Symposium: *To develop and pilot a European simulation based learning educator preparation programme.*

A collaborative project (NESTLED) supported by the EU Lifelong Learning Programme.

- *What is NESTLED? An overview and background to the NESTLED Project and the International Collaboration of the Project Team.*

- *The Story So Far. Methodology of the NESTLED Project and the individual stages of the EU supported project which commenced in September 2013.*

- *Results and evaluation of the piloted European simulation based learning*

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NESTLED project

Presenters: Senior Lecturer Rikke Buus Bøje

Senior Lecturer Tina Hartvigsen

VIA University College, Denmark

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Collaboration in growth

Since 2011 VIA UC Denmark, Metropolia University of Applied Sciences Finland and University of Huddersfield United Kingdom have shared an interest in simulation-based learning in nursing Education.

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– the Next step…

The present collaboration on the NESTLED project emerged from litterature review with the purpose of defining competences needed for educators when using simulation-based learning.

What do we know about educator´s competences?

Literature Review:

- Knowledge
- Skills and behaviors
- Comportment

And NESTLED
"was born"

What is NESTLED?

Nurse Educator Simulation Based Learning Development

- NESTLED project is a development and research project within the EU programme; Leonardo – Transfer of Innovation. The project started 2013 and will continue until 2015.

- The aim is to transfer and develop existing knowledge into other contexts

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Purpose

The purpose of NESTLED is to develop educator competency to facilitate the use of simulation-based learning in nurse education and test transferability and development across providors from a number of EU countries

Members with different skills and competences

How to make an International collaboration work?

- **Enablers:**

- Strong and different professional profiles

- Different cultural background

- Different organisations and strategic agendas

- **Barriers:**

- Strong and different professional profiles

- Different cultural background

- Different organisations and strategic agendas

What is extremely important?

Kaffe

Kaffe

Kaffe

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NESTLED Methodology and Phases

Presenters:

Senior Lecturer Leena Hannula

Senior Lecturer Jaana-Maija Koivisto
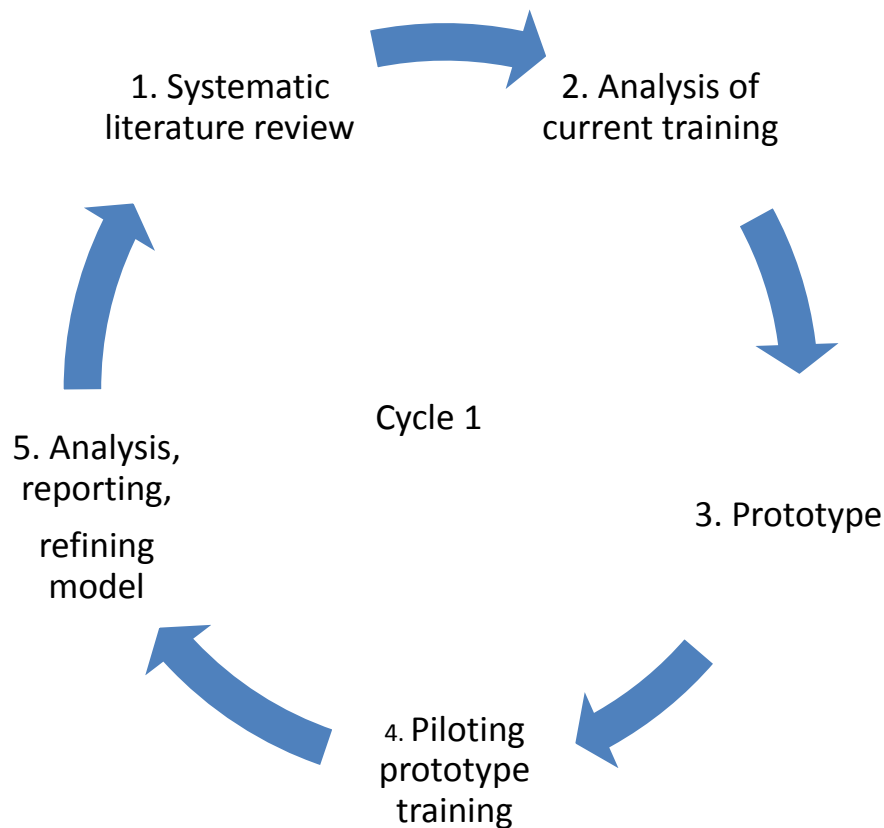
Senior Lecturer Ari-Pekka Åker

Principal Lecturer Leena Rekola

Head of Health Technology Päivi Haho

Helsinki Metropolia University of Applied Sciences

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Phases of development of the simulation educator model using **Design-Based Research**

1. Systematic literature review

2. Analysis of current training

Cycle 1

3. Prototype

4. Piloting prototype training

5. Analysis, reporting, refining model

Project outline and the six work packages of the NESTLED Project (2013-2015)

- Following the decision of EU funding by the Lifelong Learning Programme, the project started officially with a 'kick-off' meeting in September 2013

- The work was divided in 6 separate work packages (WP), with project partners taking a lead of different work packages

- We worked during on-line meetings (via Lync and Skype for Business), face-to-face meetings, workshops and faculty training sessions and shared the work in conducting literature reviews and writing articles

- All work is documented in meeting minutes and time-sheets

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Education and Culture DG
Lifelong Learning Programme

WP1 -Analysis of the literature and current simulation educations

- In WP1 (WP lead Huddersfield) we:
- Reviewed the current literature of the competencies of simulation educators by the method of systematic literature review (Topping et al. 2015) and found "Precursor competencies for delivering simulated learning in nursing programs" that were named:
- Required knowledge underpinning simulation, skills and behavioral competencies to deliver simulation, skills to support students and to support debriefing and/or assessment as well as educator Comportment or educator qualities needed to effectively deliver Simulation-Based Education.
- "What preparation or training was identified to develop educator capabilities in simulated learning":
- We described training linked to knowledge, skills and behaviors and educator qualities or comportment

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WP1 continued

- We reviewed and refined the existing simulation education (Huddersfield module "Teaching and learning using simulation" compared with Metropolia, VIA models for simulation education) by reviewing content, modes of delivery, teaching and learning strategies, materials and equipment

- The outcome of WP1 was a module specification and agreed operational plan for delivery of a pilot programme.

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WP 2 Operationalization
WP lead Metropolia

- The aim of WP2 was to operationalize the module into a deliverable package, provide any specific training needs of 'trainer' faculty and adapt and develop educational materials for piloting in DK.

- We developed a prototype module based on a systematic review of the educator competencies and training of educators (Topping et al. 2015) and synthesis of recognised and available training of teachers using simulation education in United Kingdom, Finland and Denmark to produce a framework for a prototype of training educators who use simulation-based learning.

- During WP2 e also developed a communication plan and a risk management plan for the project

WP 3 Pilot delivery WP lead VIA

- The aim of WP3 will be to prepare to pilot the module in order to test difficulties, identify challenges associated with transfer, operationalization and evaluate student faculty satisfaction and learning.

- We prepared to pilot the prototype training conducted in 2014 in Denmark with Huddersfield team participating in the training

Testing the prototype

- Denmark (August 2014)
    - Four day course
    - 11 participants, lecturers or senior lecturers
    - 3 members of the NESTLED were facilitating the module + 2 technicians from Laerdal.

WP4 Module delivery WP lead Metropolia

- The NESTLED Module delivery was the actual transfer of knowledge to be tested into three different national contexts in VIA UC, DK , Metropolia FIN and Tallinn Health Care College, EST.

- Faculty delivering the module were the persons who participated in the Workshop in Huddersfield (WP 2) and they delivered the module in their own national context.

- The NESTLED module consisted of lectures, tutorials, the use of electronic resources, participants preparation, writing individual assignments and assessment of participants.

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Testing the Module

- Finland (22.1.2015 – 20.4.2015)
  - Five day course spread over several weeks.
    - 2 assignments in between:
      - Planning, delivering and evaluating SBL in participants own organization
      - Embedding SBL into the curriculum in participants own organization
  - 15 participants: 12 lecturers or senior lecturers, 2 nurses, 1 emergency service manager
  - 3 members of the NESTLED were facilitating the module

Testing the Module

- Tallinn (April 2015 – 4.9.2015)
  - Five day course spread over several weeks.
    - 2 assignments in between:
      - Planning, delivering and evaluating SBL in participants own organization
      - Embedding SBL into the curriculum in participants own organization
  - 8 participants: lecturers or senior lecturers
  - 2 members of the NESTLED were facilitating the module

WP 5 Evaluation
WP lead Huddersfield

- The aim of WP5 is undertake a systematic process and summative outcome evaluation based on Kirkpatrick´s model (2006)

- This model captures participants´ reaction, learning, changes in behavior and real world results generated through engagement in the programme.

- This WP run continuously over the two years so all aspects of learning was captured.

WP6 Dissemination
WP lead VIA

- The aim of WP6 was to ensure the widest dissemination to range of audiences of learning generated from transfer and cascade of a "train the trainers" model for simulated learning in nurse education.

- A NESTLED project website was constructed to describe the project and present news and interim and final reports.

- The project was disseminated via national and international conferences and publications

- Local events were held in DK, UK and FIN to disseminate good practice and inform Healthcare providers, commissioners and students of the development.

- A booklet including the educational materials for the NESTLED Module will be produced

- Laerdal will contribute to dissemination by sharing best practice results within their global network.

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Experiences

- Simulation
  - Learning by doing
  - Learning by others are doing
    - 20-25 different and creative tasks to evaluate

- Course
  - Time
  - 20-25 different and creative tasks to evaluate

- Learning outcome?

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Experiences

- Trainers opinions
  - Adoption and internalisation of issues requires time
  - Experiential learning has a big role
  - The progress of trainees is fast and efficient
    - The level of discussions
    - Performances
    - Comments
  - Trainers are developing themselves all the time
  - Will develop and change simulation as a teaching method

Experiences

- The trainees' experience
    - Initially despair confusion and embarrassment
    - Understanding and learning experiences
    - The ability to apply and the courage to try

    - "I think all my teaching again thanks to this"
    - " This changed my pedagogical way of thinking"
    - "I'm going to renew my organizations training system"
    - "I don´t see any rights and wrongs in simulation anymore. I see only learning opportunities.

NESTLED Evaluation & Expected Results

Andrew Bland, Andrew Sutton & Stephen Prescott

Senior Lecturers (Adult Nursing)

University of Huddersfield, UK

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Expected Results

- A model for Educators using Simulation-Based Learning, applicable to different European Nursing Programmes.

- An online booklet including education materials available via the NESTLED webpage.

- Three academic published papers:

1. Nurse Education Today (2015)

- Towards identifying nurse educator competencies required for

- simulation-based learning: A systemised rapid review and synthesis

- Anne Topping [a], □ , Rikke Buus Bøje [b,1], Leena Rekola [c,2], TinaHartvigsen[b,1], Stephen Prescott [d,3],

- Andrew Bland [d,4], Angela Hope [e,5], Paivi Haho [c], Leena Hannula [f,2+]

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Expected Results (Continued)

- A second paper (**Testing a Model for Educators using Simulation-Based Learning – a European Collaboration)** is ready for submission.

- An expanded network of educators in both national and international contexts.

- We have commenced an exciting collaboration with Laerdal to develop their educators and to continue refining and researching the NESTLED Model.

- Individual partners are developing the NESTLED Model and expanding networks within their own and local education environments.

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Please check out our website (www.nestled.eu)

Ethics and Consent

- Application for ethical approval for the evaluation has been obtained in line with the institutional requirements of each partner.

- The evaluation is led by the University of Huddersfield, and the detailed study protocol and data collection instruments have been approved by the School of Human and Health Sciences 'School Research and Ethics Panel' at the University.

- Study governance, data management and storage will be in line with partner institutional protocols related to data protection and integrity.

- All "student" participants in the pilot and testing of the NESTLED product will be invited to participate in the evaluation.

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Evaluation

- The Kirkpatrick model.

- First created by Donald Kirkpatrick in 1954 as the subject of his PhD dissertation (Kirkpatrick Partners, 2014).

- Published in 1959 in US Training and Development Journal.

- Updated in 1975 and 1994.

- Four levels.

The Kirkpatrick Model

Adapted from Kirkpatrick Partners (2014)

LEVEL 4 – RESULTS	To what degree targeted outcomes occur as a result of the training event and subsequent reinforcement
LEVEL 3 – BEHAVIOUR	To what degree participants apply what they learned during training when they are back on the job
LEVEL 2 - LEARNING	To what degree participants acquire the intended knowledge, skills, attitudes, confidence, and commitment based on their participation in a training event
LEVEL 1 – REACTION	To what degree participants react favourably to the training

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- **Level 1 (Reaction)**
  - Post course questionnaire (Student).
- **Level 2 (Learning)**
  - Pre and post course questionnaire (Student).
  - Focus group (Student).
- **Level 3 (Behaviour)**
  - Post course questionnaire (Student).
  - Post course questionnaire (Organisation).
- **Level 4 (Results)**
  - Post course questionnaire (Student).
  - Post course questionnaire (Organisation).

Questionnaires

- Likert Scale with some free text responses.
- Completed in English or native language (free text sections).
- Pre Course Questionnaire:
  - Emailed out to all participants along with instructions two to three days before the course. Opportunity is given at the start of the course for those who have not completed the questionnaire to do so.
- Post Course Questionnaire:
  - Emailed out four weeks post course.
- Pre and Post Questionnaires 'paired':
  - Unique ID.
- Organisation Questionnaire..
- Questionnaires returned to Evaluation lead.

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Focus Group

- Final session of the course.
- Native language if required and translated locally.
- Video recorded.
- Sent to Evaluation Lead for transcription.
- Thematic analysis.

- 10 Participants took part in the pilot with 3 facilitators in Randers, Denmark between August 18th – 21st 2014

- 8 Students completed the Pre course questionnaire and 10 students completed the post course questionnaire.

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Results of Data Collection
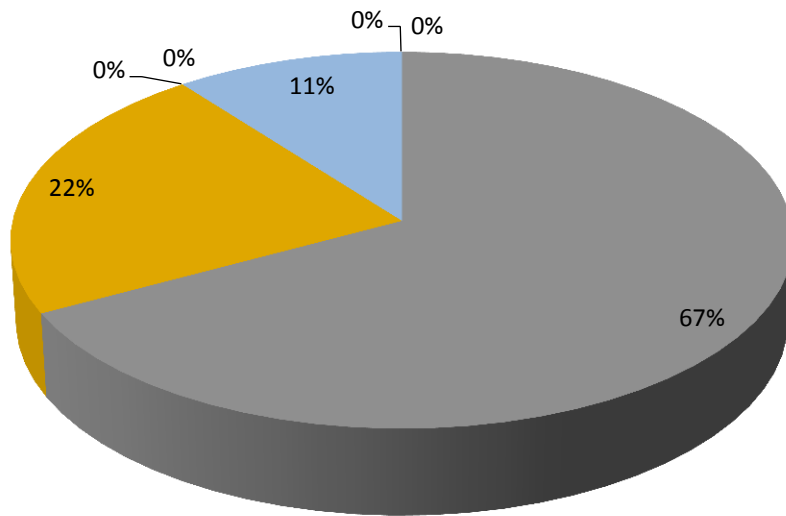
The closed questions utilised the following Likert Scale

Very Confident				Not at all confident		
5	4	3	2	1	Do Not Know	N/A

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Pre Question 2
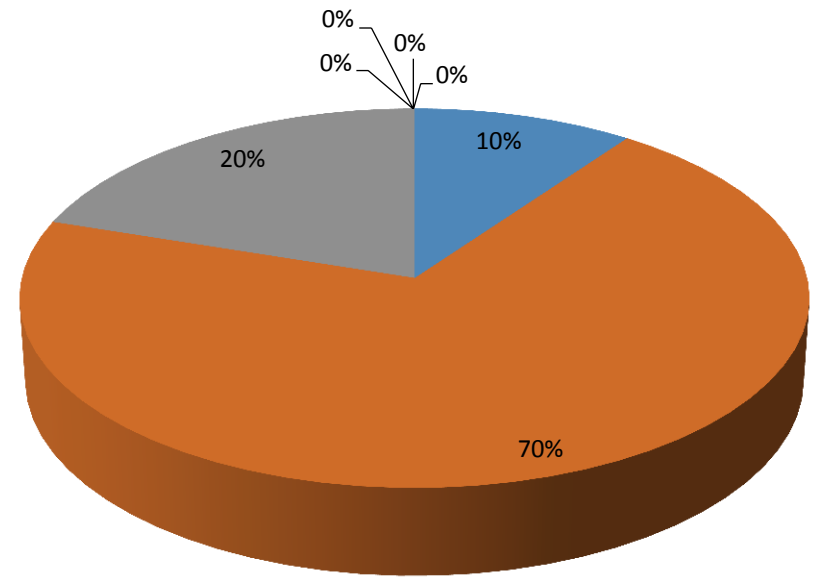**How confident are you that you understand how simulation-based learning could be integrated into curricula?**

5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

0% 0%
0% 0%
11%
22%
67%

Post Question 2
How confident are you now you have completed the course that you understand how simulation-based learning can be integrated into curricula?
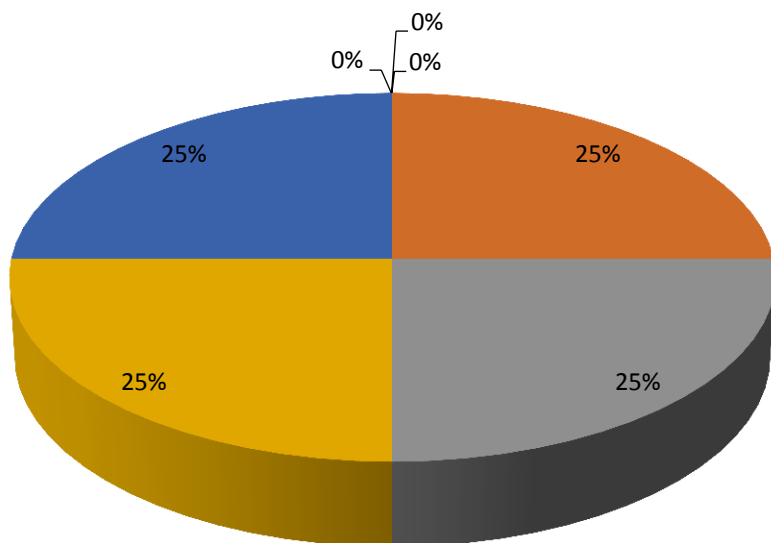
5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

0% 0%
0% 0%
10%
20%
70%

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Pre Question 6
How confident do you feel using simulation equipment e.g. high fidelity simulators?

Legend: 5 4 3 2 1 DNK N/A

- 0%
- 0%
- 0%
- 25%
- 25%
- 25%
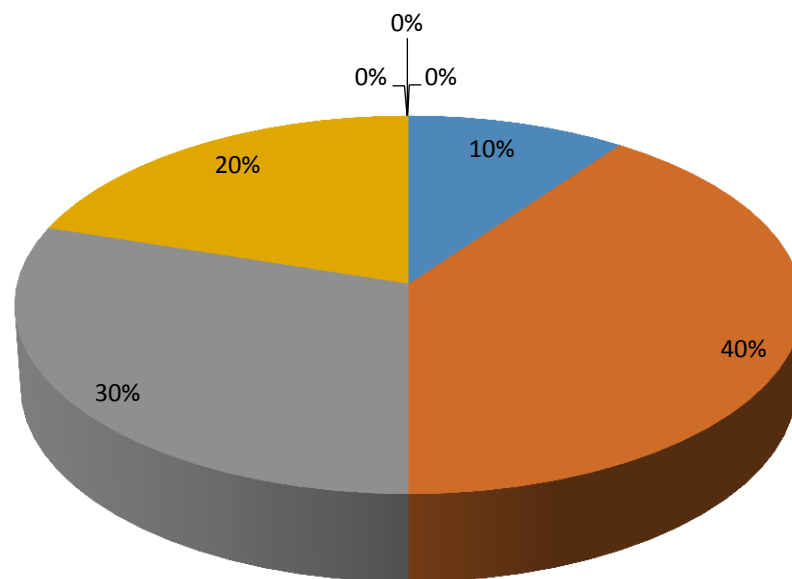- 25%

Post Question 6
How confident do you feel now you have completed the course about using simulation equipment e.g. high fidelity simulators?

Legend: 5 4 3 2 1 DNK N/A

- 0%
- 0%
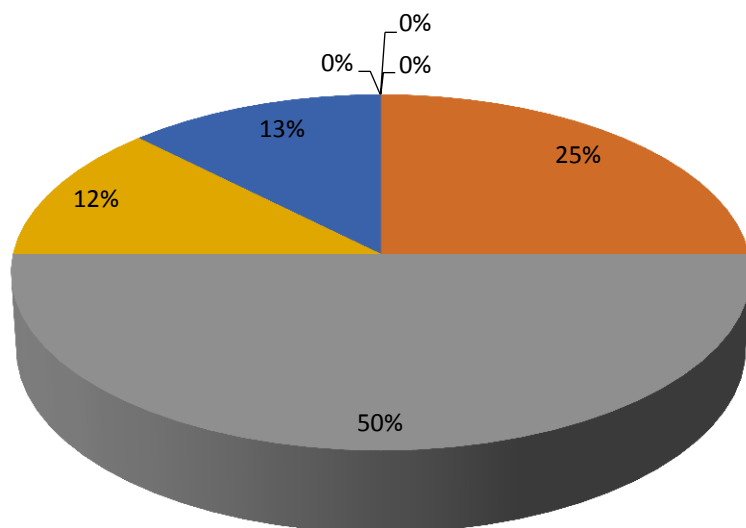- 0%
- 10%
- 40%
- 30%
- 20%

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Pre Question 12
How confident do you feel giving students' negative feedback concerning their performance when facilitating simulation-based?
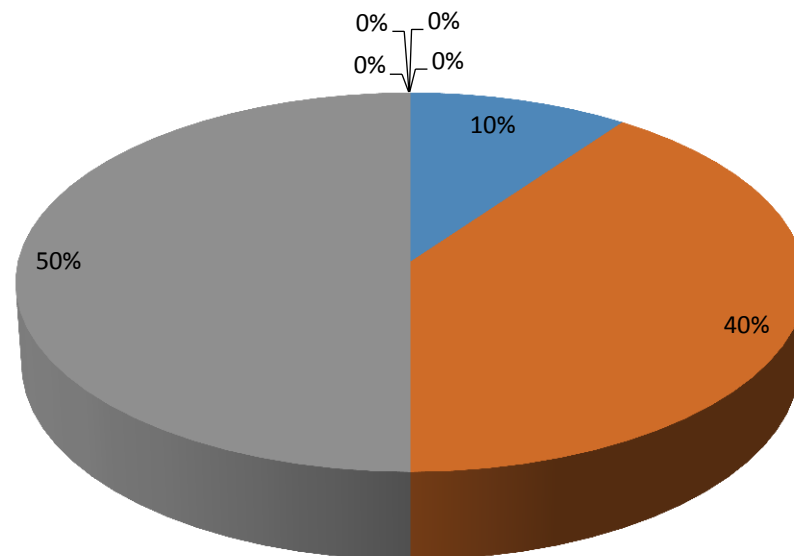
5 4 3 2 1 DNK N/A

0%
0% 0%
13%
12%
25%
50%

Post Question 12
How confident do you feel now you have completed the course giving students' negative feedback concerning their performance using simulation-based learning?

5 4 3 2 1 DNK N/A
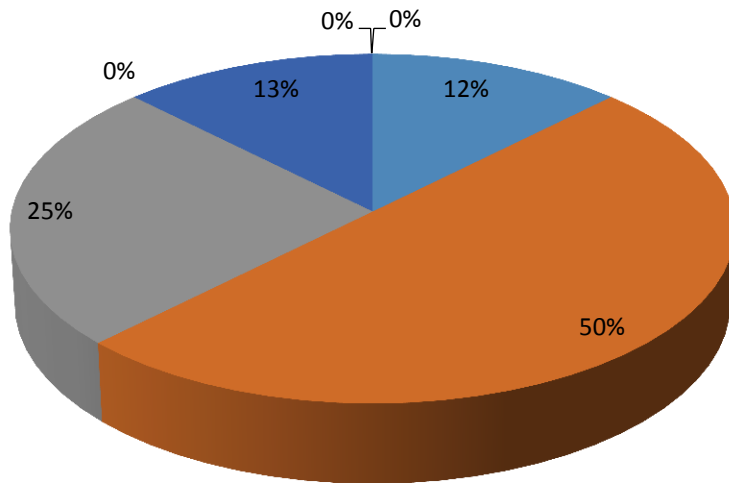
0% 0%
0% 0%
10%
40%
50%

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Pre Question 18
How confident do you feel about your ability to link theory and practice together when using simulation-based learning?
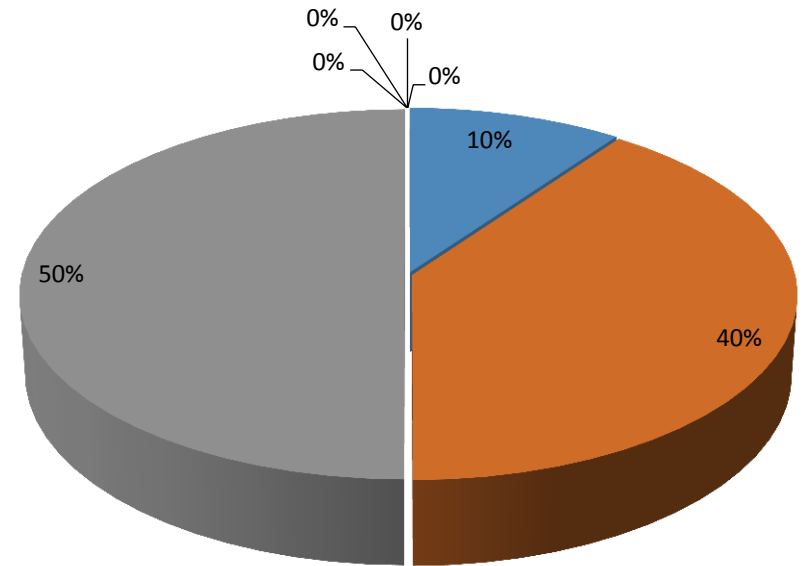
Legend: ■ 5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

- 12%
- 50%
- 25%
- 13%
- 0%
- 0%
- 0%

Post Question 18
How confident do you feel now you have completed the course about your ability to link theory and practice when using simulation-based learning?

Legend: ■ 5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

- 10%
- 40%
- 50%
- 0%
- 0%
- 0%
- 0%

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Pre Question 24
Please rate your knowledge associated with simulation-based learning
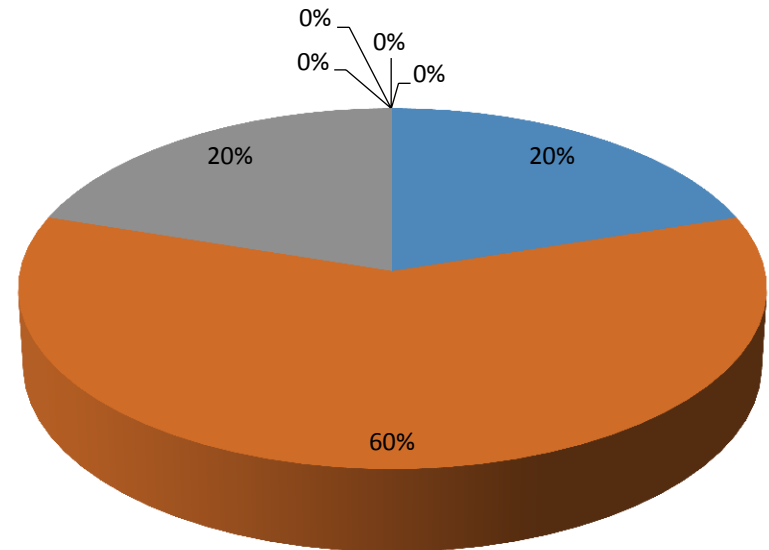
Post Question 24
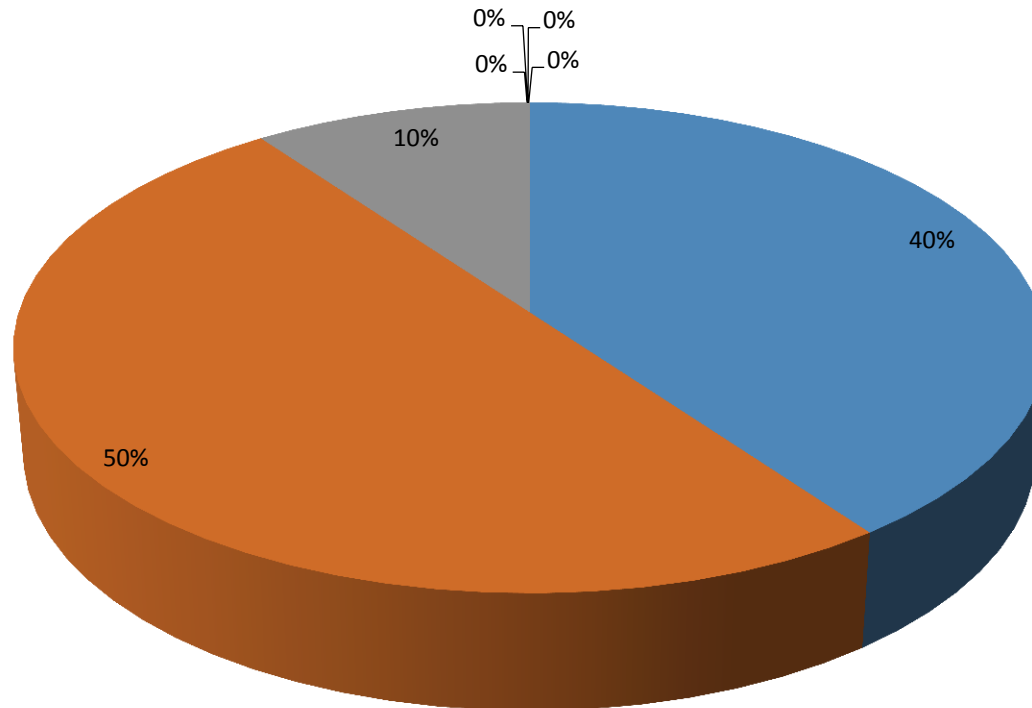**Please rate your knowledge associated with simulation-based learning**

■ 5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

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Post Question 27
Having <u>completed</u> the course do you feel you have achieved the goals you hoped to achieve from undertaking the course?

■ 5 ■ 4 ■ 3 ■ 2 ■ 1 ■ DNK ■ N/A

0% — 0%
0% — 0%
10%
40%
50%

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Open questions
Pre-Questionnaire

Do you feel you have any difficulties communicating with particular individuals or groups of students (e.g. age, gender, please specify and comment)

I feel fairly confident communicating with students

Not specific. But when having group session in SBL sometimes the groups does not work well together. To get them to work well together AND learn by SBL I find difficult.

I find it real difficult when a team/group is having problems on a personal level within the group. This is not related to age, gender or other characteristics of the members in the team/Group - I assume it could be due to the fact that they do not know how to put aside personal conflicts when working as a professional.

When students have a defence against learning simulation based learning e.g. Projection - blame the setting, the situation, the group , the teacher, "the world" for the problems because of own fear.

It can be a challenge to communicate with a group, where the students background knowledge is extremely various.

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Open questions
Pre-Questionnaire

23. Can you identify any aspects of simulation-based learning that you find difficult?

I find it difficult to debrief - often questions and assessment take overhand and my intended debriefing end up being an assessment instead. Difficult to make simulation within the time I have for preparation.

The role as a facilitator can be difficult when persons/groups does not want to do SBL/or does not want to do the specific SBL together.

Making a realistic scenarios, since I do not have much clinical practice my self.

I think that technology will be one of my biggest challenges. To trust the technology when standing with a group of students.

The time and resources for debriefing. Updated professional experience - I think all teachers, who work and develop simulation must have a updated professional knowledge. That will give credibility.

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Open questions
Post-Questionnaire

23. Now you have completed the course can you identify any aspects of simulation-based learning that you will continue to find difficult? (Please list or comment)

I will still find it difficult to give negative feedback, always a part which I should work with. It is also difficult to have the full view over the situation and I will have to practice using video recording during simulation, it is difficult to make the students argue for their actions, to be persistent in arguments for actions, i often find that i let them go too easy

Everything is still difficult;-) but the course provided literature background and arguments related to simulation

How much to say in the briefing, facilitating true out the simulation, and planning the debrief

I will have to work on high fidelity simulations

Time to spend on the simulation and preparation for the scion. 2. College with nursing identity in a time where it is academic competence is highlighted. Because if will effort a background of years as a nurse to navigate in the simulation. 3. to find college who have the hard with them i simulation the have to bourn for it.

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Some themes:

- *Have more focus*

- *Feeling good that you can make good simulation without technology.*

- *You cannot do this on your own*

- *Pay more attention than just to the scenario, briefing and debriefing is so important*

- *How important the debriefing is.*

- *Debriefing insecurity.*

- *Don't use it all the year round*

- *People from clinical practice coming in to assess students*

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References

Kirkpatrick Partners (2014). 'The Kirkpatrick Methodology. Retrieved from
http://www.kirkpatrickpartners.com/OurPhilosophy/tabid/66/Default.aspx

Topping, A., et al., Towards identifying nurse educator competencies required for simulation-based learning: A systemised rapid review and synthesis, Nurse Educ. Today (2015), http://dx.doi.org/10.1016/j.nedt.2015.06.003.

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