WHAT HAPPENED IN 2015?

ACTIVITY 2 - AN UPDATE ON THE DELPHI SURVEY

ACTIVITY 4 - TESTING THE NURSUS LEARNING MATERIALS

FIVE QUESTIONS - FIVE ANSWERS FROM DR. JANE GROSE

NEWS FROM ESSLINGEN STUDENT PANEL

FURTHER INFORMATION
Welcome to 2016 from the Nursus team and a very Happy New Year!

We are moving into a significant and exciting phase of the Nursus project in 2016 including the development of training materials for the Nursus TOOLKIT across all four partner countries. Our approach includes the use of an evaluation tool which will ensure the training materials and the format in which they are presented are fit for purpose. Our Sustainability Literacy and Competency (SLC) Framework will form the basis for all the work we do going forward. This SLC Framework is based on significant work conducted throughout 2015, of which some of you made a contribution via the Delphi Study and Student Engagement activities, so we send a warm ‘thank you’ for your time and input.

So in 2015 we developed the foundations from which we will be able to deliver our ground-breaking sustainability materials. These will be available on an e-platform for staff lecturers and student nurses to help them develop sustainable practice in a world where increasingly health and resources are being threatened by climate change and increasingly extreme weather events. The Nursus TOOLKIT will be completed and launched in 2017, however during 2016 some of you may be asked to evaluate the content as it is developed. If you are keen to be involved in this please contact Carmen Álvarez Nieto at calvarez@ujaen.es.

Summaries of our Interim Reports are now available in English, German and Spanish on our website www.nursus.eu under the reports section. Within these reports you can also find the early results of the Nursus curriculum scoping exercise and Delphi study. The full details of this aspect of the project and the extensive findings will be submitted to a journal for publication.

We now have our Sustainable Literacy and Competency Framework in draft format and hope to be able to share this with you in a subsequent Newsletter. The next phase, which will take us through 2016 and into 2017 is the development of our teaching and learning materials that will constitute the Nursus TOOLKIT. To begin this we have just completed the pilot testing of our first content and the e-platform, the results of this pilot are currently being analysed. Next we move on to testing the PROTOTYPE NurSus TOOLKIT with students, academics, teaching staff and practice educators.
Our Student Advocates/Advisors have been very busy, contributing to the Delphi Study as well as engaging in discussions about health and sustainability on Twitter: [http://nursus.eu/sustainability-nurse-education-twitter-chat-details](http://nursus.eu/sustainability-nurse-education-twitter-chat-details).

This resulted in a paper that has been accepted for publication in the Journal of Advanced Nursing called „Tweet if you want to be sustainable: A thematic analysis of a Twitter chat to discuss sustainability in nurse education“ so look out for this as it will be published in the next few months. Student Advisors in Esslingen have been very busy setting up a Facebook page so students across the partner countries (and wider afield) can engage in discussions about sustainability in healthcare and education (see details below).

**Publications**

Our first publication is now available online: Including sustainability issues in nurse education: a comparative study of first year student nurses’ attitudes in four European countries [http://dx.doi.org/10.1016/j.nedt.2015.11.005](http://dx.doi.org/10.1016/j.nedt.2015.11.005) Please note that access to the full text of this article will depend on your personal or institutional entitlements.

Once again, on behalf of the NurSus Team, I would like to wish you a very Happy New Year!

Professor Janet Richardson

**Transnational Meetings**

We are looking forward to our next Transnational meeting that will take place in Jaén (Spain) in April, photographs and a report of the meeting will be included in the next Newsletter.
As part of Activity 2, we have conducted an expert Delphi-survey in two rounds: April/May 2015 and July/August 2015. The Delphi approach is a method for structuring a group communication process for soliciting expert opinion, using two or more (survey) rounds. The main aim of the NurSus Delphi-study is to determine the opinion of experts about the most important sustainability knowledge, skills and competence to be included/achieved in nurse education. A total of 52 experts from different European regions and from diverse backgrounds participated in the first round of the Delphi survey. In the second round, the response rate was about 80% compared to the first round, which provided an adequate basis for our analyses. We briefly highlight some of the the key outcomes of the second round questionnaire in this newsletter.

Within the NurSus project, we define sustainability in health care as follows: ‘Designing and delivering health care that meets today’s health and health care needs of individuals and populations without compromising the ability of future generations to meet their own health and health care needs; this requires the provision of health care that recognizes and respects the dependence of our health on the earth’s ecosystems, without resulting in unfair or disproportional impacts within society’. In the second round survey, we asked the experts to grade this NurSus definition of sustainability in health care on a 6 point scale, where 1 means ‘very poor’ and 6 means ‘very good’. The average score on this question was 5 (see diagram below).

Based on this relatively high scoring, we feel that there is adequate support for using this definition in the NurSus project and the resulting education materials. Using this definition, we asked respondents how important they believe it is to integrate sustainability-related education into the nursing curri-
In the first NurSus expert survey, almost 90% of the participating experts thought that there will be an interest among nurse educators and/or nurse programme coordinators in this NurSus toolkit. In the second round, we asked the participating experts how sustainability-related education should be integrated into the nursing curriculum. The results showed that almost half of the respondents think that sustainability should be an integral part of relevant modules throughout the curriculum (i.e. it should be integrated into existing parts of the nursing programmes). Around 40% of the participating experts were supportive of a brief introduction module combined with the further integration of sustainability-related education throughout the existing curriculum. The remaining minority of respondents preferred one or two introduction modules which completely focus on sustainability in health care.

After reviewing the results of round 1, respondents were asked to rank their top 10 sustainability-related knowledge topics respectively skills. The associated results will feed into the development of education materials within the NurSus project.

**Next Steps**

We would like to thank all the participating experts for contributing to the NurSus project by participating in the expert Delphi-survey. The survey outcomes have been used in the formulation of the NurSus Sustainability Literacy and Competence (SLC) framework and will, subsequently, inform the development of relevant education materials for the NurSus toolkit. We are currently also preparing two associated journal paper submissions.

Dr. Maud Huynen
Activity 4

Testing the NurSus Learning Materials: A pilot test by Prof. Carmen Álvarez Nieto from University Jaén

The aim of Activity 4 is to test and evaluate the learning materials designed by each partner. In order to evaluate the learning materials for the NurSus TOOLKIT, we will use a modified and authorized version of the assessment tool Quality Learning Objects (COdA tool) (Fernández-Pampillón et al., 2012). The original version is a validated tool for evaluating educational materials (DEM) at university level. The original COdA tool has been validated for usability and reliability.

We have designed three modalities of the COdA tool, targeting five profiles: students, teachers, professionals, Delphi experts and technical experts in educational materials. The author of the original COdA tool (from Complutense University of Madrid, Spain) has supervised and validated the modality for each profile.

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>QUESTIONNAIRE MODALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>COdA Student</td>
</tr>
<tr>
<td>Teachers</td>
<td>COdA Teacher/ Professional/</td>
</tr>
<tr>
<td>Professionals</td>
<td>Delphi Expert</td>
</tr>
<tr>
<td>Delphi Experts</td>
<td></td>
</tr>
<tr>
<td>Technical Experts</td>
<td>COdA Technical Expert</td>
</tr>
</tbody>
</table>

During December 2015, we piloted and validated the tool. A set of materials developed by the University of Plymouth in the NurSus learning platform was used for this purpose. The objective of this pilot test was to check if the process regarding the materials and the questionnaire are suitable to carry out the final evaluation of the material itself.

The questionnaire consists of eight evaluation criteria for students, nine criteria for nursing teachers, health professionals and Delphi Experts and eleven criteria for Technical Experts. The first six criteria are educational while the rest are technological, so both aspects are relevant in the overall assessment of educational materials. The evaluation criteria are:

1. Coherence/understandability
2. Quality of the contents
3. Ability to generate learning
4. Adaptability
5. Interactivity
6. Motivation
7. Format and Design
8. Reusability (not included in the students questionnaire)
9. Portability
Activity 4

10. Interface accessibility (only included in the Technical Experts questionnaire)

11. Content Accessibility (only included in the Technical Experts questionnaire)

Each criterion, in turn, is broken down into different sub-criteria, so that the fulfillment of the criterion depends on the total score obtained in the same, yielding an extremely accurate assessment. Each sub-criterion is scored using a value from 0 to 10 (decimal values cannot be used). We have allocated a value of 0 when the sub-criterion is not reached and 10 if it is fully reached.

Using the results from the COdA tool we can calculate the RATIO; that is the ratio from TOTAL SCORE/ TOTAL ITEMS.

Firstly, the score for each criterion is calculated, dividing the sum of scores of all items of a criterion by the total number of items of that criterion. For example, suppose that criterion 1 has 4 items that are measured from 0 to 10. If the sum of the items is 36, the ratio is equal to 36/4=9.

Similarly, the total score (RATIO) of the material is calculated dividing the total sum of scores of all items between the number of total items.

Based on the ratio a quality categorization of the materials is proposed as excellent, very good, good, not enough and poor, as the following value ranges:

Ratio $\geq$ 9 Excellent
9 $>$ Ratio $\geq$ 8 Very Good
8 $>$ Ratio $\geq$ 6 Good
6 $>$ Ratio $\geq$ 4 Not Enough
4 $>$ Ratio $\geq$ 0 Deficient.

Results

4 nursing students, 3 health professionals, 3 nurse educators, 3 Delphi Experts and 1 Technical Expert from Spain, United Kingdom and Germany participated in the pilot process. The following table shows the score for each criterion and profile.

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>STUDENTS</th>
<th>TEACHERS</th>
<th>PROFESSIONAL</th>
<th>DELPHI EXPERTS</th>
<th>TECHNICAL EXPERT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Coherence/understandability</td>
<td>8,1</td>
<td>9,2</td>
<td>7,2</td>
<td>7</td>
<td>7,1</td>
</tr>
<tr>
<td>2. Quality of the contents</td>
<td>8,3</td>
<td>8,9</td>
<td>7,3</td>
<td>7,5</td>
<td>8,6</td>
</tr>
<tr>
<td>3. Ability to generate learning</td>
<td>8,9</td>
<td>9,3</td>
<td>7,1</td>
<td>7,5</td>
<td>8,8</td>
</tr>
<tr>
<td>4. Adaptability</td>
<td>7,7</td>
<td>7,5</td>
<td>7,3</td>
<td>6,2</td>
<td>8</td>
</tr>
<tr>
<td>5. Interactivity</td>
<td>8</td>
<td>8,3</td>
<td>7,4</td>
<td>6,3</td>
<td>8,4</td>
</tr>
<tr>
<td>6. Motivation</td>
<td>8,3</td>
<td>6,3</td>
<td>6,9</td>
<td>6,9</td>
<td>7,5</td>
</tr>
<tr>
<td>7. Format and Design</td>
<td>8,7</td>
<td>9,4</td>
<td>8,9</td>
<td>6,3</td>
<td>9,4</td>
</tr>
<tr>
<td>8. Reusability</td>
<td>10</td>
<td>9,4</td>
<td>8,3</td>
<td>8,8</td>
<td>10</td>
</tr>
<tr>
<td>9. Portability / Competences (in students)</td>
<td>8,9</td>
<td>10</td>
<td>9,3</td>
<td>8,7</td>
<td>7</td>
</tr>
<tr>
<td>10. Interface accessibility</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9,6</td>
</tr>
<tr>
<td>11. Content Accessibility</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,8</td>
</tr>
<tr>
<td>RATIO</td>
<td>8,5</td>
<td>8,9</td>
<td>7,5</td>
<td>6,9</td>
<td>8,6</td>
</tr>
</tbody>
</table>

QUALITY Very Good Very Good Good Good Very Good
Activity 4

All the profiles have scored the material as good or very good quality, although the group of teachers has given the better score.

**Reported Experience Regarding the Use of the Materials and Recommendations**

In general, all respondents considered that the materials are of high quality and interesting for nurses, but a lack of content and more interactive activities that give a general overview of the problem, for example videos, movies, etc. was reported. It will also be necessary to adapt the examples and activities to the local context, or to include generic examples.

The interface of the platform is an aspect commented on for improvement. A better system of surfing should be provided i.e. easily accessible and ordered, as well as platform usage guidelines.

**Next Steps**

The evaluation of the materials developed by each partner will be carried out between January and May 2016. The results will be analysed and prepared for the project report and also published as a scientific paper. The results will be used to develop the content strategy for the NurSusTOOLKIT.

Professor Carmen Álvarez Nieto

**Summaries of our Interim Reports are now available in English, German and Spanish on our website www.nursus.eu under the reports section.**
1. **What topics do you usually teach?**

Although I am employed as a researcher I still like to have the opportunity to teach. The majority of my teaching involves sustainability awareness sessions which we have embedded into all three years of our nurse and midwifery undergraduate training. We also work with the paramedics using the same materials. I then teach evidence based practice to student nurses in years two and three. I manage to raise some sustainability issues in all the teaching I do, encouraging students to look at the evidence and making their own decisions about how to manage resources at ward level.

2. **What specific expertise do you bring to the NURSus project?**

I have spent the latter part of my career managing projects in a range of areas from health planning and management to small project development. I also have a lot of experience in developing training materials for different audiences and have published two training manuals. The next stage of the project involves developing a wide variety of materials and I am looking forward to making my contribution.

3. **What do you enjoy most about being a member of the NURSus project?**

The NURSus team has a wide variety of skills and expertise and so it is always a joy to work with the team especially at the transnational meetings. I enjoy working with people who are both enthusiastic and committed to their jobs. I feel I am learning as much or more than I am contributing. The project is divided into specific activities which play to each groups strengths and it’s always fascinating to see how they approach their tasks. For a project manager it’s a joy that each group delivers on time!
4. **What do you do yourself to be more sustainable?**

Apart from recycling at home I have chosen not to eat meat as I am concerned about the damaging effect of methane which has a greater impact on the environment than carbon. I am also concerned about packaging because so many of the things and the food we buy are packaged inappropriately. I therefore try to shop for food in markets and take my own basket. I also try to reuse the packaging that is forced upon me by manufacturers.

5. **What is your sustainability tip?**

Be aware! It is so easy to go shopping with your own bag and to throw away inappropriate packaging. If we can all try to use as many things as possible more than once then we will reduce the waste we produce.

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**Keep checking www.nursus.eu for up and coming events and further project information!**

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**News from Esslingen Student Panel**

The NurSus student panel from Esslingen University has met three times since the group was founded last year. Besides talking about NurSus and our input and ideas regarding the project we’ve had some lively discussions about sustainability in our work environment as well as how to integrate sustainability into our daily lives. We also discuss politics and other current topics, for example the results of the World Climate Conference in Paris last year. It is also fun to talk about things with our English speaking Facebook group, which we share with student panel members from our project partners in Jaén and Plymouth. This broadens our range of topics and enlivens our discussions. We really enjoy being involved with such a committed team whilst at the same time doing good things for our environment!
Further Information

Stay updated and follow us

PROJECT PUBLICATIONS

Two project publications are available:

http://dx.doi.org/10.1016/j.nedt.2015.11.005


The NurSus project is also cited in an article written by Prof. Dr. Annette Riedel from the University Esslingen. The title of the article is „Sustainability as an Ethical principle: Ensuring its Systematic Place in Professional Nursing Practice“ published by Healthcare. It can be found at their Open Access Journal http://www.mdpi.com/search?q=riedel&journal=healthcare&volume=&page=&authors=&section=&issue=&article_type=&special_issue=&search=Search

MEDIA CORNER

Ulrich Grober’s book „Sustainability: A Cultural History“, published by Green Books, describes the origin and history of sustainability and its importance for us today. It is also available in German, „Die Entdeckung der Nachhaltigkeit“, published by Kunstmann Verlag.

In an interview on German radio, the climate expert Prof Dr. Hans Joachim Schellnhuber, talked about climate change and its impact on the environment and the people. The podcast of this interview (in German) can be found here under: www.swr.de/swr1/bw/programm/leute/klimaforscher-hans-joachim-schellnhuber/-/id=1895042/did=16848938/nid=1895042/4x4lr6/index.html

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