through a grant from ESF with the support of the programme already built up by EANS is aiming at moving the frontier of research in nursing forward towards research carrying stronger evidence to be implemented in health care.

### *Aims and outline of the Summer School Program and Scholars Program*

The Summer School was established to encourage nursing students undertaking PhD study to add a European dimension to their research and to receive advanced research training from a broader perspective than that of the doctoral training their home university provides. The EANS Summer School for Doctoral Studies Program is made up of a three year program, as students progress in their studies. After having participated in the three year program they can apply to become a scholar and from 2011 add a fourth year of developing their research skills. The overarching aims are to;

- To equip the new generation of early stage European nursing researchers with knowledge and expertise in advanced translational complex interventions research methods;
- To enable these researchers to design, plan and implement programmatic, mixed methods and complex interventions research in health care;
- To create a multi-state, common European learning environment for doctoral nursing students;
- To enhance the opportunities for doctoral students to study, work and undertake research in other European States.

### *Outline of the Summer School*

REFLECTION is leading the drive to equip the next generation of researchers into nursing with knowledge and skills in complex interventions research methods which the current generation has not had access to (MRC, 2010). In 2011 the summer school continued the new curriculum based on the ideas above which were implemented in the summer school in 2010. Our intention is to ensure that researching complex interventions using a mixed research methods design will become the norm in research into nursing. The complexity of nursing will be recognized explicitly in research programs which will become increasingly multi-state, multi-disciplinary and programmatic. The Doctoral Students Summer School is open to nurses on doctoral programs with a Bachelor and/or Master degree according to the entry requirements of their home university. New students commence the course each year, starting in year 1 and progress through the program. On completion of the 3-year program, participants are awarded, over and above their degree from their own university, a certificate which details the European dimension of their work. Most universities having students participating in the summer school give doctoral students credits for their successful participation in the program.

The program is a coherent series of linked summer schools. Participants remain in the same group throughout the three years and are able to make significant and lasting collaborative relationships with other participants. Teachers and year group leaders work closely together to ensure the program remains coherent across the three years that participants attend the schools, with each course remaining consistent with programs offered in previous years. Whilst the organization of each school is the responsibility of the specific University designated to run the school, an organizing committee consisting of the previous year's and upcoming organizer together with representatives of the REFLECTION steering committee ensures that the schools offer high quality content of academic activities consistent with the curriculum available and continuously critically reviewed and developed. During the first year summer school participants attend for ten days. During the second and third schools of their program, participants attend five day courses. Each year 35 new students are recruited for the first year. Consequently, those participating in year 2010, in the first and second years continued their participation for the second and third years meaning that altogether at most 105 students participate.

Fourth years and scholars hold a program of their own in conjunction with the summer school to further develop the networks established during the intensive summer school program and to support their career development as senior researchers and contributors to the advancement of nursing science in Europe. Their program is a four day program and it is a continuation of the summer school but organized by scholars themselves. Teachers in the scholars program are those available in the doctoral program and in addition they can invite others, normally from the host university. The number of scholars participating is usually around 40 scholars, in 2011 it was 52.

### *The first, second and third years summer school program*

The three summer school programs follow the MRC model tightly with the addition of multi method research. This means that the first years ten days are committed to the development stage and the feasibility and pilot stages of the MRC framework. The second year program is committed to the evaluation stage, the third year to the implementation stage. Throughout the three years a stepwise presentation and evaluation of their PhD thesis is carried out in different ways, using the traditional academic ways to present thesis. Also some lectures are common for all three year participants and for scholars; this year the special lecture on Working in Europe (by professor Walter Sermeus, Belgium) and the special lecture on The future of nursing research (by professor Ingalill Rahm Hallberg, Sweden). In addition two common group activities are carried out; the summer school debate is an event in which the second year participants prepare a debate on a debatable topic of significance for nursing research. The other activity is an integrated year activity where the participants work together on developing a research proposal on a predetermined subject. This activity is called the research incubator and is the only activity where students work across the three years.

*The year one program* the first week focused on the development stage of researching complex interventions and as such it focused on identifying the evidence base, identifying and developing theory for the intervention and the evaluation of its impact as well as relating process to outcomes and modeling of an intervention study. The novelty of this year's program in relation to the MRC model is the inclusion of identifying the knowledge base addressing traditional systematic reviews, meta-synthesis and systematic mixed methods reviews. Thereby the inclusion of the variety of scientific knowledge to build the theory or model for the intervention and evaluation of it is recognized. In addition during the first week students have to do presentations of the health care systems in their respective countries. A pedagogic mode to do this has been tested and found very effective (mean score 4.4/5). Presentations of their PhDs are made with the pedagogical mode for this activity found effective (mean score 4.5/5). The second week of the first year focused on feasibility and in doing so lectures on testing procedures addressing clinical uncertainty, acceptability and feasibility, addressing uncertainty in recruitment and retention is discussed. The second week in addition addressed setting up mixed methods design and determining sample size for intervention studies, for surveys and for qualitative studies. Thus in summary the first year of the doctoral student's summer school provided the development and feasibility and pilot stage of researching complex interventions. Time and space for discussion, questions and working in groups were provided throughout although seemingly students often would like even more contribution from the senior academics providing the teaching.

*The year two program* concerned the evaluation stage of researching complex interventions and that included assessing effectiveness in relation to the expected primary outcome variable, understanding the change process and thus exploring what is commonly addressed as the black box of interventions effectiveness, and in addition assessing cost effectiveness. The latter aspect is from a health care perspective extremely important since new methods before being implemented in health care need to be weighed against the cost and effectiveness and other methods, perhaps already in place. In addition the students of the second year had to prepare the summer the school debate that this year addressed the usefulness of nursing research (Scored 4.2/5). The comments that needs to be discussed in relation to the program 2012 is that students of the other year groups wanted to have a more active role in the debate. Second year participants also had to do a small group presentation of the development of their PhDs; called 'My PhD a health check' (mean score of 4.1/5). This activity should be further developed since some in the open ended comments expected more comments on their work and

in particular from the academics. Also they participated like the first and third year in the research incubator; applying the complex intervention to a clinical area (scored in mean 4.0/5). The comments on this activity indicated that the new mixed year groups in some cases had difficulties in collaborating with each other. They did however appreciate that they had been given a topic for the complex intervention and did not waste time in their groups coming up with that themselves. Thus in addition to following up on their PhD developments the second year program addressed the evaluation stage of researching complex intervention. For the next year this program needs to be discussed and more lectures provided as well as an earlier start considered. Perhaps an introductory lecture putting these topics in place in the process of developing complex interventions would be helpful to connect to their experiences from the first year.

The *third year program* addressing the implementation stage of researching complex interventions was developed and tested for the first time this year and turned out to be very well evaluated. The content of the program focused on dissemination, surveillance and monitoring and long-term follow up. The dissemination addressed different aspects of quality of reporting and effective implementation, barriers and facilitators, change of use strategies. Also it addressed developing quality indicators, use of audits and routine data sources as well as implementation research. Overall these lectures were very well evaluated, however, the MRC model is not clear about implementation as such; i.e. if addressing the implementation as such in the process of researching the complex intervention or addressing established findings i.e. the outcome of a successful intervention study. We can clarify that in the summer school 2012 and thereby contribute to the development of the MRC model. In addition the third year had a full day focused on presenting their PhDs in a poster session. That session was much improved compared to the last year (4.3/5) although further improvement can be done. Suggestions included splitting the poster session across two days and that scholars should also do the assessment and score the quality of the posters. Like the first and second year group the third year group participated in the summer school debate and the research incubator; applying the complex intervention to a clinical area and their comments were in accordance with those already described.

The *program of the scholars meeting* is developed by the scholars themselves and this year it addressed the REFLECTION network, career development and applying for grants, measuring social impact of research, the MRC framework applied, implementation and meta synthesis, presenting yourself, CV development, ethics in research successful publication, becoming an effective reviewer, an EU-project; Right time care place, and planning your future research career. These sessions were organized and decided on by the scholars themselves and as told from the scholars committee positively evaluated. However, by providing a fourth year the planning and organization of the summer school requires closer collaboration between the organizer of the doctoral students' three year activities and the scholars/fourth year activities. These need to be more integrated and planned in collaboration. This is discussed and going to be addressed in the December meeting planning for the 2012 doctoral students summer school.

In summary the doctoral student's summer school and the scholars/fourth year program may benefit from some changes but overall the activity is successful and fully meets the aims of the activity as presented in the REFLECTION proposal. The teaching is of high academic and pedagogical quality. The MRC model provides a very helpful framework for the summer school but in fact the transforming of the model into a curriculum also points at that the MRC model can be developed in several aspects and that is planned for in the steering committee of REFLECTION.

## **Assessment of the results and future direction; the doctoral student's summer school in nursing, REFLECTION activity carried out by Lund University, 2011**

Assessment of the activities in the REFLECTION summer school was done covering evaluation of the quality of the pre-meeting communication and information, the registration and welcome, social events, website information, overall quality of teaching sessions, PBL sessions, balance between different teaching methods, adequacy of opportunities to network, intellectual challenge, working climate within the group, commitment required and all group sessions and the integrated session. In addition all teaching sessions were evaluated and the results have been fed back to all teachers and group leaders. The scale for evaluation ranged from 1, poor to 5 excellent and a mean was calculated with regard to each activity

The lectures and activities carried out across the groups or common for all participants had means ranging from 4.1 (the summer school debate) to 4.8 (the registration and welcome), 4.7 (social events and the gala dinner), 4.6 (general relevance and interest of the summer school), 4.5 (the pre-meeting communication and information), 4.4 (information on the website), 4.4 (the special lecture – future of nursing research), 4.3 (lecture about working in Europe). Thus it is fair to say that these activities worked very well.

The lectures and activities for the first year students was scored between 4.1 and 4.9 (determining sample size for intervention studies), apart from one activity that was scored in mean 3.8 (lecture about addressing clinical uncertainty). The sessions introducing the MRC concept and that of modeling process of outcome were scored 4.6 whilst the sessions about systematic reviews, meta synthesis scored in mean 4.7 and the sessions on sample size in qualitative studies scored mean 4.5, systematic mixed studies reviews scored 4.3, ethics scored 4.2 and theory building and mixed methods research and that of uncertainty in recruitment and retention scored 4.1 each. Thus it is fair to conclude that the quality of the teaching and other academic activities was highly regarded. The open ended comments in the evaluation sheet, apart from giving a lot of positive comments indicated that participants thought there was too much group work, the English speaking ability needs to be stepped up by participants from non-native English speaking countries and that we should tell them in advance to practice before attending. Also the activity on integrating students from each year group needs to be worked more on to support their ability to start working. These aspects have been taken into consideration and we need to give pre-information about participant's English speaking ability and reduce the number of group work activities. This is mainly a matter of coordination between teachers in each year group so that not all of them use group sessions in the teaching sessions. However, the way the first year was planned and carried out worked very well. Some polishing to improvements can be done.

The lectures and activities of year 2 were rated between 3.5 and 4.4 with the lowest score from the lecture on assessing cost effectiveness whilst the session about understanding change process was scored in mean 4.2 and assessing effectiveness was rated 4.4. The comments were overall positive. However, the lecture about cost effectiveness was found too difficult and too theoretical and thus hard to follow although participants recognized the importance of the subject. The evaluation also showed that the participants believed that the five days were too short time to get up to speed from the previous year's programme. The comments also showed that there was too much group work given the five days of which much

of the time was addressed to follow up their own PhD work. Thus although mainly positive there need to be some improvement in the planning for the second year program. We need to consider bringing participants in on the Sunday and provide a get together and summing up of the previous year before the activities start on Monday morning. We also need to consider providing more lectures and decreasing the group activities as well as rethinking the way the evaluation of their PhD health check is carried out. Seemingly they expect more feed-back from teachers on their thesis. Cost effectiveness is an unfamiliar subject for doctoral students in nursing thus we have to make sure that the level of teaching also includes practical examples in order for them to understand the theoretical basis for the subject. Having said this, the comments provided by the second year students was overall positive and showed that the participants had got a novel experience and a deeper understanding of researching complex interventions as well as nursing research in a European health care context. Their request on a session about qualitative research should be addressed in the next year.

The evaluation of the third year doctoral program scored means from 4.0 to 4.6 with the highest score on the session about quality of reporting and effective dissemination and the lowest on the session about barriers and facilitators for implementation. The other sessions scored 4.5 for the session about effective implementation and use of change strategies, and 4.4 for the remaining sessions (developing quality indicators, long term follow up and implementation research). The group activity concerning their PhD; poster presentations had 4.3 and the same score was found for the activity about developing a research proposal. The comments in the open ended space showed that the third years also thought that they needed more time. They were satisfied with the poster presentations but thought they should be rated by others than peers and also they wanted poster sessions to be spread over more days. Also the third year students thought that there was too much group work and wanted more lectures from teachers. They as well as the second years wanted some more lectures on qualitative research. Thus in summary although the third year was very successful some improvements can be done like spreading the PhD poster presentation over the week and also to be aware of the risk of that all teachers use group work as part of their lectures. Having said this it is fair to conclude that also the third year's program was a success.

The scholars program is planned and organized by them and thus no systematic evaluation is carried out. As an organizer I participated in their steering group and it is clear that the organizer of the summer school should be more involved in the planning of the fourth year and the scholars program so that it more clearly is a continuation of the third year and that the scholars have the opportunity to catch up with the three year summer school. Clearly the impact of this year's summer school is great in terms of the awareness of moving the research frontier from descriptive research to the kind of research that will have an impact on health care, and produce findings that can be implemented in practice. It is obvious that the impact of this event mainly is of three kinds; the awareness of researching complex interventions, the understanding of health care and nursing research in a European perspective and the network that the participants create during the three – four years with peers and with senior researchers from all over Europe. Some improvement can be made, in particular with the second year program and the scholars/fourth year program and this will be discussed on the December meeting, but overall the summer school was a success and will have a great impact on the future nursing research.