Co-creation of interprofessional simulation for advanced home care

Samuel Edelbring[1,2] , Cecilia Wallin-Bentrari[1], Annica Kihlgren[2], Jessica Höglander[1], Anna Karin Andersson[1], Leila Asri[2,] Tiina Luukkanen[2,3]

[1] Mälardalen University, Sweden
[2] Örebro University, Sweden
[3] Kumla municipality home health care

Erasmus+

ACTIVATE

Collaboration supported by European Erasmus+ project ACTIVATE

Germany: University of Münster;
Leipzig University of Applied Sciences
The Netherlands: University of Twente
Sweden: Örebro University;
Mälardalen University;
Home care centre, Kumla municipality

co-funded by the european union, grant no. 2024-1-DE01-KA220-HED-000255951

EDUCATION OF HEALTH PROFESSIONALS FOR THE 21ST CENTURY:
A GLOBAL INDEPENDENT COMMISSION

THE LANCET

Health professionals for a new century: transforming education to strengthen health systems in an interdependent world

Julio Frenk, Lincoln Chen*, Zulfiqar A Bhutta, Jordan Cohen, Nigel Crisp, Timothy Evans, Harvey Fineberg, Patricia Garcia, Yang Ke, Patrick Kelley, Barry Kistnasamy, Afaf Meleis, David Naylor, Ariel Pablos-Mendez, Srinath Reddy, Susan Scrimshaw, Jaime Sepulveda, David Serwadda, Huda Zurayk*

Executive summary

Problem statement

100 years ago, a series of studies about the education of health professionals, led by the 1910 Flexner report, sparked groundbreaking reforms. Through integration of modern science into the curricula at university-based schools, the reforms equipped health professionals with

Redesign of professional health education is necessary and timely, in view of the opportunities for mutual learning and joint solutions offered by global interdependence due to acceleration of flows of knowledge, technologies, and financing across borders, and the migration of both professionals and patients. What is clearly needed is a thorough and authoritative

Lancet 2010; 376: 1923–58

Published Online November 29, 2010 DOI:10.1016/S0140-6736(10)61854-5

See Comment pages 1875 and 1877

*Joint first authors

Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., ... & Zurayk, H. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The lancet*, *376*(9756), 1923-1958.

Lancet commission on 21st-century health system challenges

The highly influential Lancet Commission on health professions education:

- Need to reform healthcare education to better address health system challenges
- The Commission highlighted fragmented professional education in disciplinary “silos”,
- Weak alignment between educational institutions and healthcare practice
- A hospital focus that did not acknowledge care needs in community and home-based settings.

The Lancet commission called for interprofessional education and stronger integration between education and healthcare practice (Frenk et al., 2010).

Active interprofessional education

Simulation-based learning contributes to active learning and has a tradition in interprofessional education

- Acute scenarios in hospital settings often focused nly on Medicine and Nursing students, not often including rehab-oriented professions (occupational therapy, physiotherapy) or community based context

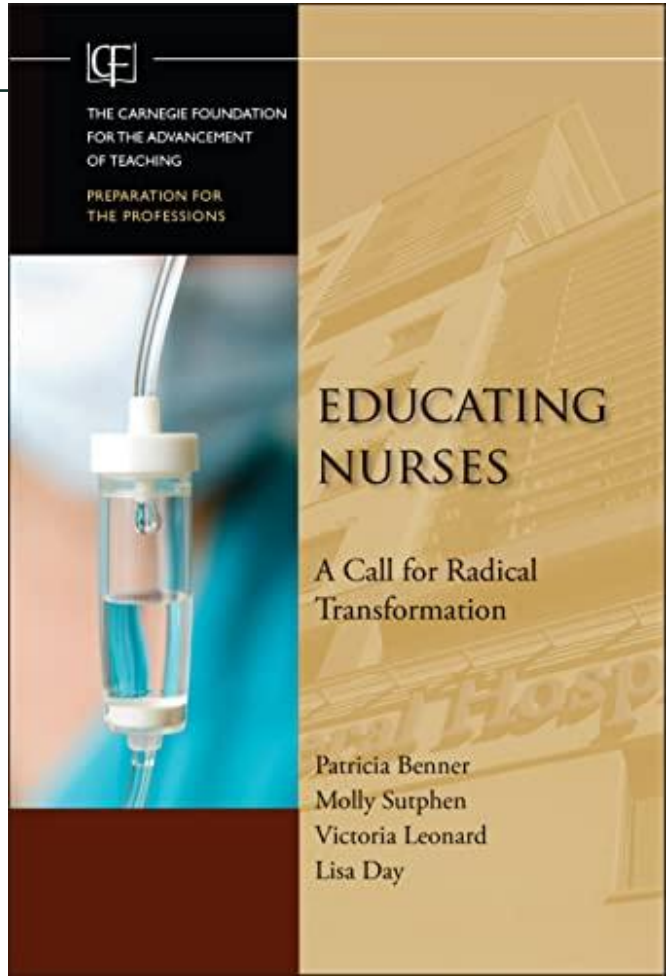
Gormley, G. J., & Fenwick, T. (2016). Learning to manage complexity through simulation: students' challenges and possible strategies. *Perspectives on medical education*, 5(3).

Hayes, C., Power, T., Forrest, G., Ferguson, C., Kennedy, D., Freeman-Sanderson, A., ... & Lucas, C. (2022). Bouncing off each other: Experiencing interprofessional collaboration through simulation. *Clinical Simulation in Nursing*, 65.

O'Hare, S., Kajamaa, A., Conn, R., & Gormley, G. (2025). SimLab: an intervention to promote expansive learning and organisational change in team-based emergency care simulation. *Instructional Science*, 53(6).

15 yrs ago: Education–practice gap

Benner et al. 2009: theory practice gap in nursing education. Calls for a radical change towards education for clinical reasoning in practice.



Education–practice gap still persist

Students perceive difference between academic and workplace cultures making transition to clinical practice difficult (Atherley et al., 2019)

- Student perceive gaps and sometimes making collaboration difficult
- excessive amounts of theoretical content that lacked any direct connection to clinical practice

medical education in review

Beyond the struggles: a scoping review on the transition to undergraduate clinical training

Anique Atherley,[1] Diana Dolmans,[1] Wendy Hu,[2] Iman Hegazi,[2] Sonita Alexander[3] & Pim W Teunissen[1,4]

CONTEXT The transition to clinical training within medical school is often seen as a struggle and students remain in distress despite numerous efforts to minimise threats.

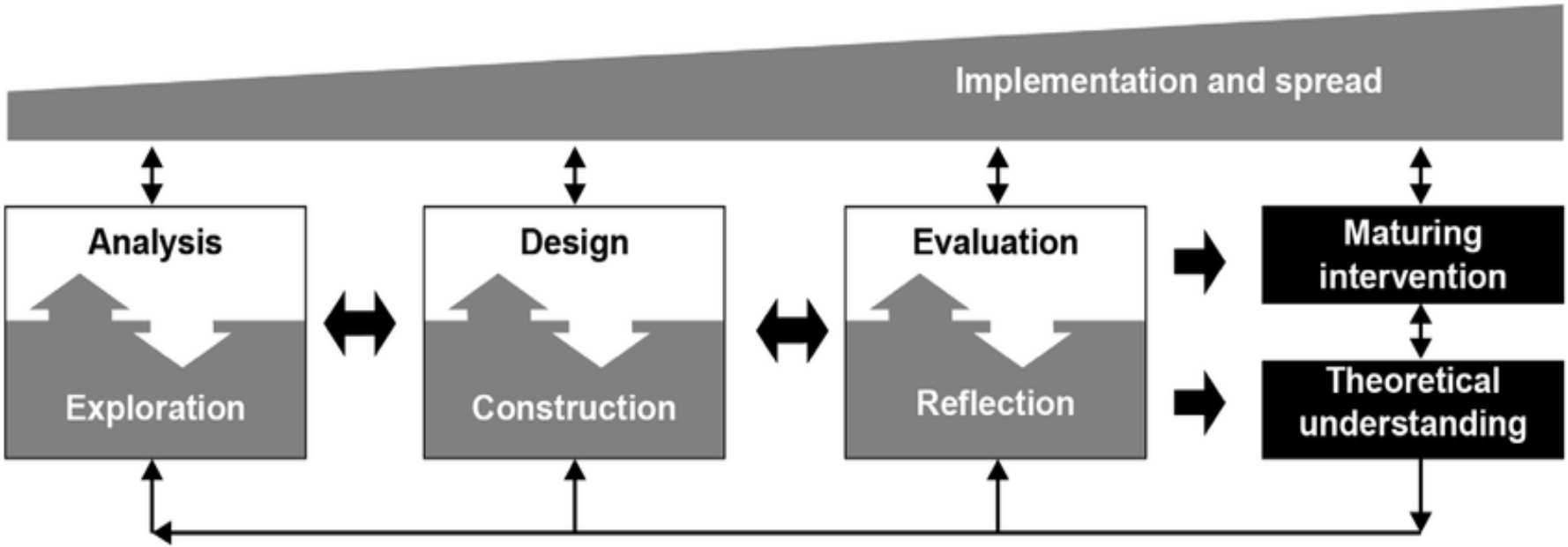
problem' and 'a struggle'. Our analysis found that researchers in medical education conducted studies on the transition to clinical training from three conceptual perspectives:

Atherley, A., Dolmans, D., Hu, W., Hegazi, I., Alexander, S., & Teunissen, P. W. (2019).
Beyond the struggles: a scoping review on the transition to undergraduate clinical training. *Medical Education*, 53(6).

Aims

- The aim of this study is to explore how *active learning* in the context of *home care* can be co-created between healthcare practice and educational institutions and enacted *interprofessionally* through simulation-based learning.

The designed based research approach



A generic model for conducting design-based research in education (McKenney & Reeves, 2021)

McKenney, S., & Reeves, T. C. (2021). Educational design research: Portraying, conducting, and enhancing productive scholarship. *Medical education*, *55*(1)

Co-creation process

- Identified problem: geriatric home care & interprof. collaboration
- Established partnerships
- Planned for two patient scenarios relating to palliative care and frail elderly
- Academic staff reviewed knowledge on palliative care, frail elderly, feedback practices & interprofessional collaboration in geriatric context
- Academic staff adapted scenarios to educational conditions
- Collected data with questionnaires, focus groups and field notes

Clinical practitioners identified ”Hans” & ”Ulla” from their everyday clinical practice

Hans - in early palliative care

Ulla - frail elderly with multiple problems

Adapting the scenario to the simulated setting

Enacting the Scenario

Main phases in the care setting

- team preparation (group)
- scenario enactment (one/profession+patient)
- Observers followed the scenario via livestream with structured observation tasks.

Structured debriefing

- Reflection/debriefing was a core component of the design.
- Debriefing using an established model to structure the debriefing (PEARLS)
- Focus on communication, decision-making, interprofessional reasoning, and teamwork.

Evaluation with questionnaire, focus groups and field notes

I was adequately prepared in terms of knowledge for today's simulation

Today's learning objectives were presented clearly

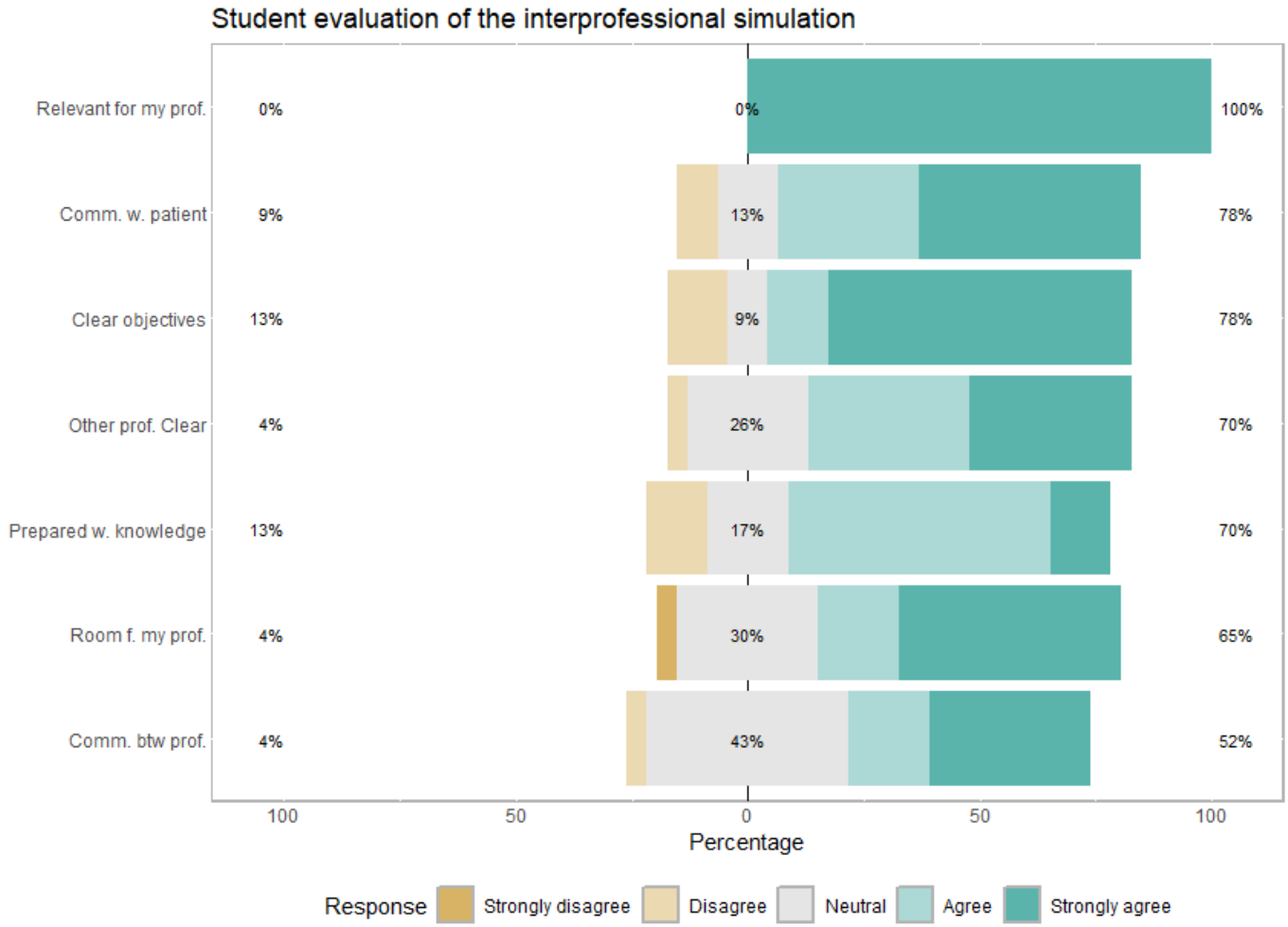
Communication between healthcare professions was reflected in the simulation

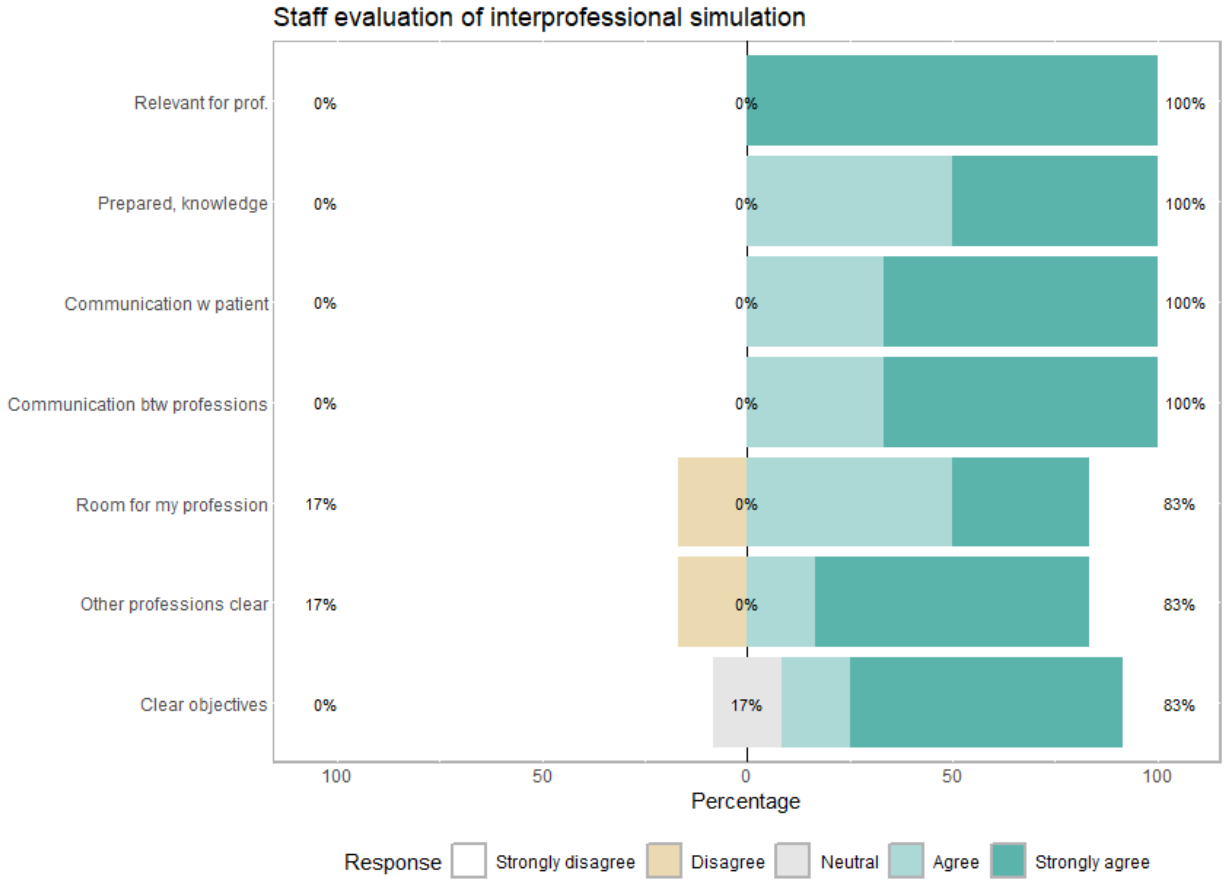
Communication with the patient was good

The responsibilities of the other professions became clear to me

My profession was given sufficient space in the simulation

The simulation was relevant to my future professional role


Student evaluation of the interprofessional simulation
Relevant for my prof.
Comm. w. patient
Clear objectives
Other prof. Clear
Prepared w. knowledge
Room f. my prof.
Comm. btw prof.
0%
9%
13%
4%
13%
4%
4%
0%
13%
9%
26%
17%
30%
43%
100%
78%
78%
70%
70%
65%
52%
100
50
0
50
100
Percentage
Response
Strongly disagree
Disagree
Neutral
Agree
Strongly agree


Staff evaluation of interprofessional simulation
Relevant for prof.
Prepared, knowledge
Communication w patient
Communication btw professions
Room for my profession
Other professions clear
Clear objectives
0%
0%
0%
0%
17%
17%
0%
0%
0%
0%
0%
0%
0%
17%
100%
100%
100%
100%
83%
83%
83%
100
50
0
50
100
Percentage
Response
Strongly disagree
Disagree
Neutral
Agree
Strongly agree

Student voices

Very good!! Reflected how reality can be
It's much more time-efficient to spend four hours here than, say, four weeks reading a book — actually getting to practice it in a practical, hands-on way.
I also think this is something we'll carry with us. I don't think we'll forget it.

- Students reported clear educational benefits from the simulations.
- Increased understanding of interprofessional teamwork compared to lectures alone.
- Enhanced readiness for clinical practice.
- Improved ability to manage stress and uncertainty in complex care situations.

Healthcare staff

- The simulations were also highly valued in professional practice.
- Strong engagement and emotional involvement among staff.
- High relevance for continuing professional development
- The simulation provided insights into how other professions operate in the home care

Example quote:

I do know quite a lot about what you do, but not exactly.

Teachers' reactions and field notes

- Created improved integration between educational programmes and clinical practice.
- Students need support to collaborate in practice (in team preparation)
- Seniour students were more structured and secure in their actions – junior more hesitant
- The participants and observers experienced partly different versions of e.g. patient communication
- The teaching staff need to handle unexpected turns in the scenario action

Sociomaterial aspects

The co-creation occurred in the intersection of different cultures demaning extra care in organisation and design

- Academy – workplace
- Academic ones: four different professional knowledge-domains and varying professional-paradigmatic and workplace cultures and structures

The material conditions to conduct scenarios

- Aimed for low-budget, easy-to-implement model

Equipment and technical needs

- A home-like environment with everyday items
- Meeting room used for team preparation, observation and debriefing.
- One-way streaming for observers
- A run-sheet with scheduled tasks

Technical requirements

- Digital equipment for sound, video, and livestreaming to observers.
  - Conference mike/speaker
  - Web camera
  - Laptop with Zoom

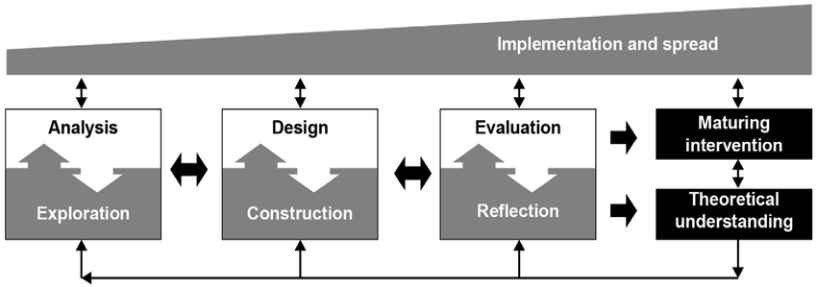
Wikimedia commons, User:Kskhh

Require insight into simulation-based learning as an educational approach

- Education in simulation-based learning as part of the preparation
- An emphasis on supporting learning based on experience rather than lecturing students
- An established debriefing methodology provides a structure for the teaching staff facilitating the debriefing

Simulation in home context as a clinical arena

Summary



- Co-created, simulation-based activities resulted in relevant learning for both students and home care staff
- Generated valuable experiences of collaboration between academia and practitioners within home care context.
  - An iterative negotiation occurred between student needs, clinical authenticity and research-based knowledge (palliative care, frail elderly) throughout the process.
- We gained valuable experiences towards a model to implement active learning of home care contexts in interprofessional health professions education
  - Home care context
  - Including a holistic perspective on health including students adding perspecives beyond a biomedical focus.