

Pedagogical innovation in nursing education: reflection on the challenges and opportunities

FINE 2019, Madrid 21.11.2019

**Helena Leino-Kilpi, PhD, RN, FAAN, FEANS, MAE
Professor and Head of the Department of Nursing Science
Visiting professor, University of Dublin, Trinity College, Dublin
Doctores Honores Causa, University of Klaipeda, Lithuania**



University of Turku, Finland

<https://www.utu.fi/en/university/faculty-of-medicine/departments-of-nursing-science>

University is the oldest in Finland (also among Nordic countries), since 1640

Faculty of Medicine, since 1943

Department of Nursing Science, since 1986

We educate masters (scientific masters) and PhDs (in nursing science)

Masters:

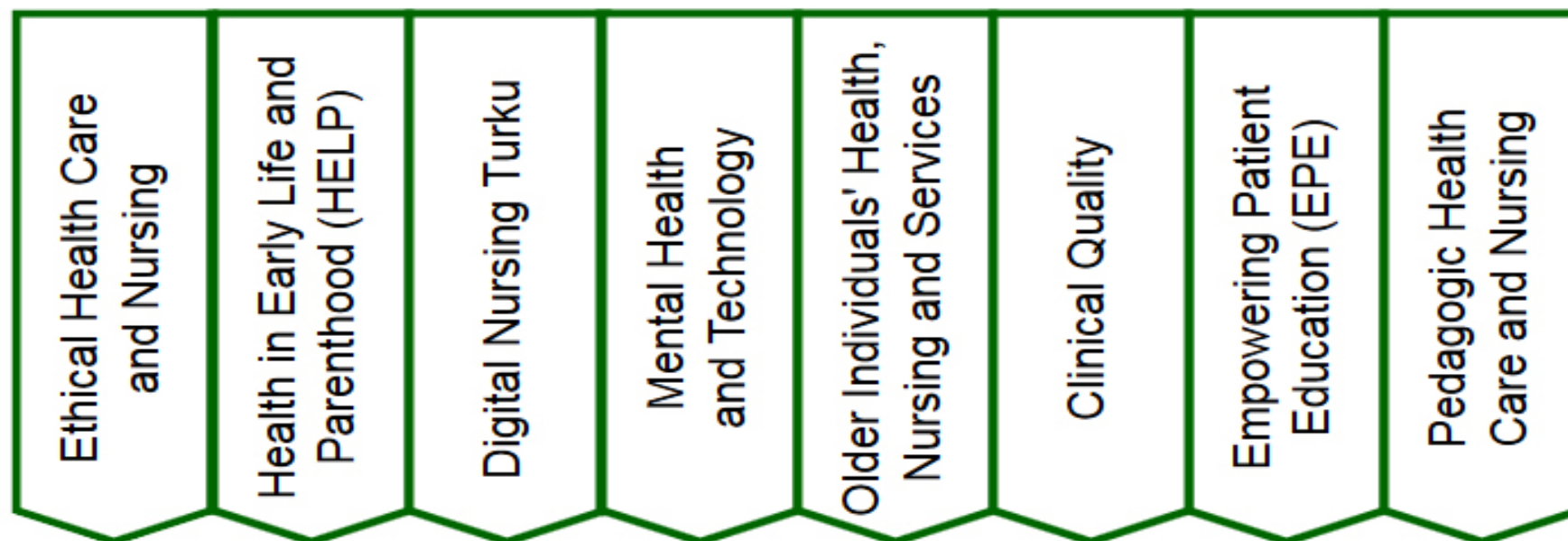
- a) **Health care teachers (health pedagogics)**
- b) Clinical specialists (clinical, mental health, gerontological)
- c) Future Health Technology (international program in collaboration with information technology and the University of Fudan, Shanghai)



Turun yliopisto
University of Turku



NURSING AND HEALTH RESEARCH UTU



EMPOWERING
POPULATION, PATIENTS,
PROFESSIONALS



Two dimensions to consider for future in nursing education

SOCIETY – HEALTH-HEALTH CARE

- Future health/health issues
- Future health care (health and social care) organizations
- Future role of nurses
- Future competence models/criteria



Focus of nursing/health care education

SCIENCE-KNOWLEDGE-RESEARCH

- Development of science/research
- Development of knowledge
- Development of research



Methodology and methods of education

Educator's Corner

Column Editor: Cathy J. Thompson, PhD, RN, CCNS, CNE

Research Priorities for Nursing Education

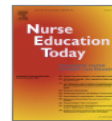
Application to Clinical Nurse Specialist Education

Cathy J. Thompson, PhD, RN, CCNS, CNE



Nurse Education Today

Volume 30, Issue 3, April 2010, Pages 233-238



Zabalegui et al 2006 Changes in Nursing Education
in The European Union
Journal of Nursing Scholarship 38(2):114-8 ·

Future challenges for nursing education – A European perspective

Leena Salminen ^a✉, Minna Stolt ^a✉, Mikko Saarikoski ^b✉, Arja Suikkala ^c✉, Heli Vaartio ^d✉, Helena Leino-Kilpi

^a✉

Huch, M.H., 1995. Nursing and the next millennium. *Nursing Science Quarterly* 8 (1), 38–44.

Bunkers, S.S., 2000. Nurse scholar of the 21st century. *Nursing Science Quarterly* 113, 116–123.

Aiken, L. H. (2011). Nurses for the future. *New England Journal of Medicine*, 364(3), 196–198

Henly S 2011 The future history of nursing science: 2026. *Nursing Research* 60(2), 81

Grady P & Gough L 2015 Nursing Science: Claiming the Future. *J Nurs Scholarship* 47(6), 512-521)

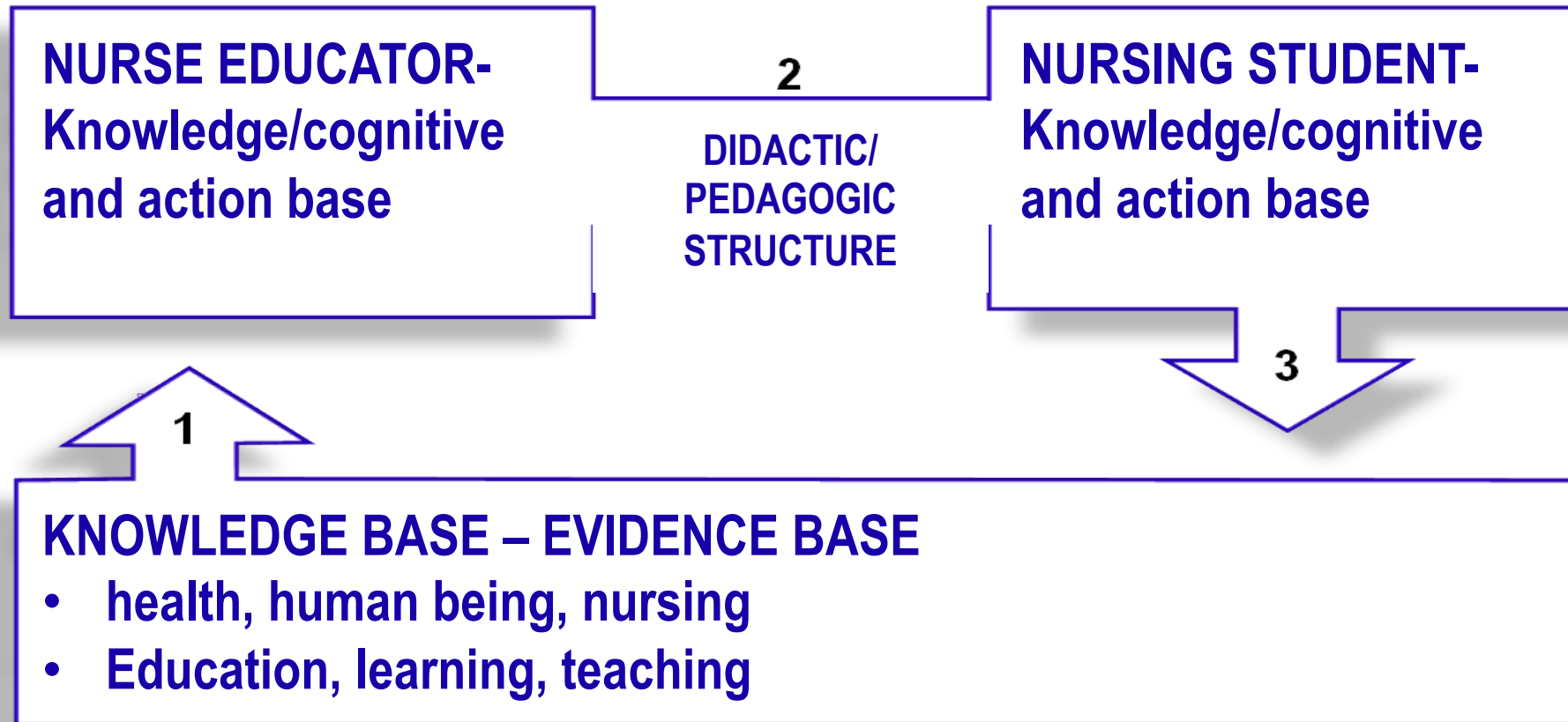


Turun yliopisto
University of Turku

STRUCTURAL ELEMENTS OF EDUCATION



STRUCTURE OF EDUCATION



(Leino-Kilpi 2001, different levels)



Turun yliopisto
University of Turku

24.11.2019

Knowledge base – Evidence base

Knowledge about health strategies – impact to education/research in education (e.g. EU 2014-2020, WHO 2013, NINH, strategies for global health)

EU/specific goals and several strategic guidelines:

- Promote health, prevent diseases, and foster supportive environments for healthy lifestyles
- Protect citizens from serious cross-border health threats, equality
- Contribute to innovative, efficient and sustainable health systems.
- Facilitate access to better and safer healthcare for Union citizens, health literacy

Trends in global health and global responsibility

Knowledge in nursing –future

NINR (Grady & Gough 2015, see also Henly 2011)- research and education in future

- 1. Biological systems and system-science (-omics-, eg genomics)**
- 2. Behavioural nursing science (links between behavior and health)**
- 3. Data-science (big data and modifications)**
- 4. Innovative methodologies (SMART, pragmatic trials, personal health records)**
- 5. Effective and sustainable interventions (eg palliative care, O'Shea & Mager 2019)**



Evidence based nursing- still missing systematic practices

In practice

- **evidence-based level of nursing care is continuously increasing – but is still limited** (Bahtsevani et al 2005/mental health, Holleman et al 2006, Orta et al 2016, Zhao et al 2018, Petre et al 2018, Ye et al 2018)
- **there are many barriers** (Petre et al 2018/Belgium, Scott et al 2009)

In education

- ***the faculty is supportive – but they may not be integrating EBP into their teaching due to high job demands or lack the skills, knowledge, or management of time to integrate** (Stichler et al 2011)
- * **effectiveness of evidence-based nursing was superior to that of traditional teaching on nursing students' critical thinking** (Cui et al 2018)

Implementation and dissemination

- **strategies are developed (e.g. ICN 2012)– but they are not necessary effective and require new avenues, e.g. in Finland, most of the nurses (64-65 %), evaluated the use of evidence and implementation of evidence as limited. There is also lack of practices of dissemination of evidence (67 %). (1049 nurses/SSL 2018)**
- **Open science/open access is an improvement for this !**

We need a new way to evidence based nursing and teaching !



Kuva: Pyhä-Häkki, Jari

Nurse educator – pedagogic solutions



**There is no
single
pedagogic
solution for
future,
no single way
to go**



Polku koivikossa, Hannu Laatonen

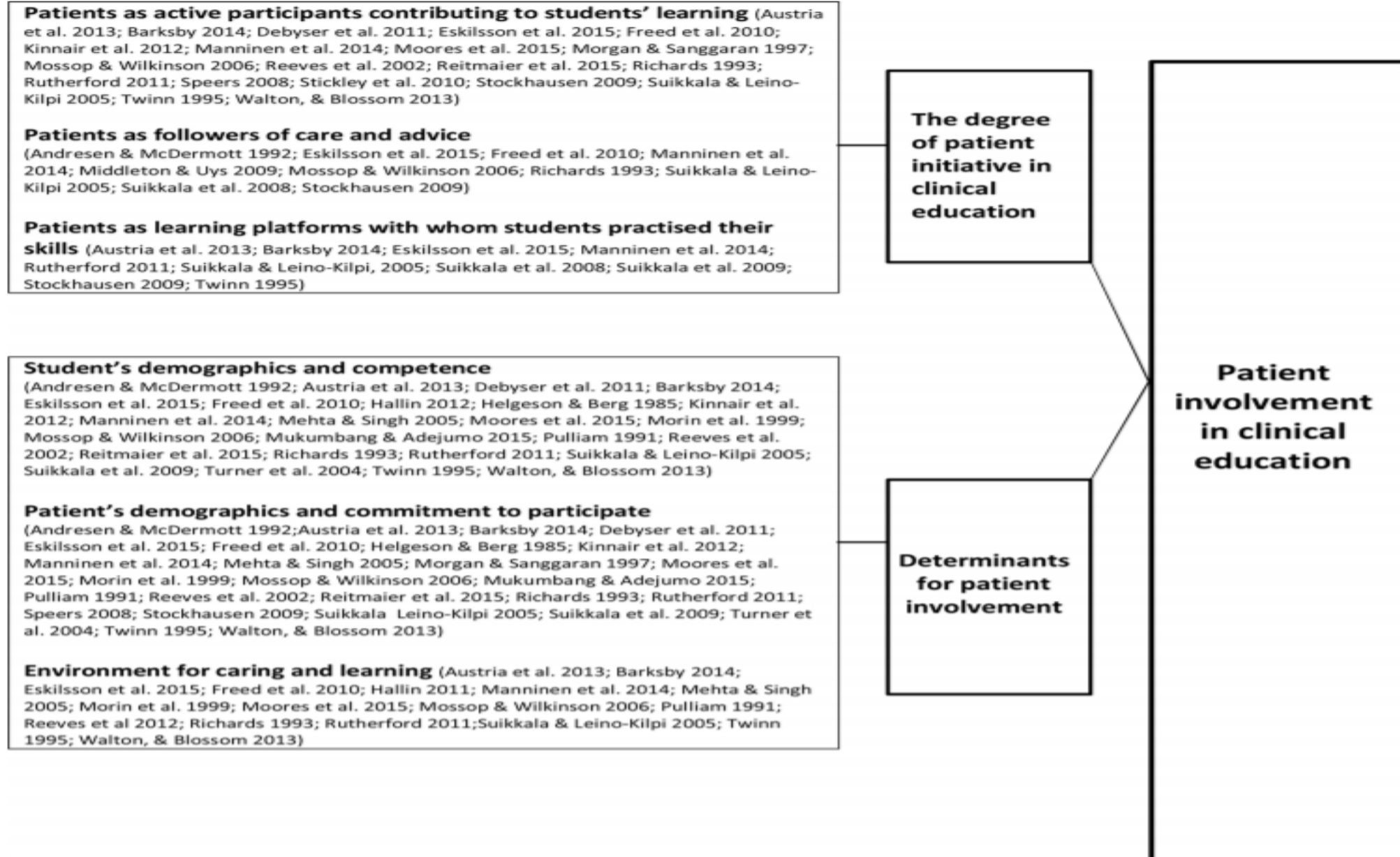


A. PATIENT-CENTRED/PATIENT-ORIENTED PEDAGOGICS

- Central role of patients/clients/families in health care – and education
- Limited systematic knowledge
- Changing patients,. e.g.

Cognitive disorders (inc dementia) → change in main nursing interventions (e.g educational and supportive, Palm et al 2018; **lack of graduating students to work in older people care**)

Citizen/patient empowerment → empowering strategies (e.g. Klemetti et al 2016, Schoberer et al 2016), supporting the power of patients/clients → diagnostics of power/empowerment



B. Digitalization in teaching/learning – variety of testings/pilots/apps and possibilities to simulation

Systematic knowledge needed –

**researchers need to be aware of not repeating same designs*

**educators need to evaluate the outcomes.*

** simulation reality vs clinical reality (General-Individual)*

** use of big data* (Grisham, W., Brumberg, J. C., Gilbert, T., Lanyon, L., Williams, R. W., & Olivo, R. (2017). Teaching with Big Data: Report from the 2016 Society for Neuroscience Teaching Workshop. *Journal of Undergraduate Neuroscience Education*, 16(1), A68–A76. **OBS here is data!**

[Lavoie P et al 2018](#) Learning theories and tools for the assessment of core nursing competencies in simulation: A theoretical review. [J Adv Nurs](#). 74(2):239-250.

Naismith LM, Cavalcanti RB 2015 Validity of Cognitive Load Measures in Simulation-Based Training: A Systematic Review. *Acad Med*. 90(11 Suppl):S24-35.

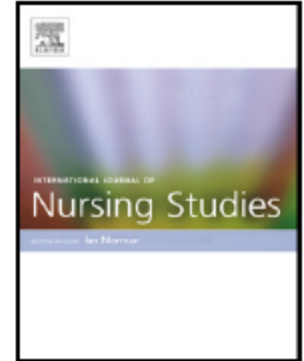
The effectiveness of internet-based e-learning on clinician behavior and patient outcomes: a systematic review protocol. Sinclair P, Kable A, Levett-Jones T. *JBIM Database System Rev Implement Rep*. 2015 Jan; 13(1):52-64.



Contents lists available at [SciVerse ScienceDirect](#)

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns



Review

Impact of e-learning on nurses' and student nurses knowledge, skills, and satisfaction: A systematic review and meta-analysis

Mari Lahti ^{a,*}, Heli Hätönen ^a, Maritta Välimäki ^b

^a *University of Turku, Faculty of Medicine, Department of Nursing Science, Turku, Finland*

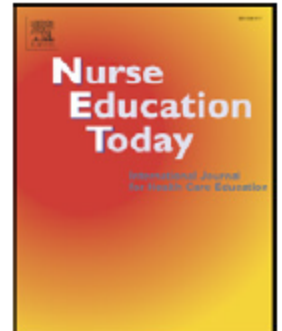
^b *Southwest Hospital District, Turku, Finland*



Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt



Review

Use of mobile devices in nursing student–nurse teacher cooperation during the clinical practicum: An integrative review



Camilla Strandell-Laine ^{a,*}, Minna Stolt ^a, Helena Leino-Kilpi ^{a,b}, Mikko Saarikoski ^a

^a Department of Nursing Science, University of Turku, Turku, Finland

^b Hospital District of Southwest Finland, Finland

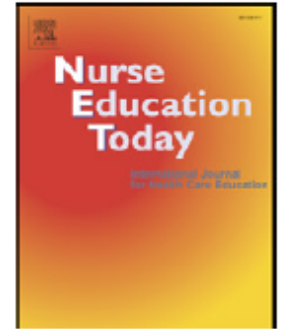
Nurse Education Today 34 (2014) 1382–1387



Contents lists available at [ScienceDirect](#)

Nurse Education Today

journal homepage: www.elsevier.com/nedt



Review

The nursing educator's role in e-learning: A literature review

Lee F. Koch *

St. Loreto College of Applied Social Sciences, Peutingen Str. 2, 73479 Ellwangen, Germany



C. Life-long learning - pedagogic challenge

Graduating students are best known

**cohorts needed*

**follow-up studies*

** pedagogy of countinuing development of
professional skills/competence*

D. Multiprofessional learning/teaching

- **Limited evidence**
- **Evidence-based outcomes:**
 - * **understanding others**
 - * **social learning**
- **Learning nursing –**
what is independent nursing action to be learnt



E. RESEARCH/DEVELOPMENT ON EDUCATIONAL REFORMS/ORGANIZATIONS/CURRICULA

- Educational organisations, structures and outcomes
- Educational organisations, managements, professionals, work well-being
- Educational organisations, competence of teachers/actors (see eg NLN competence criteria <http://www.nln.org/professional-development-programs/competencies-for-nursing-education/nurse-educator-core-competency>)
- Educational organisations, values and ethics
- Curriculum development
Pedagogic literature extensive!
Theoretical frames – limited discussion

e.g. NLN, Hallmarks of Excellence/http://www.nln.org/docs/default-source/default-document-library/hallmarks_of_excellence_2019.pdf?sfvrsn=0

Outcomes of education – competence

- Methods
- Use of evaluation
- Changing competences



Table 2 How clinical competence was evaluated during nursing education

How	Who
Use of evaluation tools	
National Clinical Final Examination tool (NCFE)	Students' self-assessment ⁸
Structured Observation and Assessment of Practice (SOAP)	Students' self-assessment, Faculty member assessment and preceptor ³⁸
Objective Structured Clinical Evaluation Tool (OSCE)	Students' self-assessment ³⁹
	Students' self-assessment ⁴⁰
	Faculty members and standard patients ¹⁰
Competency Outcomes Performance Assessment (COPA)	Students' self-assessment and faculty member assessment ⁴¹
Nursing Students' Core Competencies scale (NSCC)	Students' self-assessment and preceptor assessment ⁴²
Self-Evaluated Core Competencies Scale (SECC)	Students' self-assessment ⁴³
Shared Specialist Placement Document (SSPD)	Students' self-assessment and preceptor assessment ⁴⁴
Peer Assessment of Clinical Skills (PACS)	Students' self-assessment and peer assessment ⁴⁵
The Nurse Competence Scale (NCS)	Students' self-assessment ⁴⁶
Competency Inventory of Nursing Students (CINS)	Students' self-assessment ⁴⁷
	Students' self-assessment ⁴⁸
Clinical Competence Assessment Documents	Students' self-assessment and faculty member assessment ⁴⁹
Observation methods	
Video-based observational practice	Students' self-assessment and faculty member assessment ⁵⁰
Clinical Skills Laboratory (CSL)	Students' self-assessment, preceptor assessment and faculty member assessment ⁵¹
Other evaluation methods	
Portfolio	Students' self-assessment and faculty member assessment ⁵²
	Students' self-assessment and faculty member assessment ⁵³
Learning contract	Students' self-assessment ⁵⁴

Kajander-Unkuri et al 2019,
Using Nurse Competence
Scale

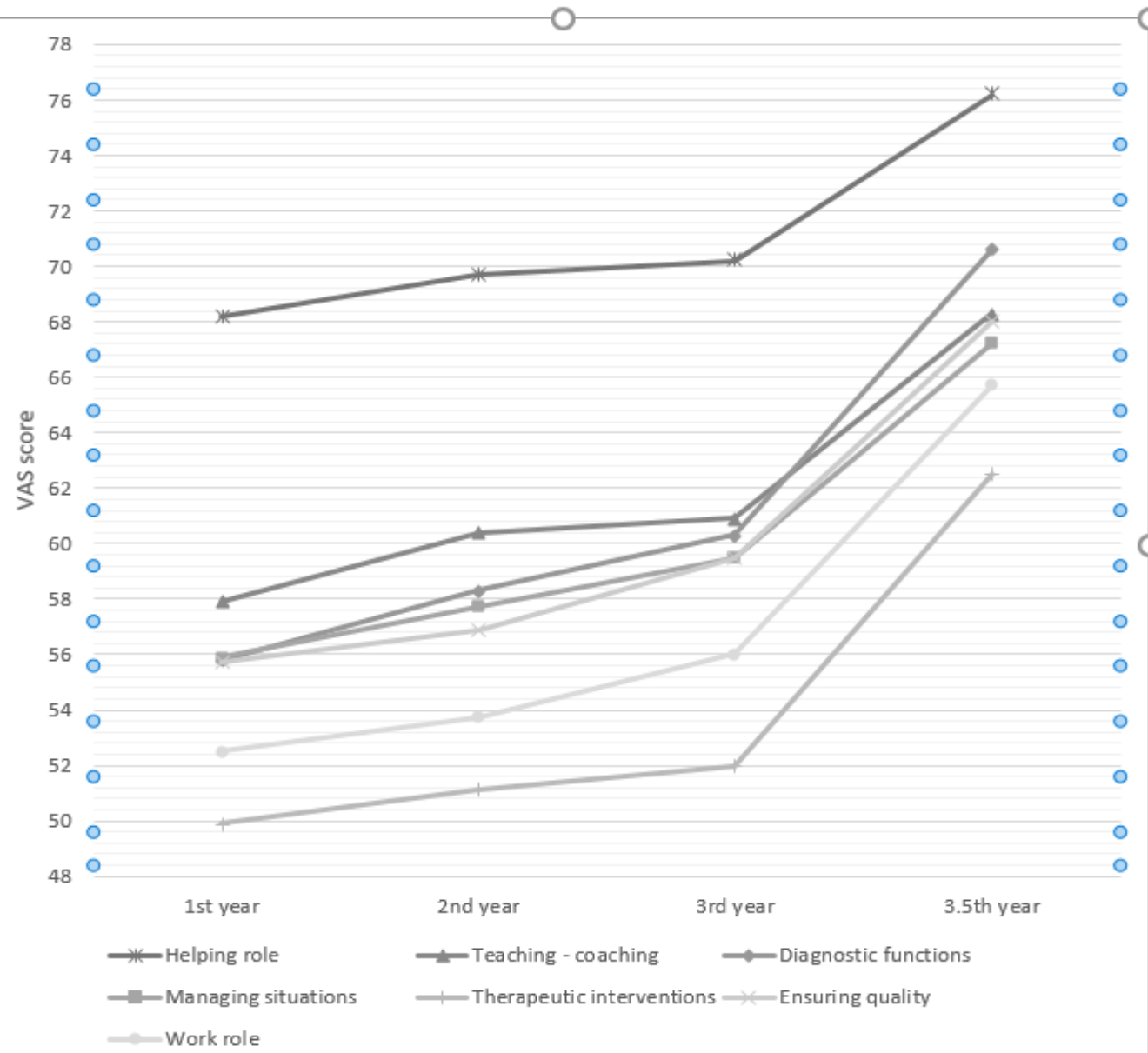


Figure 1. The level of competence in competence categories during education



Turun yliopisto
University of Turku

Competence – connection between health and education (Directive 2013/55/EC, kts myös Blazun 2015, Kajander-Unkuri 2015)

Changing Concept of Competence – Changing pedagogic solutions

- **To respect differences**

Hellman A et al 2018 Understanding Poverty: Teaching Social Justice in Undergraduate Nursing Education. J Forensic Nurs. 2018 14(1):11-17

Yang K et al 2014 Relate better and judge less: poverty simulation promoting culturally competent care in community health nursing. Nurse Educ Pract. 14(6):680-5.

- **To manage uncertainty**

- **To manage knowledge**

- **To manage argumentation**

-

- **To manage leadership and political activities**

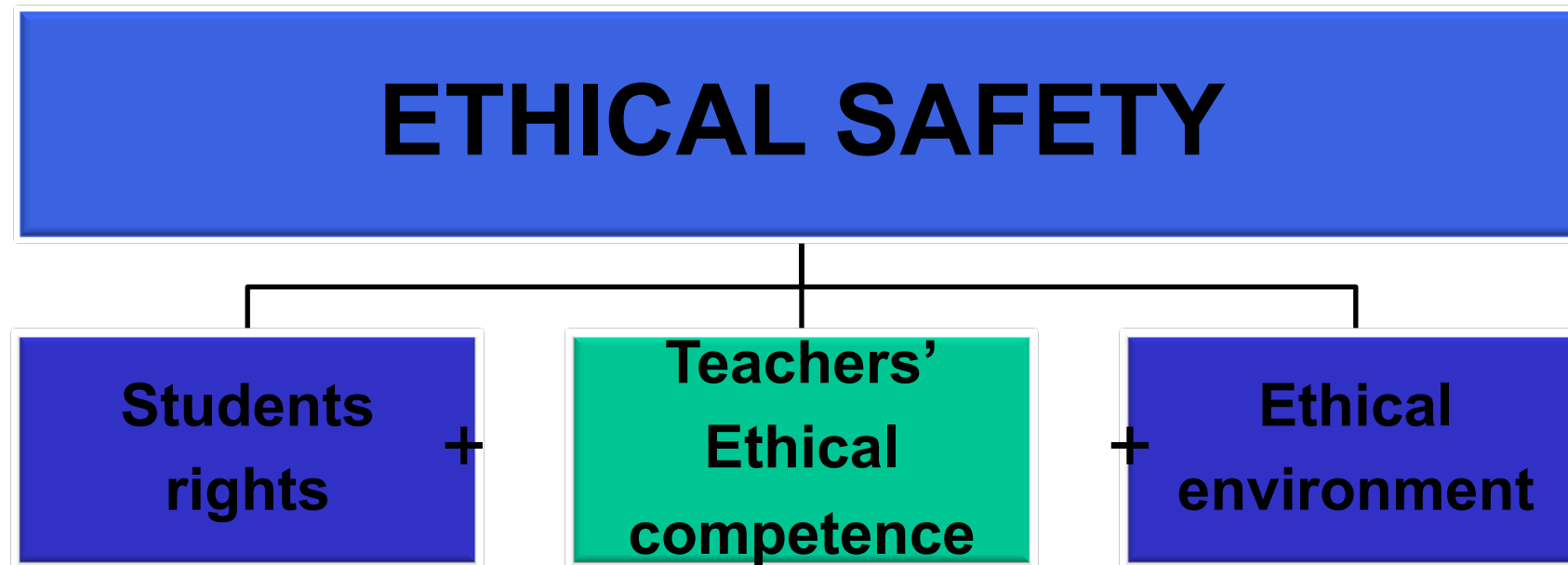
- **Media competence / Cultural competence**



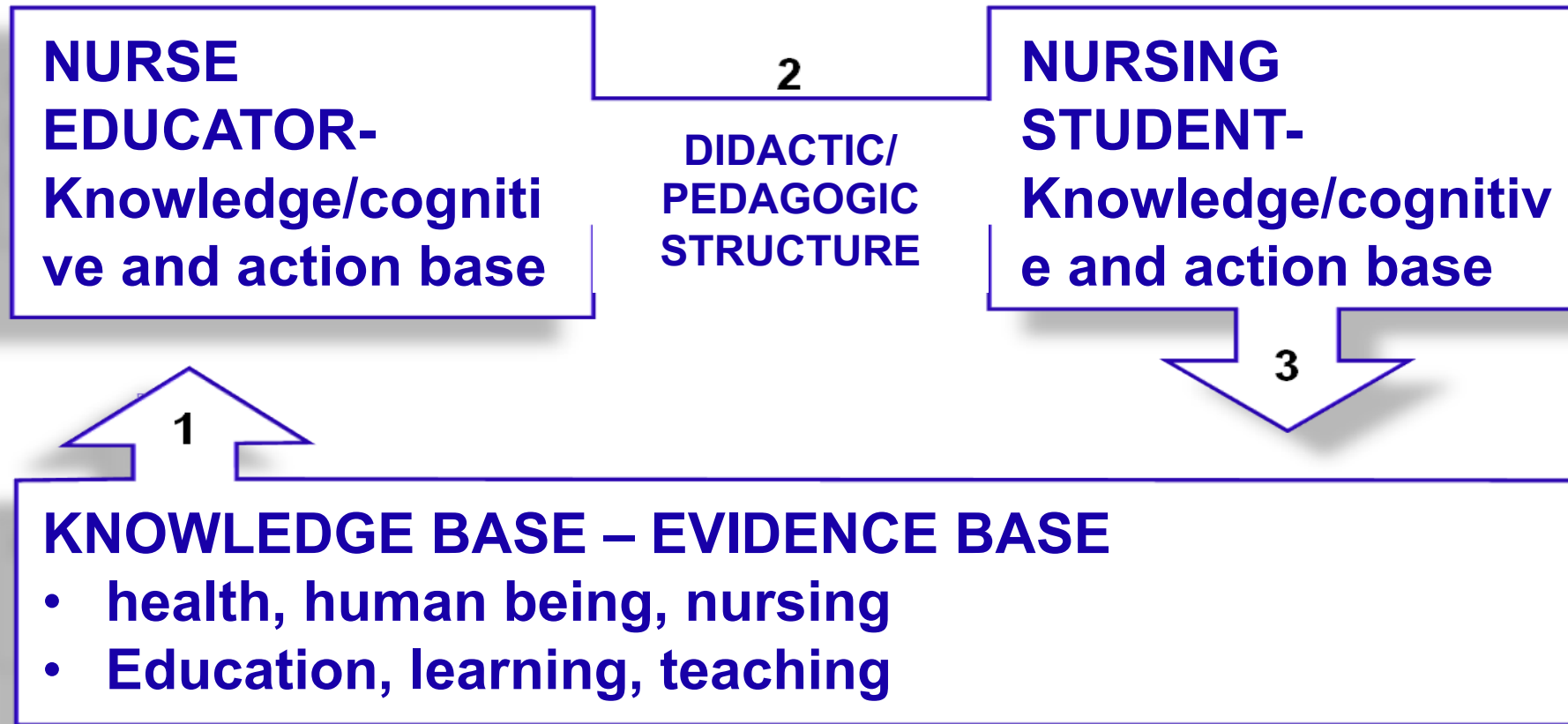
Turun yliopisto
University of Turku

Elements of ethical safety in education/research in education

(Leino-Kilpi 2016, Leino-Kilpi & Suhonen 2017)




STRUCTURE OF EDUCATION



(Leino-Kilpi 2001, different levels)





Ville Savilampi: Loppuvuoden
lumilla

Thank you for your interest!



Zhao et al 2018 Evidence-based nursing outputs and hot spots analysis of the last 5 years in mainland China: Results of a bibliometric analysis. *Int J of Nursing Practice*)

A total of 9036 papers published by 13 808 authors in 606 journals were included. Publication numbers were increasing. None of the top ten journals publishing evidence-based nursing papers were core nursing journals. The research hot spots on evidence-based nursing in the recent five years were cardiovascular disease, mental health, and complication prevention. **However, little attention has been paid to education for evidence-based nursing.**

Orta, R., Messmer, P. R., Valdes, G. R., Turkel, M., Fields, S. D., & Wei, C. C. (2016). Knowledge and competency of nursing faculty regarding evidence-based practice. *The Journal of Continuing Education in Nursing*, 47(9), 409-419.

•Stichler, J. F., D.N.Sc F.A.C.H.E.F.A.A.N., Fields, W., D.N.Sc R.N.F.H.I.M.S.S., Kim, S. C., PhD.R.N., & Brown, C. E., D.Ed C.N.S.W.H.N.P. (2011). Faculty knowledge, attitudes, and perceived barriers to teaching evidence-based nursing. *Journal of Professional Nursing*, 27(2), 92. Retrieved from <https://search-proquest-com.ezproxy.utu.fi/docview/864545468?accountid=14774>

A review of the literature determined that although most faculty are supportive of teaching EBP, **they may not be integrating EBP into their teaching due to high job demands or lack the skills, knowledge, or management of time to integrate.**



REFERENCES – LIFE LONG LEARNING

Numminen O, Leino-Kilpi H, Isoaho H, Meretoja R 2016 Newly graduated nurses' occupational commitment and its associations with professional competence and work-related factors. *J Clin Nurs* 25(1-2):117-26.

Numminen O, Leino-Kilpi H, Isoaho H, Meretoja R.2017 Development of Nurses' Professional Competence Early in Their Career: A Longitudinal Study.*J Contin Educ Nurs.* 48(1):29-39. doi: 10.3928/00220124-20170110-08.

Chang HY, Shyu YI, Wong MK, Friesner D, Chu TL, Teng CI2015 Which Aspects of Professional Commitment Can Effectively Retain Nurses in the Nursing Profession? . *J Nurs Scholarsh.* 47(5):468-76.

Qalehsari, M. Q., Khaghanizadeh, M., & Ebadi, A. (2017). Lifelong learning strategies in nursing: A systematic review. *Electronic Physician*, 9(10), 5541–5550. <http://doi.org.ezproxy.utu.fi/10.19082/5541>

Stillwell SB, Vermeesch AL, Scott JG 2017 Interventions to Reduce Perceived Stress Among Graduate Students: A Systematic Review With Implications for Evidence-Based Practice.*Worldviews Evid Based Nurs.* 14(6):507-513. *Epub 2017 Aug 10.*

Windhaber T 2018 Educational strategies to train health care professionals across the education continuum on the process of frailty prevention and frailty management: a systematic review. [Aging Clin Exp Res.](#) 2018 Feb 23. doi: 10.1007/s40520-018-0918-9.



REFERENCES MULTIPROFESSIONAL

Experiences and shared meaning of teamwork and interprofessional collaboration among health care professionals in primary health care settings: a **systematic review**. Sangaleti C, Schveitzer MC, Peduzzi M, Zoboli ELCP, Soares CB. *JBIM Database System Rev Implement Rep*. 2017 Nov; 15(11):2723-2788.

Teaching and learning activities to educate nursing students for interprofessional collaboration: **A scoping review**. Murdoch NL, Epp S, Vinek J. *J Interprof Care*. 2017 Nov; 31(6):744-753. Epub 2017 Sep 18.

Educational interventions to enhance competencies for interprofessional collaboration among nurse and physician managers: **An integrative review**. Clausen C, Cummins K, Dionne K. *J Interprof Care*. 2017 Nov; 31(6):685-695. Epub 2017 Sep 1.

Schapmire, T. J., Head, B. A., Nash, W. A., Yankeelov, P. A., Furman, C. D., Wright, R. B., ... Faul, A. C. (2018). Overcoming barriers to interprofessional education in gerontology: the Interprofessional Curriculum for the Care of Older Adults. *Advances in Medical Education and Practice*, 9, 109–118. <http://doi.org.ezproxy.utu.fi/10.2147/AMEP.S149863>



REFERENCES: CURRICULUM RESEARCH/DEVELOPMENT

Concept-based curriculum Baron, K. A. (2017). Changing to Concept-Based Curricula: The Process for Nurse Educators. *The Open Nursing Journal*, 11, 277–287. <http://doi.org.ezproxy.utu.fi/10.2174/1874434601711010277>

Hardin, Pamela K,PhD., R.N., & Richardson, Stephanie J,PhD., R.N. (2012). Teaching the concept curricula: Theory and method. *Journal of Nursing Education*, 51(3), 155-159.

[Kuskar R et al 2012](#) Have **motivation theories** guided the development and reform of medical education curricula? A review of the literature. *Acad Med* 87(6):735-43



[JBI Database System Rev Implement Rep](#). 2015 Oct;13(10):146-55. doi: 10.11124/jbisrir-2015-2150.

Exploring conceptual and theoretical frameworks for nurse practitioner education: a scoping review protocol.

[Wilson R](#)¹, [Godfrey CM](#), [Sears K](#), [Medves J](#), [Ross-White A](#), [Lambert N](#).

– Author information

- 1 Queen's Joanna Briggs Collaboration: a Collaborating Center of the Joanna Briggs Institute2School of Nursing, Faculty of Health Sciences, Queen's University, Canada3Bracken Health Sciences Library, Faculty of Health Sciences, Queen's University, Canada4School of Medicine, Faculty of Health Sciences, Queen's University, Canada.

NLN Core Competencies 2013 of Nurse Educators <http://www.nln.org/professional-development-programs/competencies-for-nursing-education/nurse-educator-core-competency>

Competency I: Facilitate Learning

Nurse educators are responsible for creating an environment in classroom, laboratory, and clinical settings that facilitates student learning and the achievement of desired cognitive, affective, and psychomotor outcomes.

Competency II: Facilitate Learner Development and Socialization

Nurse educators recognize their responsibility for helping students develop as nurses and integrate the values and behaviors expected of those who fulfill that role.

Competency III: Use Assessment and Evaluation Strategies

Nurse educators use a variety of strategies to assess and evaluate student learning in classroom, laboratory and clinical settings, as well as in all domains of learning.

Competency IV: Participate in Curriculum Design and Evaluation of Program Outcomes

Nurse educators are responsible for formulating program outcomes and designing curricula that reflect contemporary health care trends and prepare graduates to function effectively in the health care environment.

Competency V: Function as a Change Agent and Leader

Nurse educators function as change agents and leaders to create a preferred future for nursing education and nursing practice.

Competency VI: Pursue Continuous Quality Improvements in the Nurse Educator Role

Nurse educators recognize that their role is multidimensional and that an ongoing commitment to develop and maintain competence in the role is essential.

Competency VII: Engage in Scholarship

Nurse educators acknowledge that scholarship is an integral component of the faculty role, and that teaching itself is a scholarly activity.

Competency VIII: Function Within the Educational Environment

Nurse educators are knowledgeable about the educational environment within which they practice and recognize how political, institutional, social, and economic forces impact their role.

Connection between education and the realisation of the quality of care

See, for example:

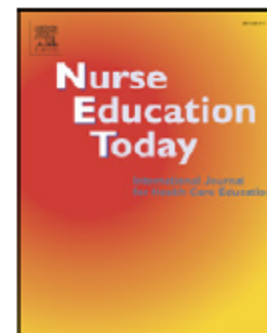
- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., . . . ; Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *The Lancet*, 383(9931), 1824–1830.
- Buerhaus, P. I., Auerbach, D. J., & Staiger, D. O. (2014). The rapid growth of graduates from associate, baccalaureate, and graduate programs in nursing. *Nursing Economics*, 32(6), 290–311.
- Buerhaus, P. I., Auerbach, D. I., & Staiger, D. O. (2016). Recent changes in the number of nurses graduating from undergraduate and graduate programs. *Nursing Economics*, 34(1), 46–48.
- Kutney-Lee, A., Sloane, D. M., & Aiken, L. H. (2013). An increase in the number of nurses with baccalaureate degrees is linked to lower rates of postsurgery mortality. *Health Affairs*, 32(3), 579–586.



Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt



Review

Nursing education research in Finland—A review of doctoral dissertations



Jonna Vierula ^{a,*}, Minna Stolt ^{a,1}, Leena Salminen ^{a,2}, Helena Leino-Kilpi ^{b,3}, Jouni Tuomi ^{c,4}

^a Department of Nursing Science, 20014 University of Turku, Finland

^b Department of Nursing Science, 20014 University Of Turku Finland and Hospital District of Southwest, Finland

^c Tampere University of Applied Sciences, TAMK Pääkampus Kuntokatu 3, 33520 Tampere Finland

Katso myös: Stolt M, Tuomi J, Salminen L, Suhonen R, Koskinen S, Vierula J & Leino-Kilpi H 2018 Suomalaisen hoitotieteen kolme ensimmäistä vuosikymmentä—Analyysi väitöskirjojen tiivistelmistä vuosina 1984–2015. *Hoitotiede* 30(1), 3–14. (Väitöskirjojen n=443)

References

Appl Nurs Res. 2019 Nov 7;151197. doi: 10.1016/j.apnr.2019.151197. [Epub ahead of print]

End-of-life nursing education: Enhancing nurse knowledge and attitudes.

O'Shea ER¹, Mager D².

- A modified systematic review of research evidence about education for pre-registration nurses in palliative care. *Bassah N, Seymour J, Cox K. BMC Palliat Care. 2014; 13:56. Epub 2014 Dec 10.*

Hunter, Kathleen ; McGonigle, Dee ; Hebda, Toni 2013Nurse Educator: [May/June 2013 - Volume 38 - Issue 3 - p 110–113](#)

Bove LA. Integration of informatics content in baccalaureate The Integration of Informatics Content in Baccalaureate and Graduate Nursing Education: A Status Report. and graduate nursing education: an updated status report. Nurse Educ. 2019; doi: 10.1097/NNE.0000000000000734

Big data – references

- Grisham, W., Brumberg, J. C., Gilbert, T., Lanyon, L., Williams, R. W., & Olivo, R. (2017). Teaching with Big Data: Report from the 2016 Society for Neuroscience Teaching Workshop. *Journal of Undergraduate Neuroscience Education*, 16(1), A68–A76. **OBS here is data!**
- Wong, H. T., Chiang, V. C. L., Choi, K. S., & Loke, A. Y. (2016). The Need for a Definition of Big Data for Nursing Science: A Case Study of Disaster Preparedness. *International Journal of Environmental Research and Public Health*, 13(10), 1015. <http://doi.org.ezproxy.utu.fi/10.3390/ijerph13101015>
- Brennan, P. F., & Bakken, S. (2015). Nursing needs big data and big data needs nursing. *Journal of Nursing Scholarship*, 47(5), 477–484.
- Clancy T.R., Reed L. Big data, big challenges: Implications for chief nurse executives. *J. Nurs. Adm.* 2016;46:113–115

Strategies for education

EU

- http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/163EN.pdf
- <http://www.euro.who.int/en/health-topics/Health-systems/nursing-and-midwifery/activities/education>

NATIONAL LEAGUE FOR NURSING <http://www.nln.org/newsroom/nursing-education-statistics/nurse-educator-demographics> - knowledge about nurse teachers

Kts White E 2018 A comparison of nursing education and Workforce planning initiatives in the United States and England. Policy, Politics & Nursing Practice, 1-13.

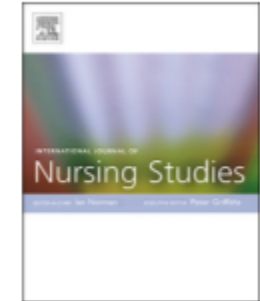
Royal College of Nursing. (2014). An uncertain future. The UK nursing labour market review 2014. Retrieved from <https://www.rcn.org.uk/>



Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/locate/ijns



Patients' involvement in nursing students' clinical education: A scoping review

Arja Suikkala^{a,*}, Sanna Koskinen^a, Helena Leino-Kilpi^{a,b}

^a Department of Nursing Science, 20014, University of Turku, Turku, Finland

^b Hospital District of South-West Finland, Turku, Finland

