



Understanding the causes, consequences, and measures to address teacher shortages in developed countries

EAPRIL 2025 Conference

Valletta, November 25-27, 2025



dr. Hanneke Theelen, Zuyd University of Applied Sciences, The Netherlands

dr. Dave van Breukelen, Fontys University of Applied Sciences, The Netherlands



Rationale, aim and research question

RATIONALE

- Shortages persist despite current measures (UNESCO, 2024).
- Existing research is fragmented (e.g., Gooden et al., 2023; Peyton et al., 2021):
 - Focus on single aspects (e.g., workload, recruitment, retirement)
 - Limited to specific contexts (e.g., countries, sectors, subjects)
- Lack of a holistic understanding of the problem (Håkansson Lindqvist & Gidlund, 2024)

AIM

Toward a holistic view of the global teacher shortage and sustainable solutions.

RESEARCH QUESTION

What is known about the causes, consequences, and effective measures to address teacher shortages across all educational levels in developed countries since 2007?

Teacher pipeline

TEACHER PIPELINE

The teacher career path is a **leaky pipeline**, with losses at every stage, leading to teacher shortages worldwide (Barth et al., 2016; UNESCO, 2024).



Which stage in the teacher pipeline do you think contributes most to teacher shortages?

Theoretical background

2007-2024

Government report identifying teacher shortages as a structural risk to the Dutch knowledge economy (Rinnooy Kan Committee, 2007).

DEVELOPED COUNTRIES

- Europe and Northern America, Australia, New Zealand, Japan (World Population Review, 2024)
- Stable economy, solid educational system, structural (public) funding

TEACHER SHORTAGES

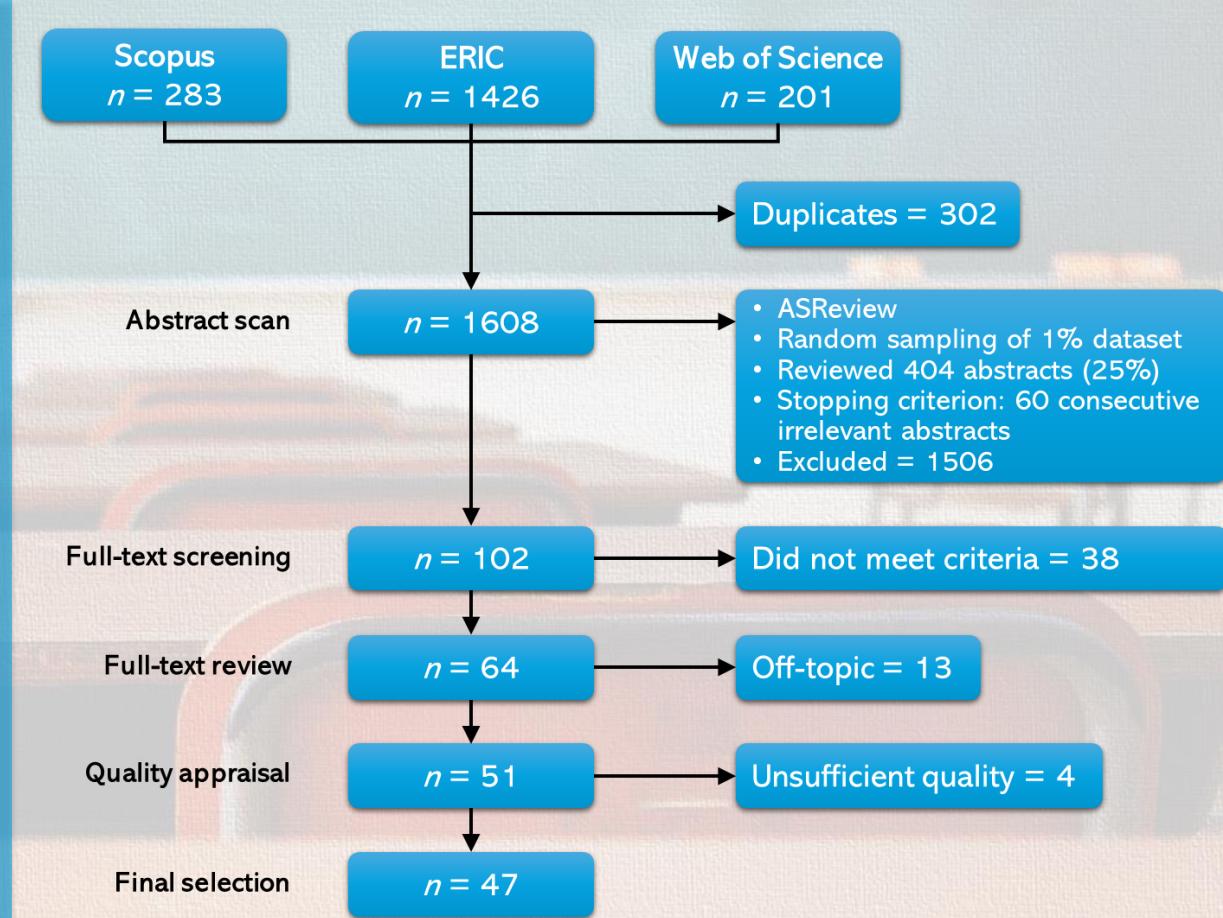
- Quantitative: insufficient teachers, average shortage of 25-40% in 2030 (UNESCO, 2024)
- Qualitative: lack of qualifications, competences, and expertise (Gorard et al., 2024)

FREQUENTLY MENTIONED ISSUES

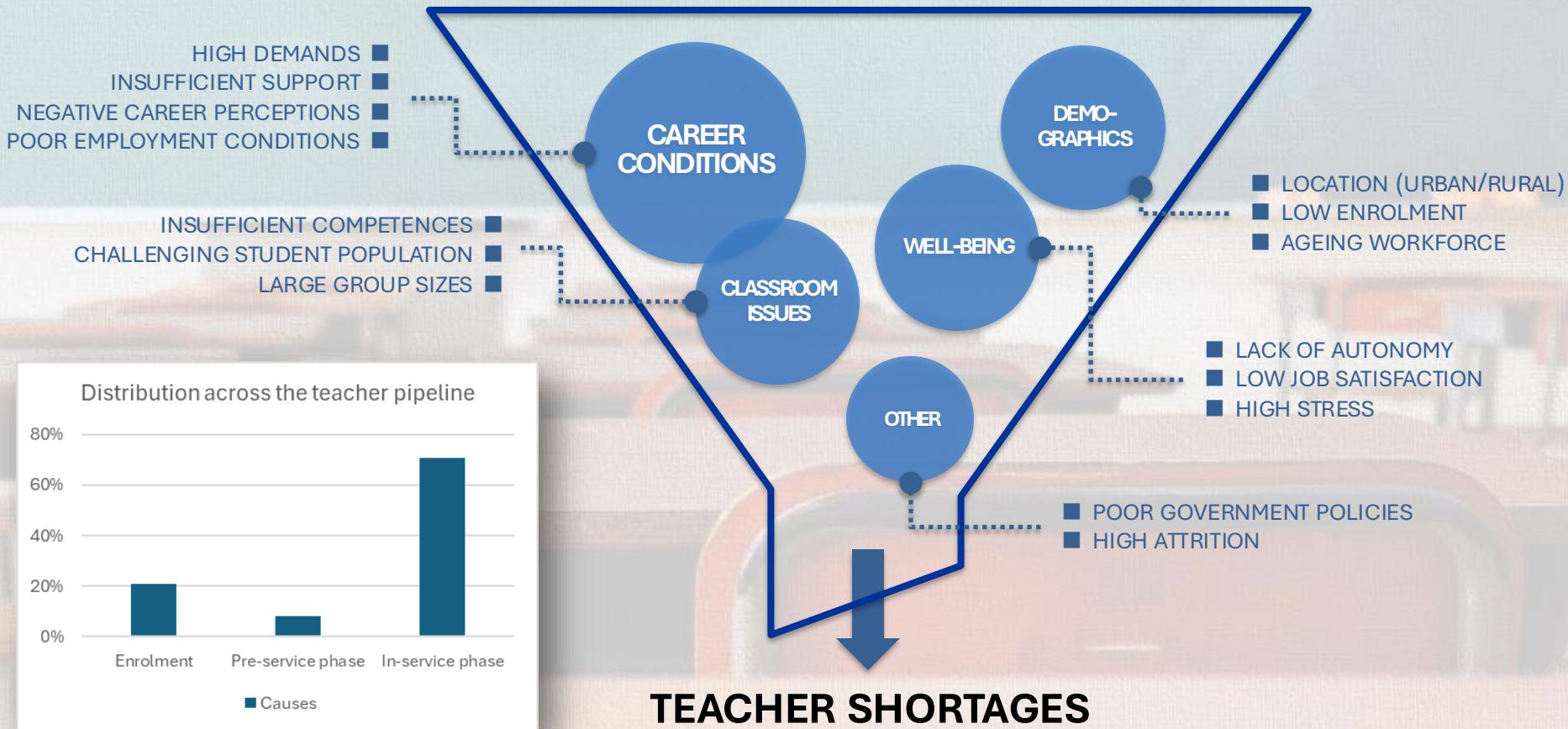
- Low intake and high dropout in teacher education and profession (Slichko et al., 2023)
- Ineffective policy measures (UNESCO, 2024)
- Low salaries and high workload (OECD, 2023)

Method

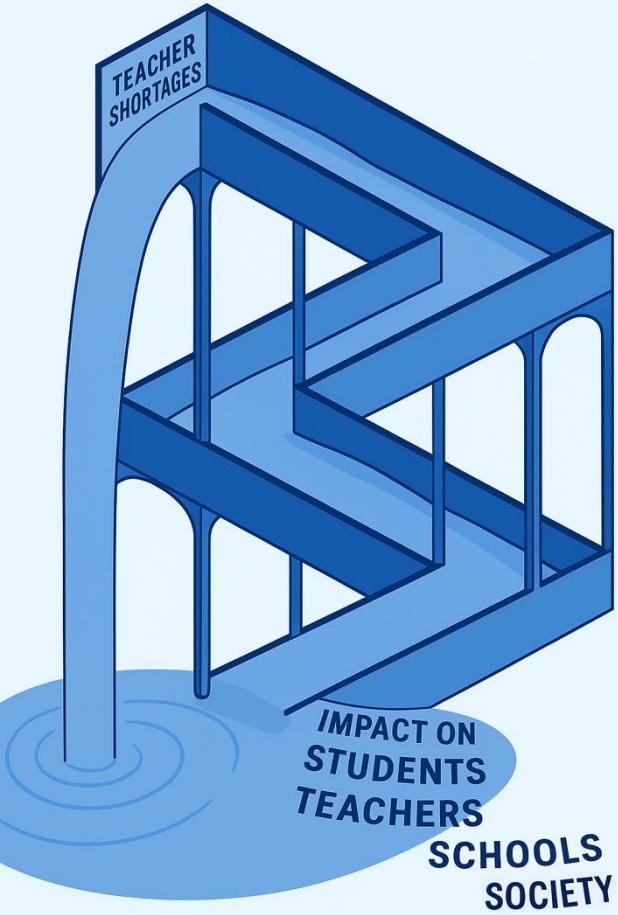
- Systematic literature review
- Scopus, ERIC, Web of Science
- Search and inclusion criteria:
 - 2007-2024, peer-reviewed
 - Englisch or Dutch
 - research (incl. official reports)
 - teacher shortage
 - developed countries
 - all educational levels
- Quality appraisal
- Open and axial coding (Atlas.ti)
 - causes
 - consequences
 - measures (and effects)



Results ■ Causes



Results ■ Consequences



IMPACT ON STUDENTS

- REDUCED QUALITY OF EDUCATION AND TEACHING
- DECLINE IN STUDENT OUTCOMES AND CARE
- UNEQUAL AND UNSTABLE EDUCATION SYSTEMS

IMPACT ON TEACHERS

- ONGOING TEACHER TURNOVER AND CAREER SHIFTS
- INCREASED WORKLOAD AND CHALLENGES FOR REMAINING STAFF
- EMOTIONAL STRAIN AND PROFESSIONAL DISENGAGEMENT

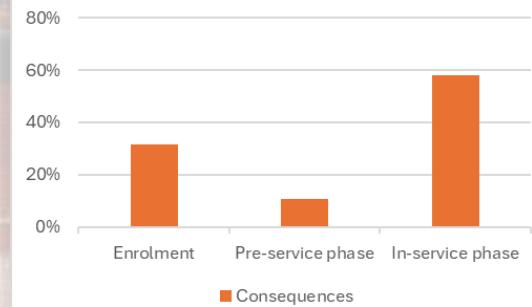
IMPACT ON SCHOOLS

- UNDERQUALIFIED TEACHING STAFF
- RISING STUDENT-TO-TEACHER RATIOS
- COST INCREASES

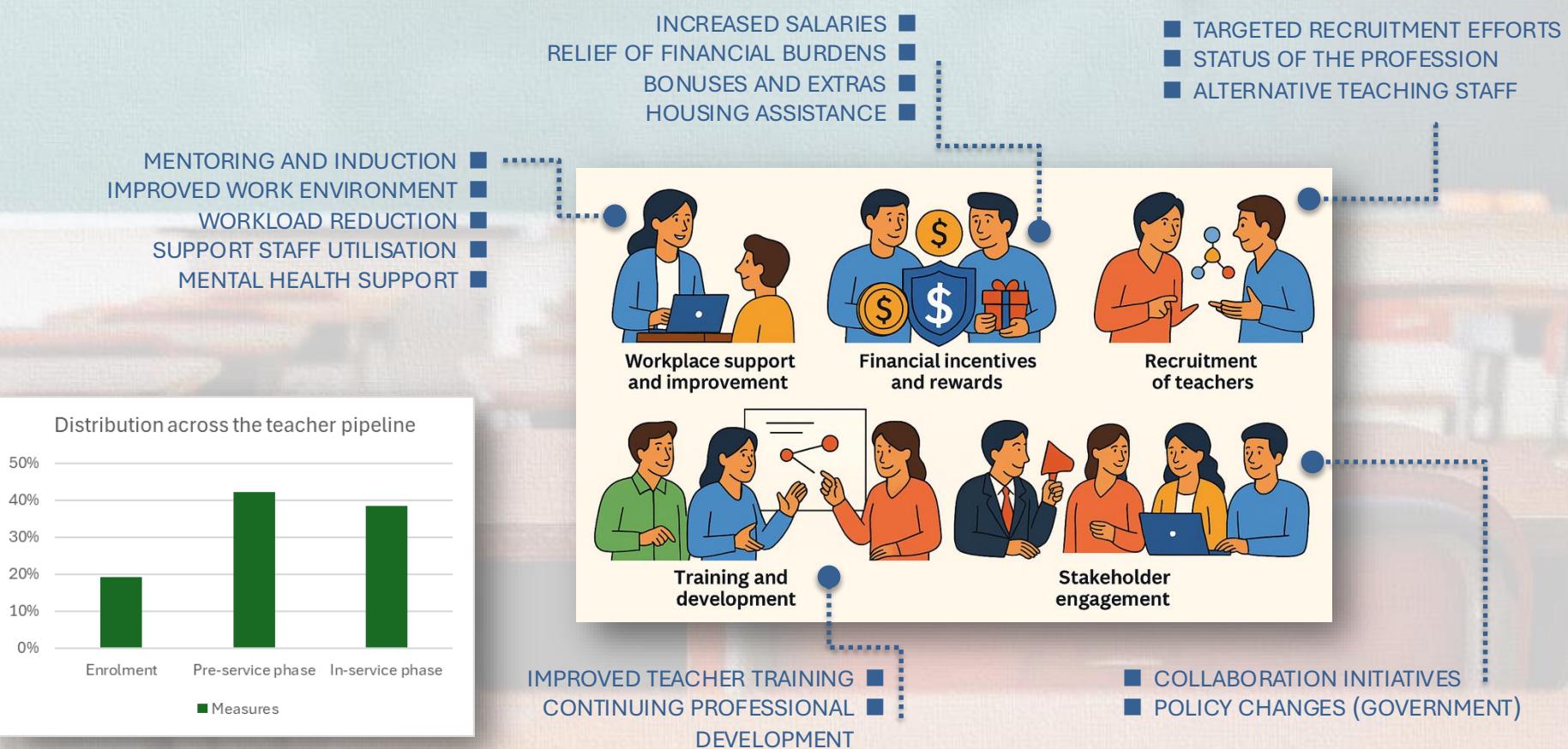
IMPACT ON SOCIETY

- POOR PUBLIC IMAGE OF THE PROFESSION
- UNDEREDUCATED WORKFORCE/CITIZENS

Distribution across the teacher pipeline



Results ■ Measures and effects



Results ■ Measures and effects

STAKEHOLDER ENGAGEMENT

schools, communities, policymakers, government, teachers, companies...



Enrolment ■ Recruitment

- Short-term: incentivising student enrolment through **rewards or promises**.
- Long-term: sustaining interest in teaching through improved **status** of the profession, **working conditions**, and **tailored training**.



Pre-service phase

- Short-term: **targeted recruitment** and **flexible pathways** to attract a more diverse pool of candidates.
- Long-term: **ongoing support** and **realistic teaching experiences** in training programs to improve **teaching competences**.



In-service phase

- Short-term: reducing **workload** and stress through **temporary measures** like **teaching assistants** and smaller **class sizes**.
- Long-term: investing in better-aligned **teaching competences**, sustainable measures to improve the **working climate**, and **development perspectives**.

Conclusion and recommendations

Conclusion

Teacher shortages are complex and context-specific: one-size-fits-all solutions don't work.

Poor working conditions and low societal status create a negative self-reinforcing cycle.

Quick fixes often seem preferable, yet they are insufficient: long-term, pipeline-wide strategies are essential.

Effective collaboration among all stakeholders is vital.

RECOMMENDATIONS

TARGET ALL STAGES OF THE PIPELINE



LONG-TERM STRATEGIES



CONTEXTUAL DEMANDS



COLLECTIVE RESPONSIBILITY



STATUS AND PROFESSIONAL IMAGE

- RECOGNITION
- WORKING CONDITIONS
- FLEXIBLE TRAINING
- REALISTIC EXPERIENCES
- ONGOING SUPPORT
- TEACHING SKILLS
- CAREER DEVELOPMENT
- TAILORED TRAINING



Thank you for your attention

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dr. Hanneke Theelen, Zuyd University of Applied Sciences, The Netherlands
hanneke.theelen@zuyd.nl

dr. Dave van Breukelen, Fontys University of Applied Sciences, The Netherlands
d.vanbreukelen@fontys.nl

