

AI-Enhanced Educational Model to Improve Nursing Students' Knowledge of Wound Bed Assessment

Rúben Encarnação^{1,2}

PhD Student, MNursSci, RN

Supervisors:

Dr. Paulo Alves¹

Dr. João Reis³

¹ Centre for Interdisciplinary Research in Health, Faculty of Health Sciences and Nursing, Catholic University of Portugal, 4169-005, Porto, Portugal

² Cardiology Intensive Care Unit, São João Local Healthcare Unit, 4200-319, Porto, Portugal, Porto, Portugal, Porto, Portugal, Porto, Portugal

³ SYSTEC-ARISE, Faculty of Engineering of the University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal

BREMEN, GERMANY 6 - 8 MAY 2026

The 36th Conference of the European
Wound Management Association
EWMA 2026

DE WU
DEUTSCHER
WUNDKONGRESS

 **WundD-A-CH**

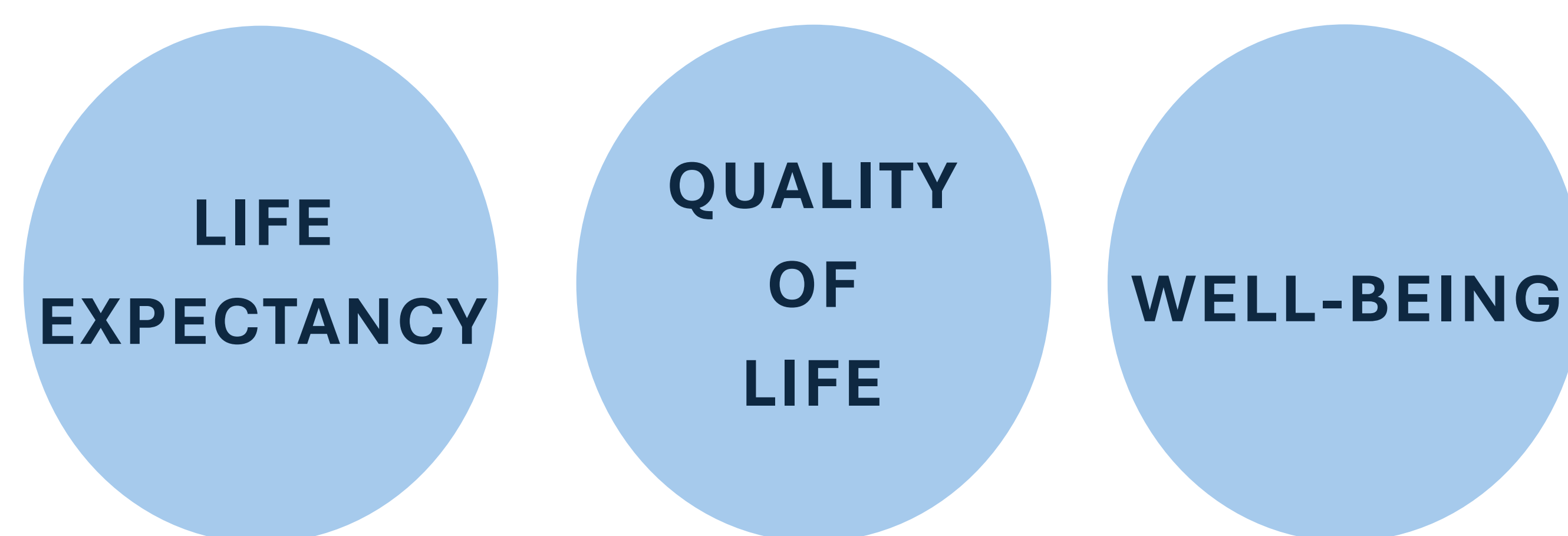
BACKGROUND

HUMAN WOUND AND ITS BURDEN

(USD, billions)

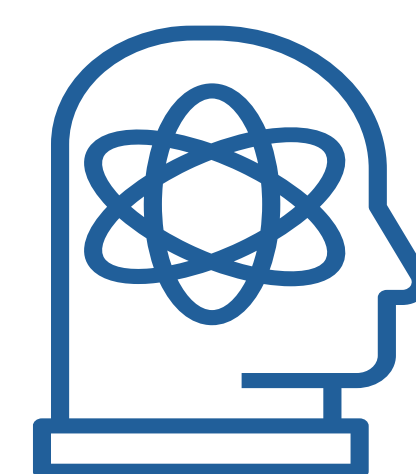
148	42,78	22,91	23,33	13,31
USA	CHINA	JAPAN	GERMANY	UK

ECONOMIC IMPACT



PATIENT IMPACT

KNOWLEDGE & DECISION-MAKING



HIGH-COMPLEXITY PROCESS

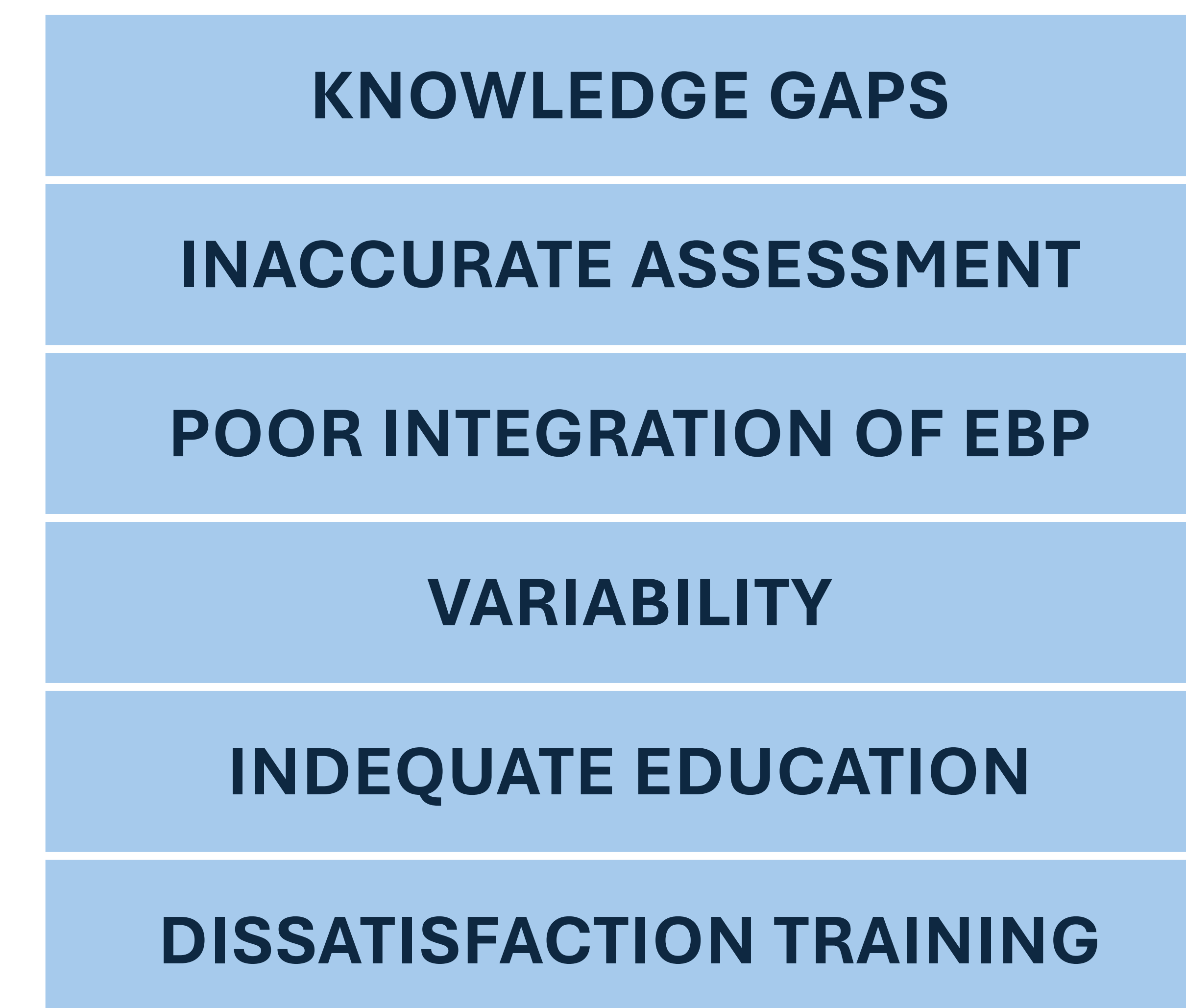


SYSTEMATIC ASSESSMENT



ACCURATE INFORMATION

EDUCATION & TRAINING GAPS



(Queen & Harding, 2023; Ahtiala & Kiello-Viljamaa, 2024; Queen & Harding, 2024; Young C., 2025; Zhao et al., 2024; WUWHS, 2020; Welsh, 2018)

CAN AI SUPPORT WOUND CARE EDUCATION?

AI-Enhanced Educational Model to Improve Nursing Students' Knowledge of Wound Bed Assessment

Objective: To develop and evaluate the effectiveness of an AI-supported educational model in improving nursing students' knowledge of wound bed assessment.

BREMEN, GERMANY 6 - 8 MAY 2026

The 36th Conference of the European
Wound Management Association
EWMA 2026

DE WU
DEUTSCHER
WUNDKONGRESS

 **WundD-A-CH**

ADDIE MODEL

(Branch, 2009)

DESIGN

Educational content and strategies for teaching local wound assessment: A scoping review



Delphi Study



DEVELOPMENT

Development of the AI chatbot and educational materials
Construction and validation of an instrument to measure knowledge about local wound assessment



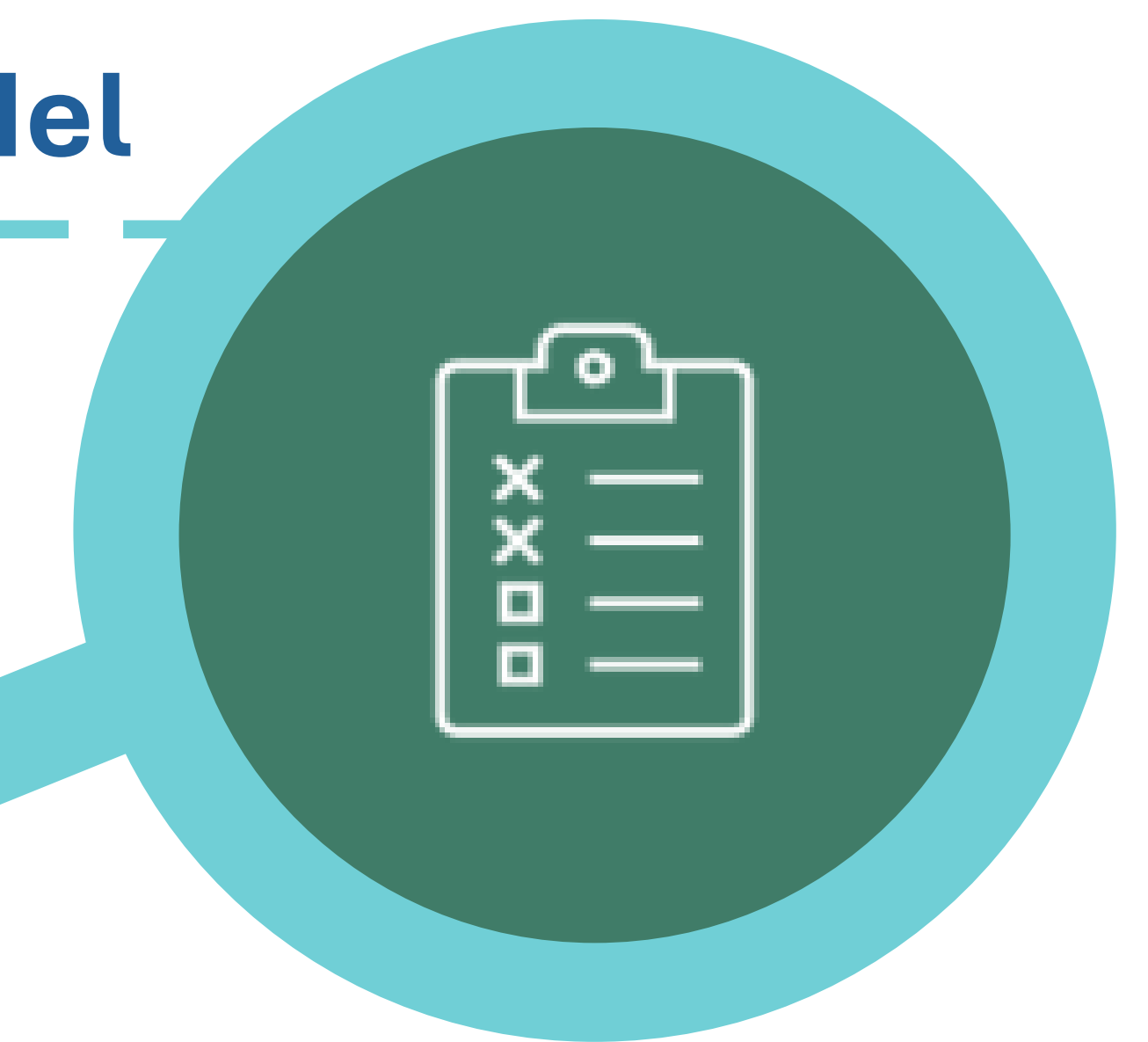
ANALYSIS

Artificial intelligence in wound care education:
Scoping review



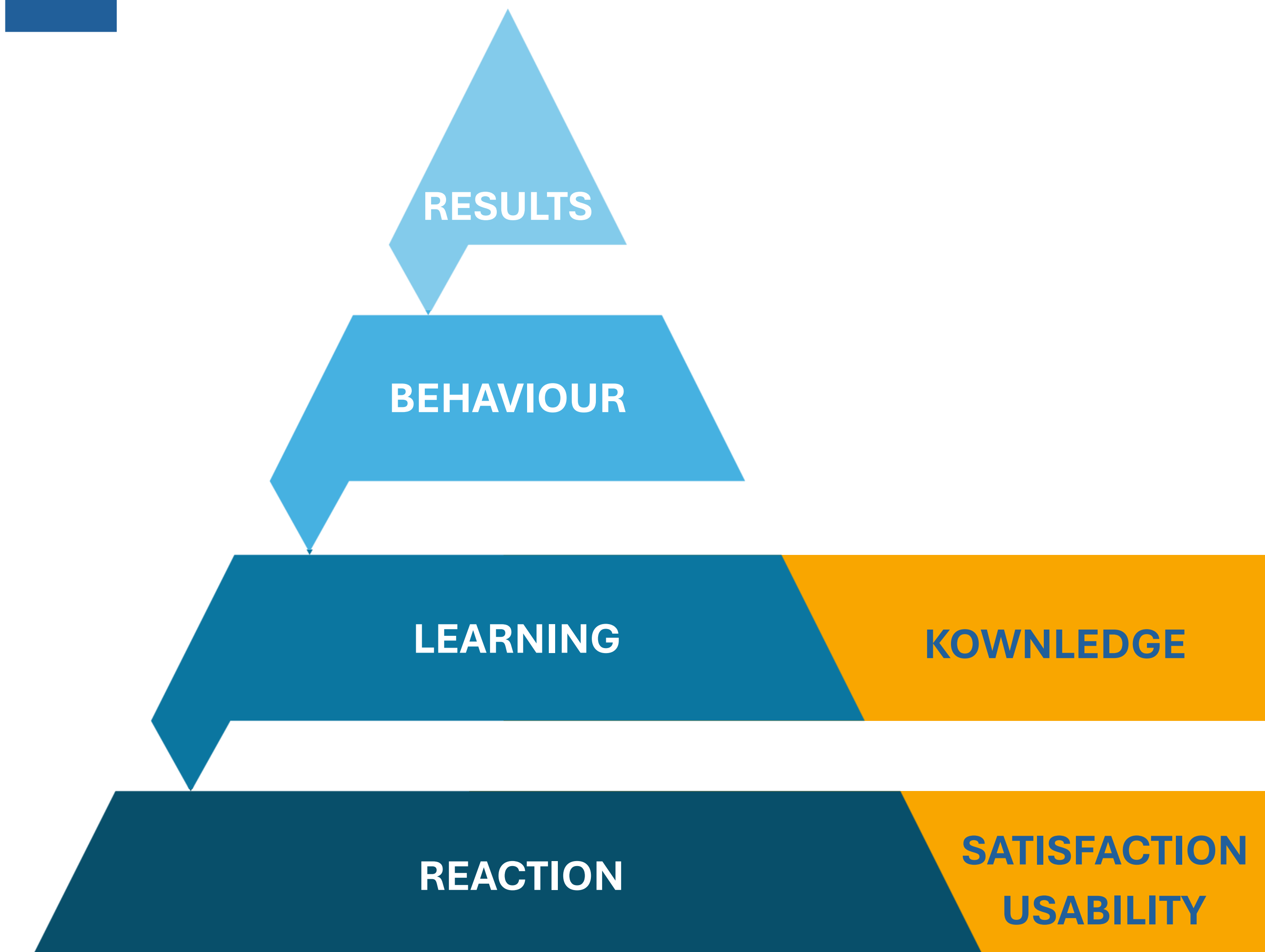
IMPLEMENTATION

Quasi-Experimental Pilot Study



EVALUATION

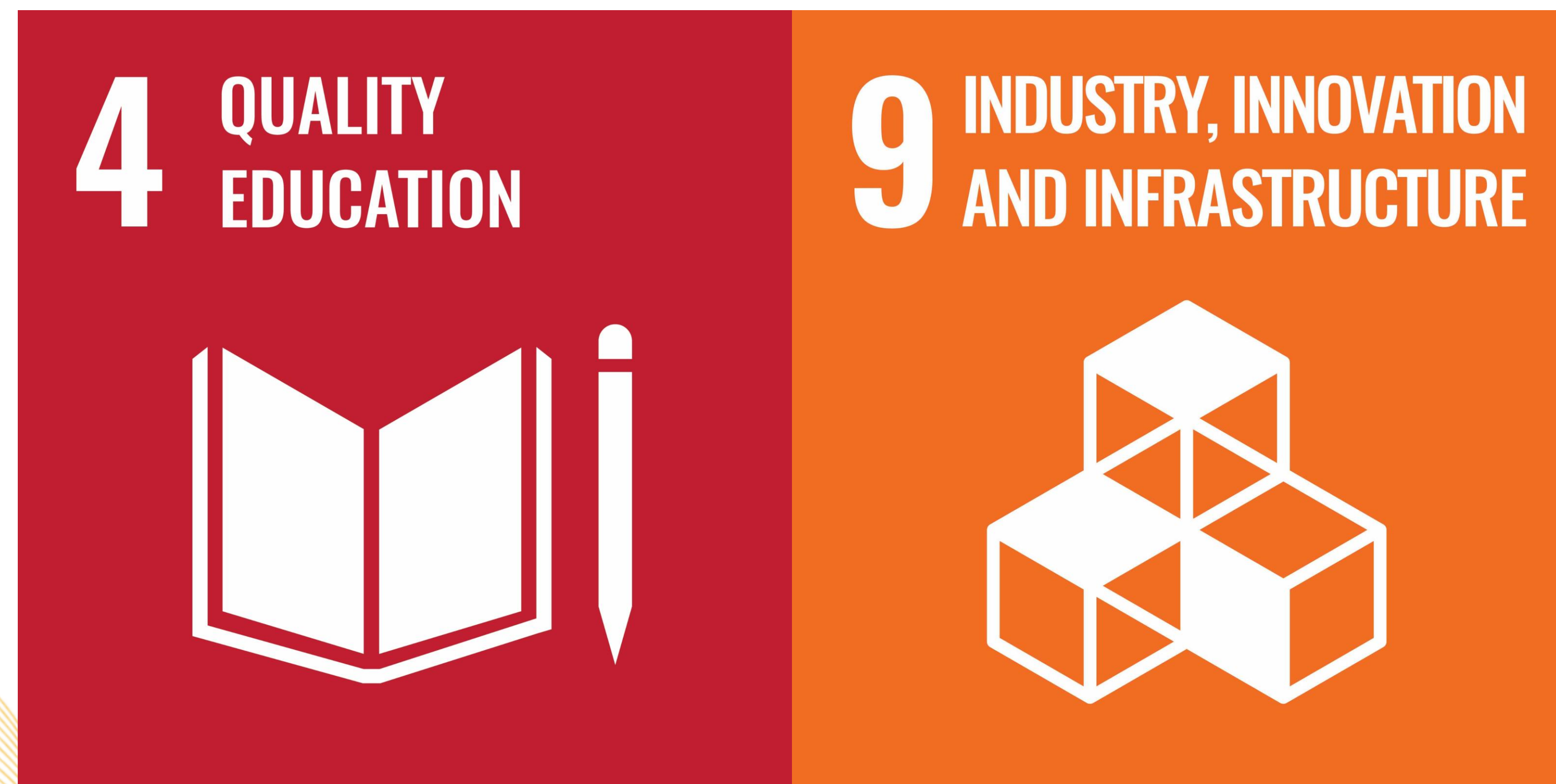
Kirkpatrick Model



BREMEN, GERMANY 6 - 8 MAY 2026

ALIGNMENT WITH GLOBAL PRIORITIES

SUSTAINABLE DEVELOPMENT GOALS



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



Promoting innovative teaching practices
Transforming teaching and learning practices
Optimizing curricula



Map, test, and promote pedagogical and curricular innovation
Develop, foster, and support applied research and innovative teaching



CATÓLICA
CIIS · CENTRO DE INVESTIGAÇÃO INTERDISCIPLINAR EM SAÚDE

LISBOA · PORTO · VISEU

Develop scientific foundation to drive innovation in education
Produce digital content to promote health

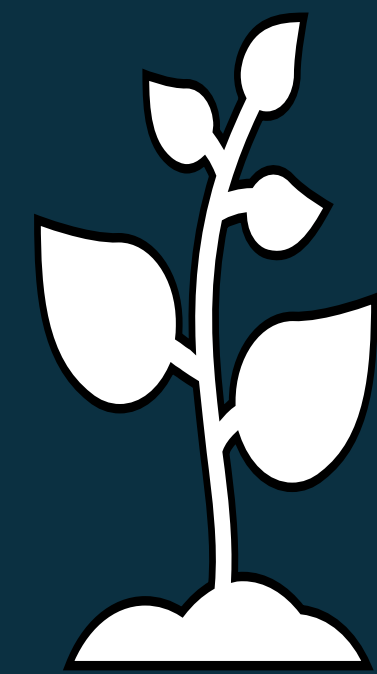
BREMEN, GERMANY 6 - 8 MAY 2026

The 36th Conference of the European Wound Management Association
EWMA 2026

DE WU
DEUTSCHER WUNDKONGRESS

 **WundD-A-CH**

ANTICIPATED IMPACT/TRANSLATION



INOVATION

Innovative educational model using AI to support learning in wound care.



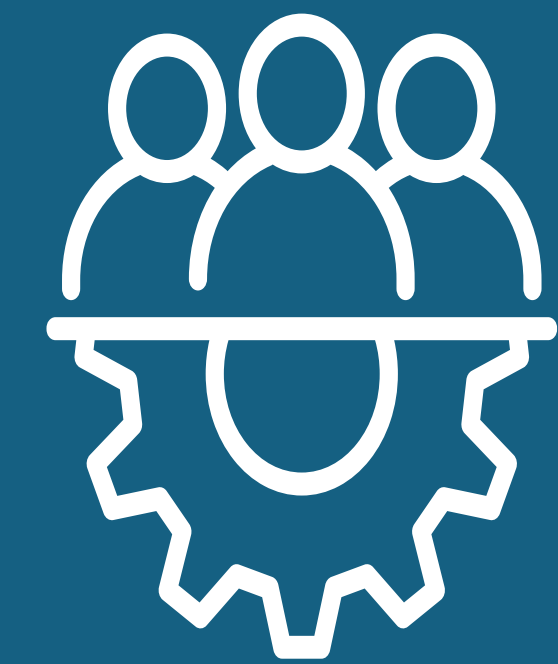
QUALITY

Expected to enhance the quality of education and support high-quality, evidence-based care.



COMPETENCY DEVELOPMENT

Strengthens wound assessment skills and evidence-based practice.



SCALABILITY

National and international potential, expandable to broader areas and to a wider range of healthcare professionals.

REFERENCES:



BREMEN, GERMANY 6 - 8 MAY 2026

The 36th Conference of the European
Wound Management Association
EWMA 2026

DE WU
DEUTSCHER
WUNDKONGRESS

 **WundD-A-CH**