How to enhance transversal competences in doctoral education in various international contexts: Insights from an ongoing programme between European and Mozambican Universities

Fostering a sustainable platform to support
PhD training in Health Sciences in Mozambique

EUA-CDE Annual Meeting, "20 years of progress - Celebrating the achievements and shaping the future of doctoral education in Europe", 4-6 June 2025, in Lausanne

PhD4MOZ

November 2023 – October 2026

Co-funded by the European Union

Higher Education Institutions

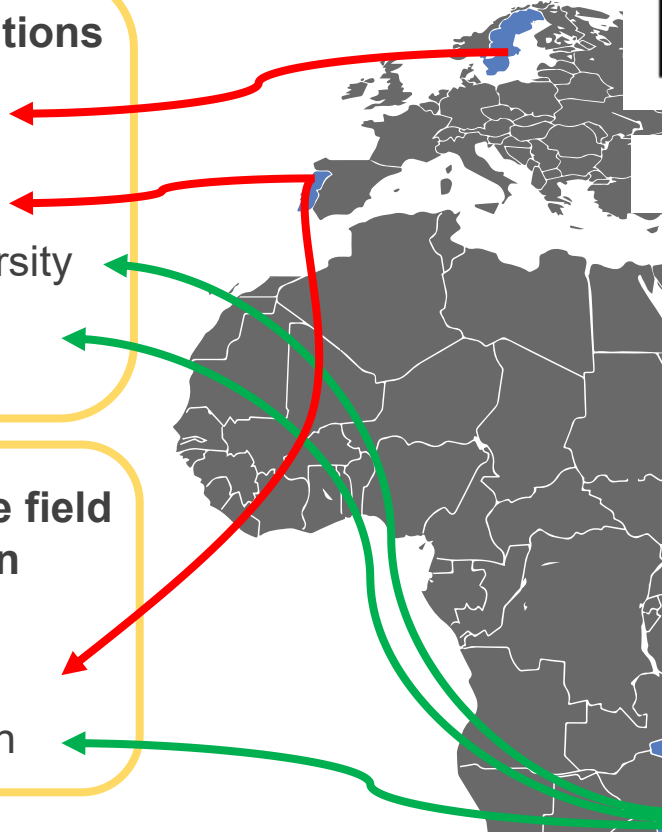Karolinska Institutet

University of Minho

Eduardo Mondlane University

Pedagogical University of Maputo

Institutions active in the field of Higher Education

TecMinho

National Institute of Health

orpheus

ORganisation of PhD Education in Biomedicine and Health Sciences in the EUropean System

Associated institution; supports voluntarily the consortium

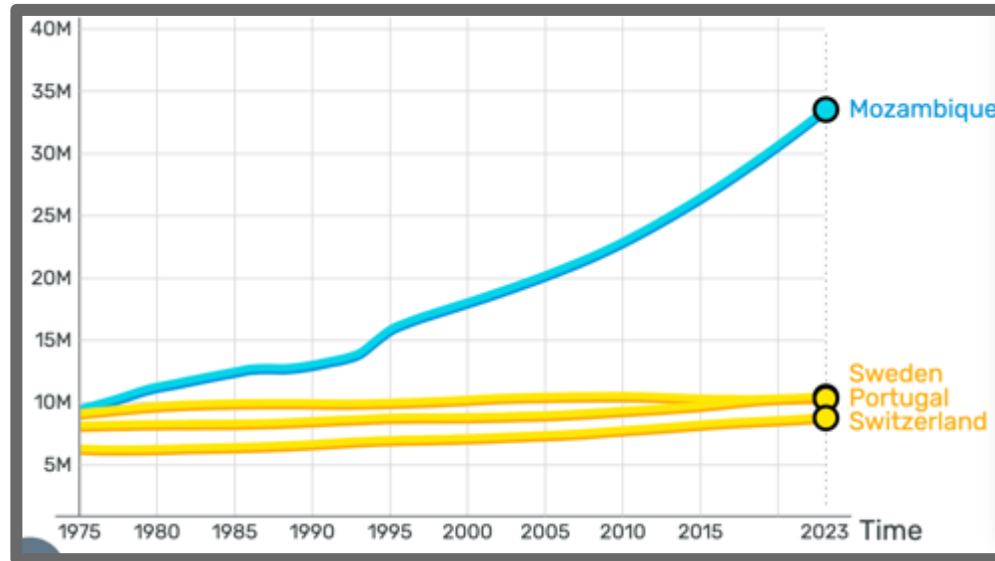UNIVERSIDADE EDUARDO MONDLANE · FACULDADE DE MEDICINA · INSTITUTO NACIONAL DE SAÚDE MOÇAMBIQUE · Karolinska Institutet ANNO 1810 · TECMINHO UNIVERSIDADE DO MINHO INTERFACE · Universidade do Minho Escola de Medicina
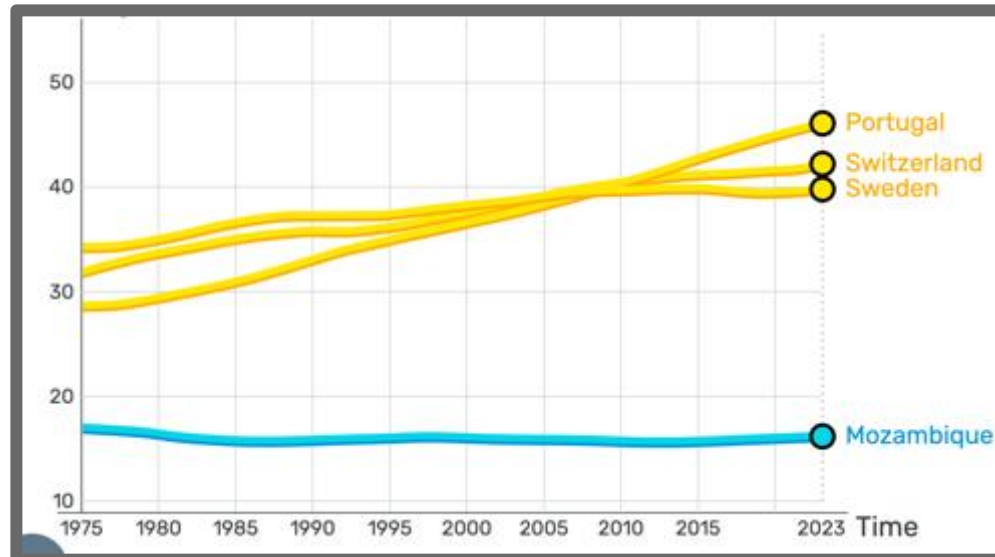
Mozambique

Population

Median age (years)

Mozambique

Population

Median age (years)

801,590 km²

Mozambique

Population chart (Mozambique, Sweden, Portugal, Switzerland), 1975–2023

Median age (years) chart (Portugal, Switzerland, Sweden, Mozambique), 1975–2023
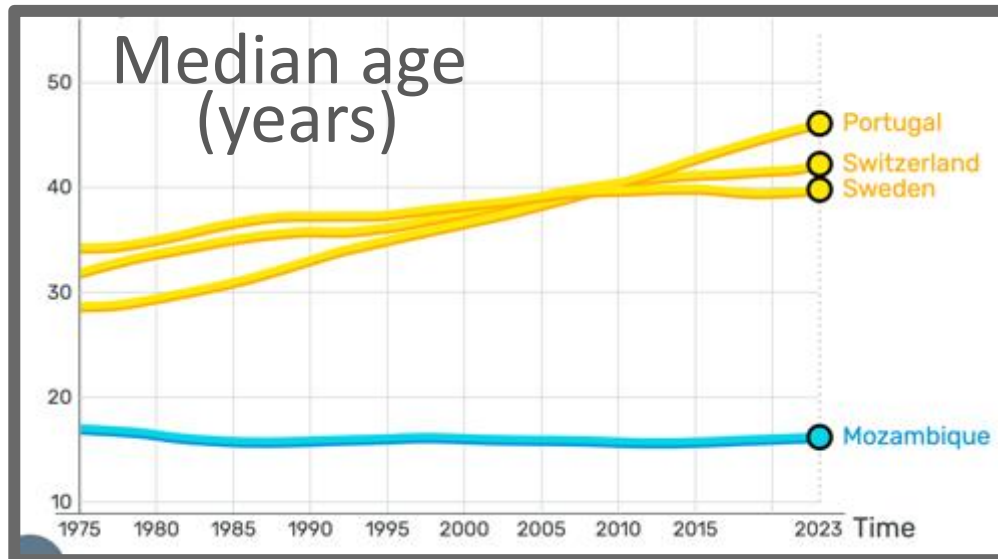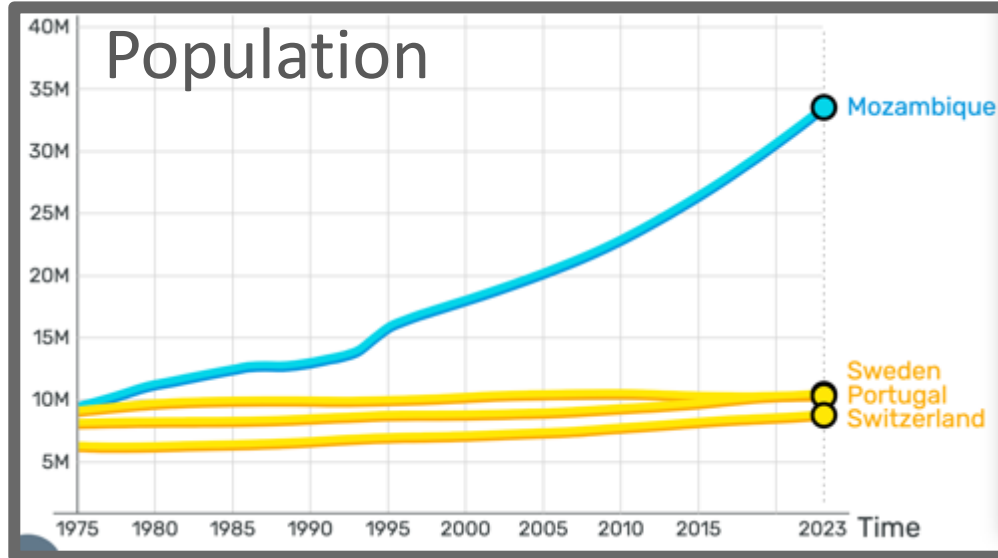

Map comparison: Mozambique, Switzerland, Portugal — 801,590 km²

Mozambique

Population

Median age (years)

Portugal
Switzerland
Sweden

Mozambique

Portugal

801,590 km²

Mozambique

Population
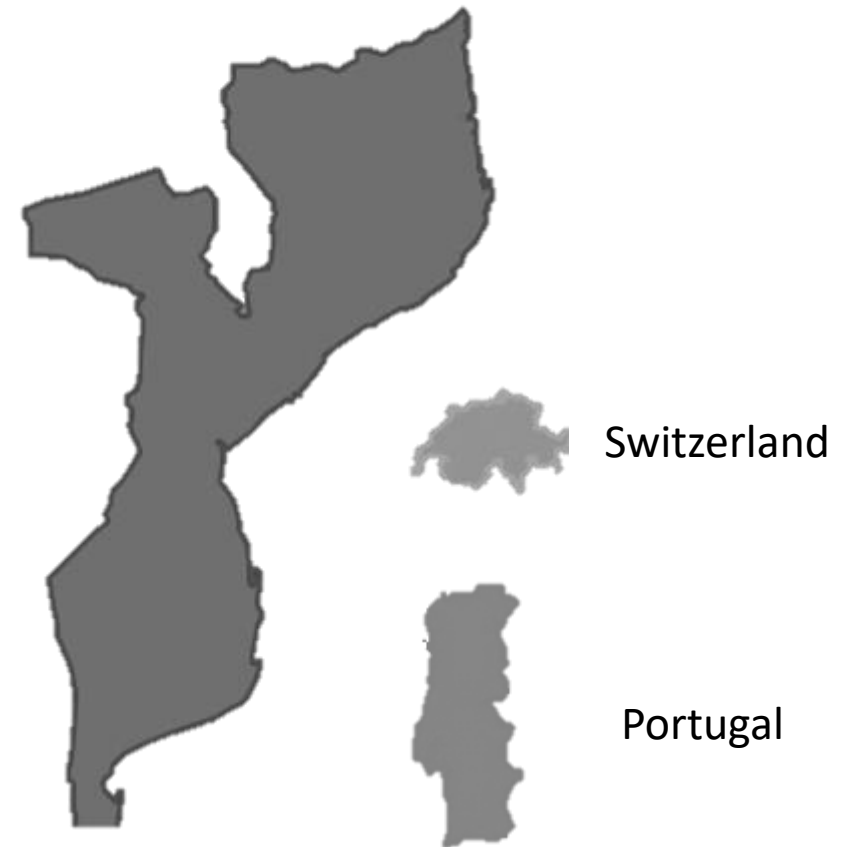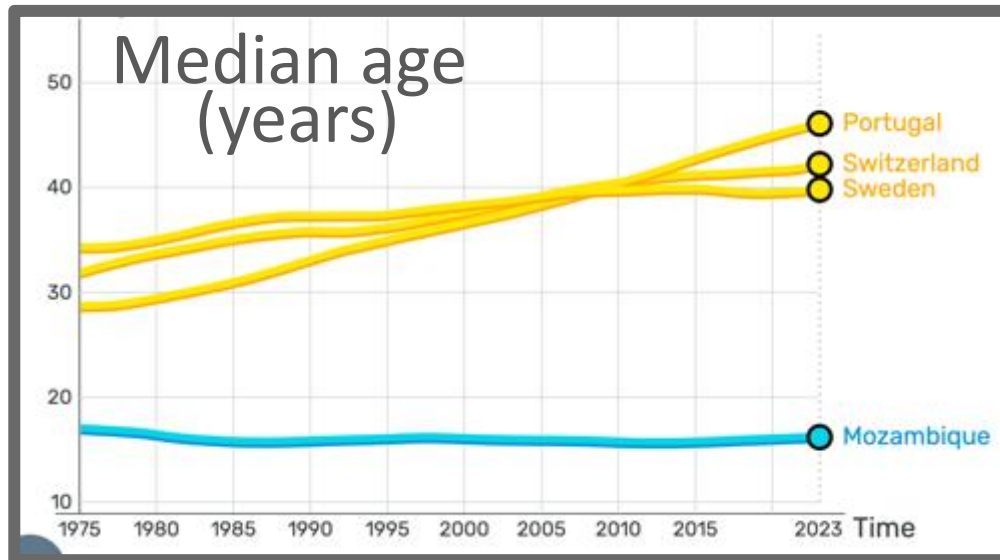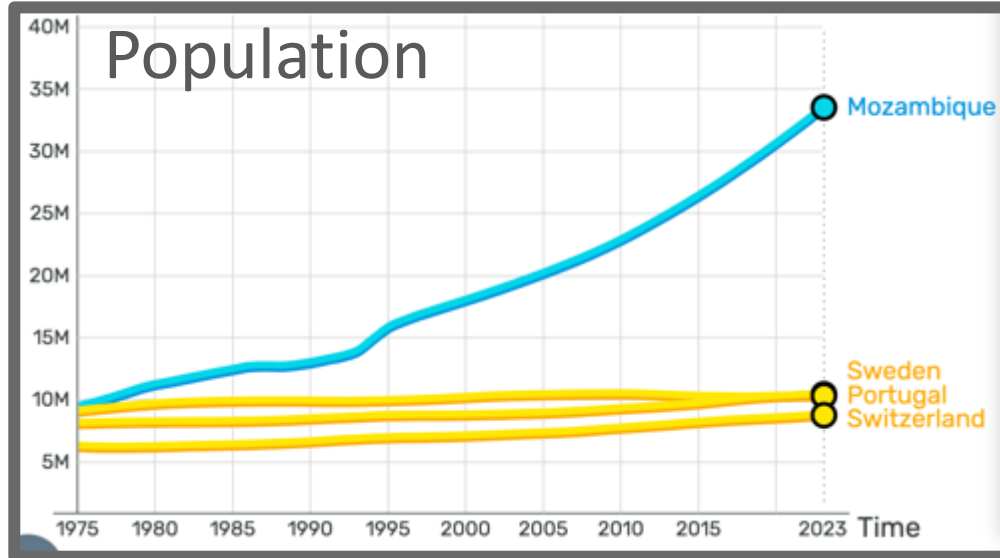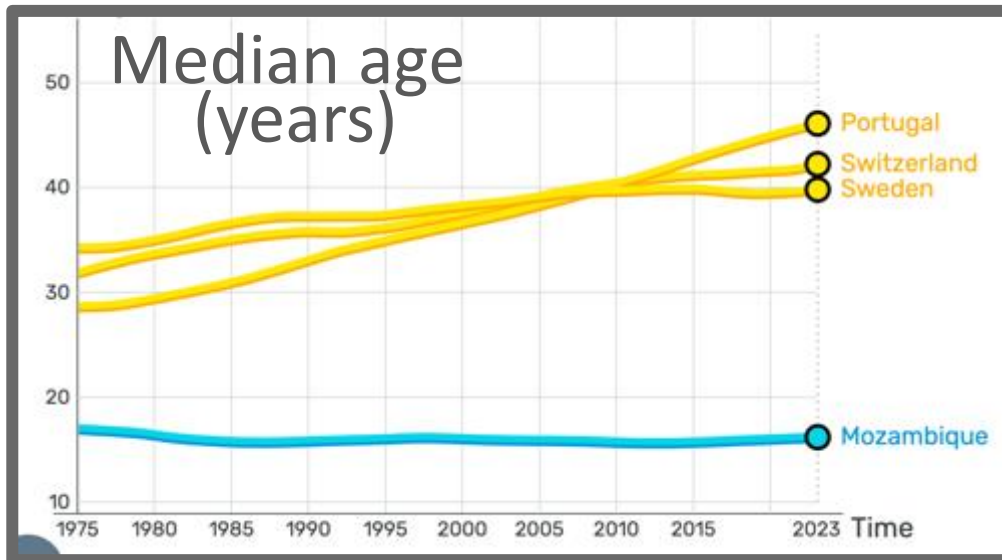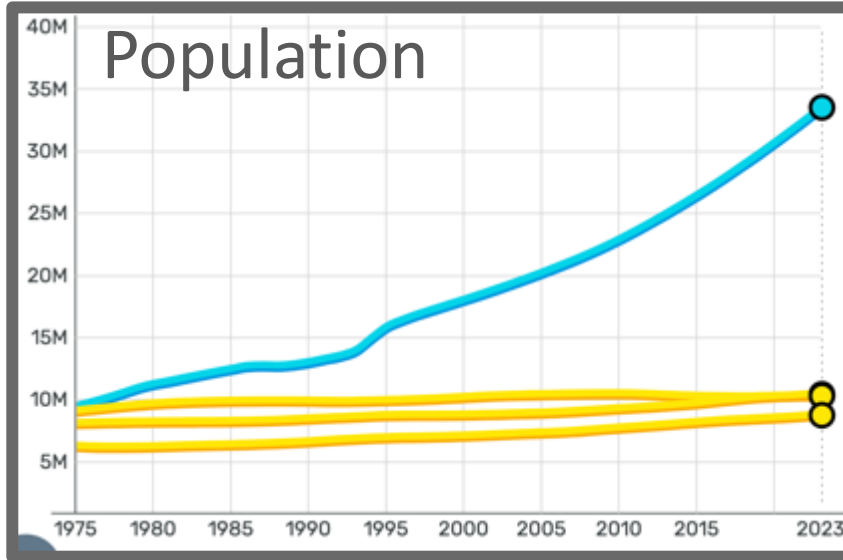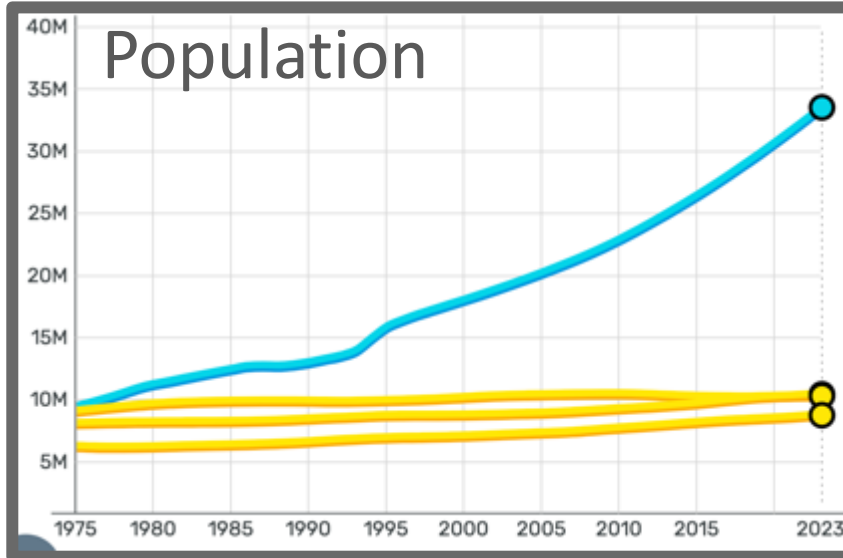
Support PhD training in Mozambique is needed....

Pilar 1
tranversal skills

Pilar 2
discipline-based courses

Pilar 3
supporting PhD supervision

Online eLearning platform

PhD4MOZ

Co-funded by the European Union

Erasmus+

In-person versus on-line
Synchronous versus asynchronous

Images generated with ChatGPT
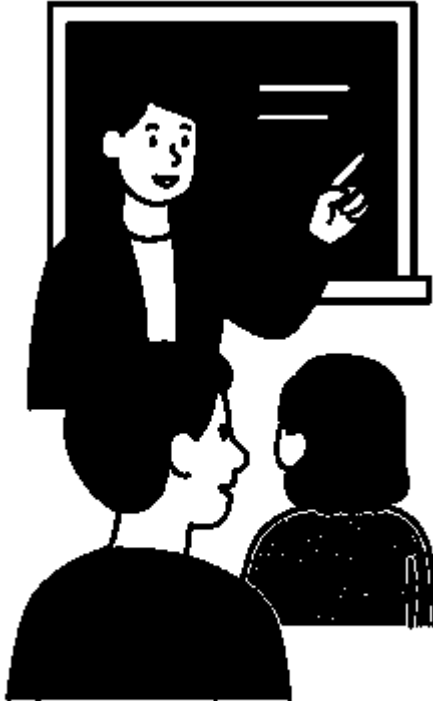
PhD4Moz E-Learning platform
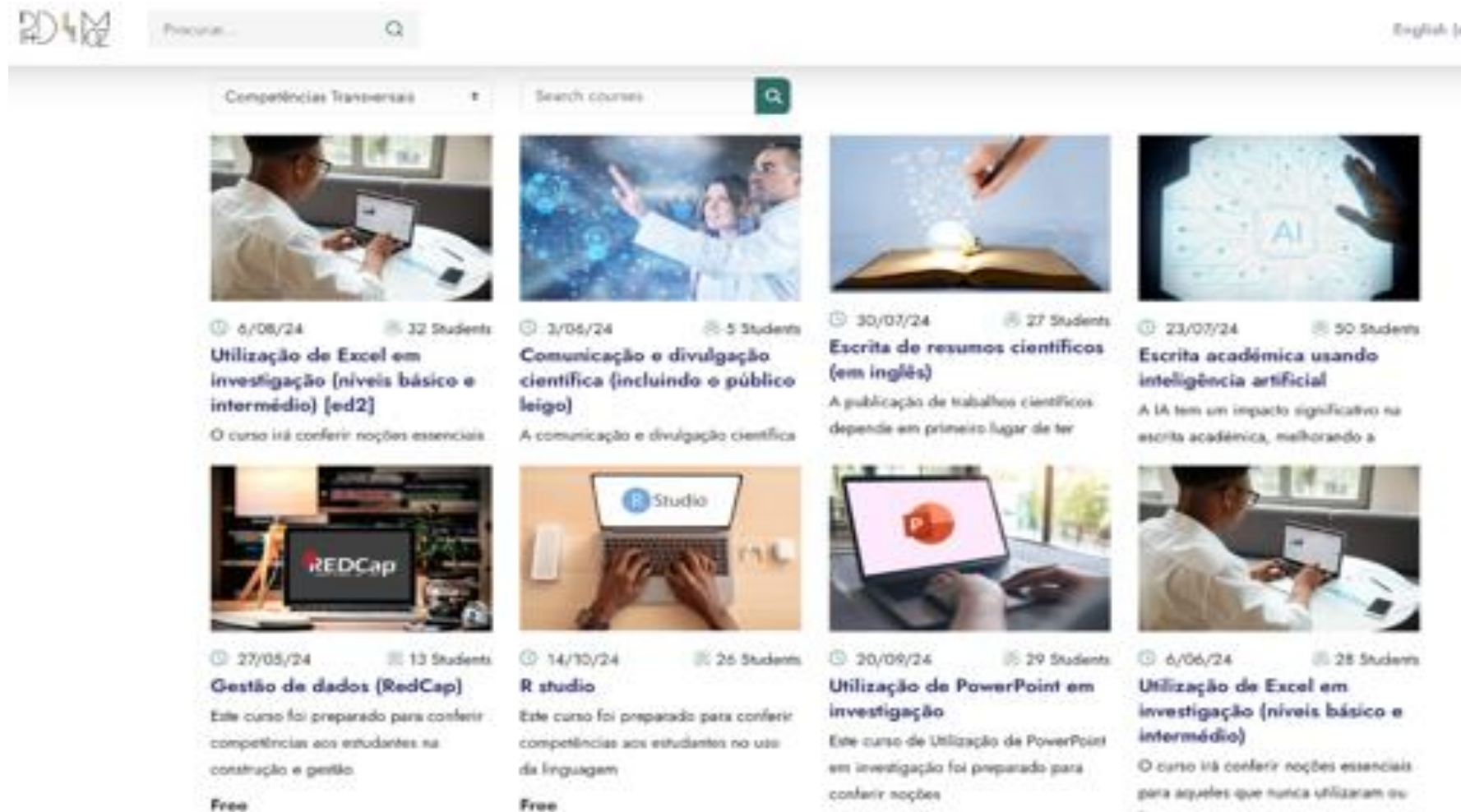
Used for each course.
Students can go back to the training materials.

What transversal skills do PhD students in Mozambique need the most?

- Sustainability and management
- Leadership and teambuilding
- Project management
- Conflict management

- Best clinical and laboratory pratices
- Ethics in human and animal research
- Submitting to ethical committees, consent letter

PERSONAL AND PROFESSIONAL DEVELOPMENT

RESEARCH AND LEADERSHIP MANAGEMENT

PhD4Moz Transversal skills matrix

SCIENTIFIC WRITING AND COMMUNICATION

DIGITAL SKILLS AND OFFICE TOOLS

RESEARCH METHODS

RESPONSIBLE CONDUCT IN RESEARCH

Transversal skills Matrix – a continuous ongoing work

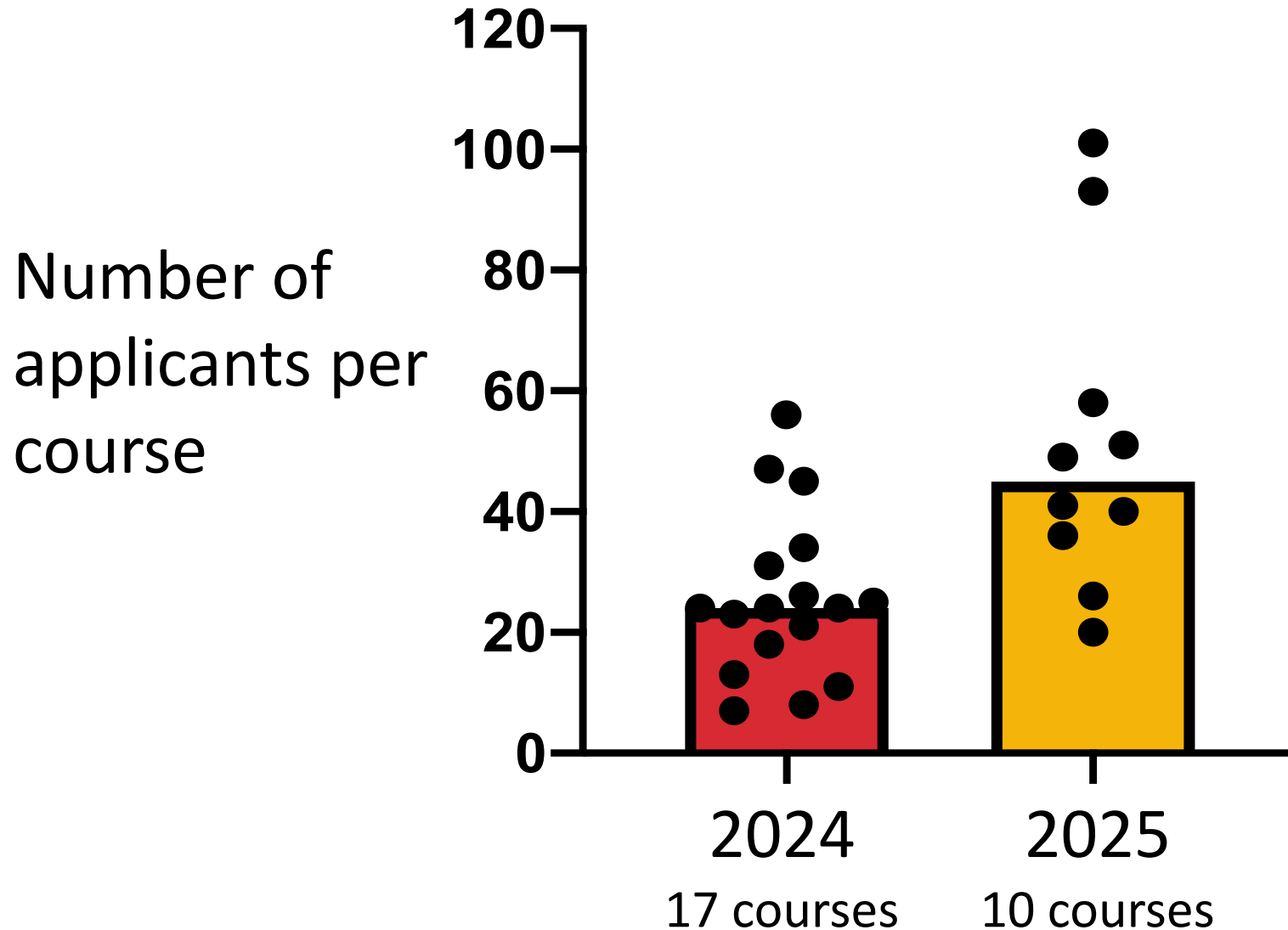| Categorias / Categories	Português	English
Desenvolvimento pessoal e profissional / **Personal and professional development**	Estratégias de autogestão Desenvolvimento de carreira Hábitos que potenciam o sucesso Desenvolvimento pessoal contínuo Estratégias de gestão de tempo Organização de dados e de documentos Estratégias de colaboração profissional	Self management strategies Career management Habits that boost success Continuous professional development Time management strategies Organization of data and documents Collaboration strategies
Competências digitais e ferramentas do office / **Digital skills and office tools**	Utilização de Word em investigação Utilização de Excel em investigação Utilização de Power-point em investigação **Competências digitais básicas** R studio Gestão de dados (RedCAP) Ferramentas de gestão de projetos (Asana) Utilização de inteligência artificial na escrita académica **Power BI** **SPSS** **STATA**	How to use word in research How to use Excel in research How to use Power-point in research **Basic digital competences** R studio Data management (RedCAP) Project management tools (Asana) Using artificial inteligence for academic writing **Power BI** **SPSS** **STATA**
Métodos em investigação / **Research methods**	Desenho de estudo Fundamentos de bioestatística Bioestatística avançada **Biomatemática** **Linguagem de programação Python** **Análise qualitativa de dados com MAXQDA** **Análise Espacial ou Geoprocessamento / Georeferenciamento** Análise crítica de artigos científicos	Study design Fundamentals in biostatistics Advanced biostatistics **Biomatemathics** **Programming language Python** **Qualitative data analysis using MAXQDA** **Spatial Analysis or Geoprocessing** Critical analysis of scientific papers
Gestão e liderança em investigação / **Research and leadership management**	Comunicação interpessoal Liderança e gestão de equipas Gestão de projetos **Relações públicas e protocolo** **Como identificar fontes de financiamento em ciência** Gestão de conflitos	Interpersonal communication Leadership and teambuilding Project management **Public relations and protocol** **Identification of funding sources for science** Conflict management
Comunicação e escrita científica / **Scientific writing and communication**	Apresentações orais (2, 10, 30 min) Comunicação em público Comunicação e divulgação científica (incluindo o público leigo) Escrita de propostas de financiamento Escrita de resumos científicos (português e inglês) Escrita de artigos científicos com dados originais Escrita Científica Seleção de referências chave e referenciação Revisões sistemáticas Meta-análises Inglês oral / conversação	Oral presentations (2, 10, 30 min) Communicating in Public Communication and dissemination of research (including lay audiences) Successful grant poposal writing Abstract writing (Portuguese and English) Full papper with original data writing Scientific writing Selecting key references and referentiation Systematic reviews Meta-analysis Spoken English / conversation
Conduta responsável em investigação / **Responsible conduct in research**	Boas práticas de laboratório em investigação Boas práticas em investigação clínica Ética na investigação com animais de laboratório Ética na investigação clínica Apresentação aos comités de ética, carta de consentimento informado Ética e integridade na investigação Ética e regulamentação nos ensaios clínicos	Best laboratory pratices in research Best pratices in clinical research Ethics in animal research Ethics in clinical research Submitting to ethical committees, consent letter Research ethics and integrity Ethics and regulations in clinical trials

Transversal skills – year 1

-Over 100 students

-Each student completed 1 to 8 courses

-Feedback from students - for each course and each trainer

1	Organization of data, documents and emails
2	Habits that boost success
3	Time management strategies
4	Data management (RedCAP)
5	Excel in research 1st
6	Academic writing with artificial intelligence
7	Excel in research 2nd
8	Word in research
9	Power-point in research
10	RStudio
11	Study Design
12	Conflict management
13	Abstract writing (Portuguese)
14	Abstract writing (English)
15	Communication and dissemination of research
16	Good clinical practices
17	Good Laboratory Clinical Practices

Personal and professional development	Digital skills and office tools	Research methods	Research and leadership management	Scientific writing and communication	Responsible conduct in research
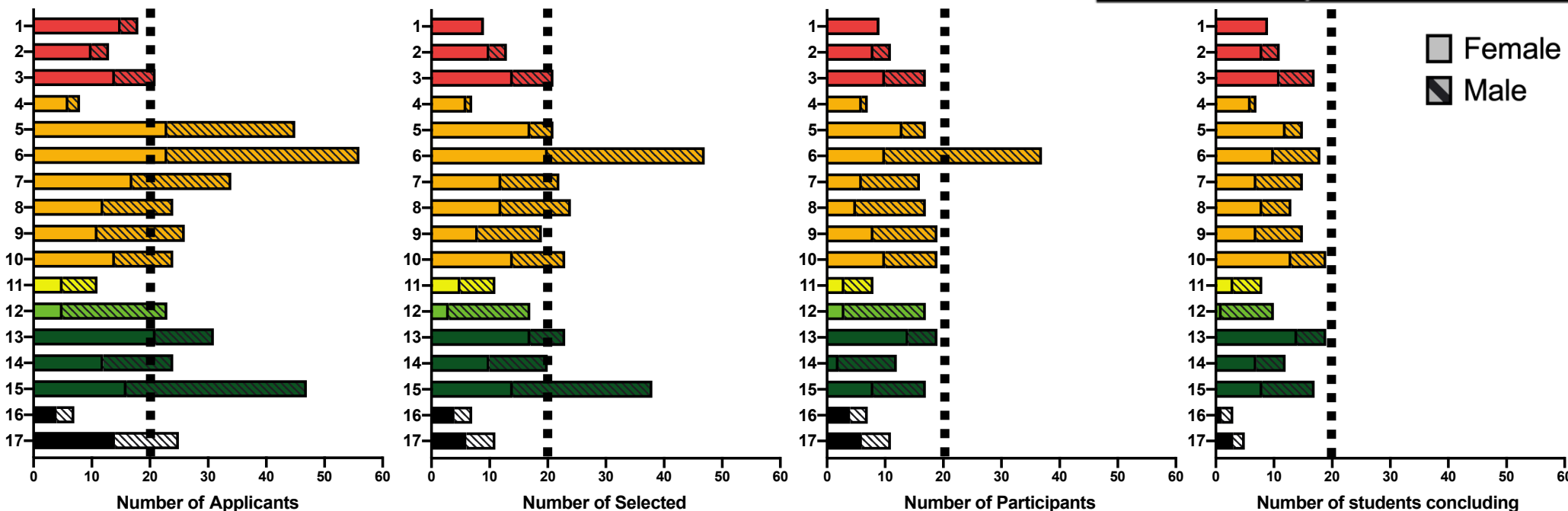
Year 2 ongoing - Increasing interest!

Number of applicants per course

2024	**2025**
17 courses	10 courses

Transversal skills – year 1 and 2 (ongoing)

Feedback from students
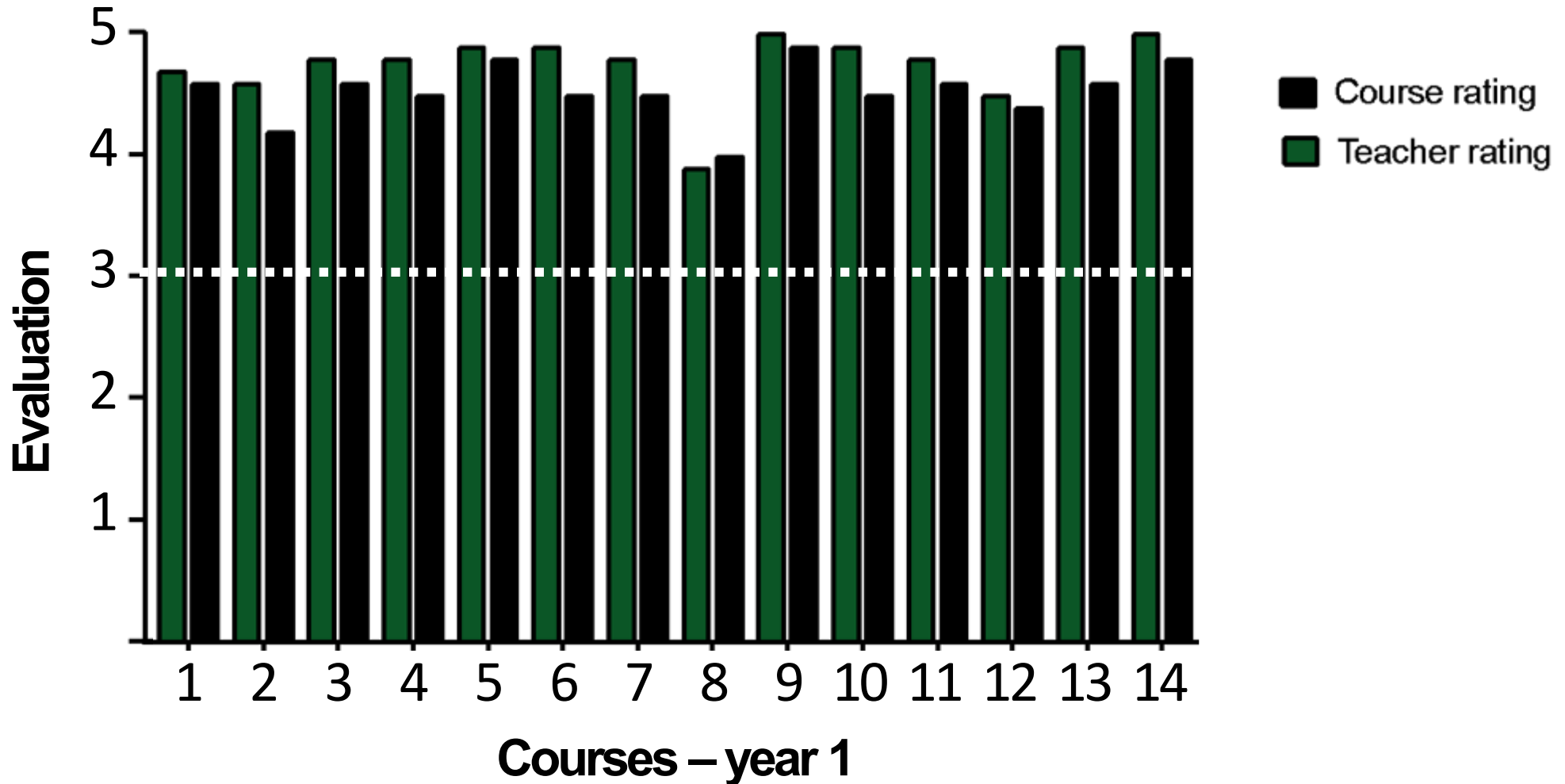
Sustainability – a big challenge

Increase the number of editions for courses with high demand
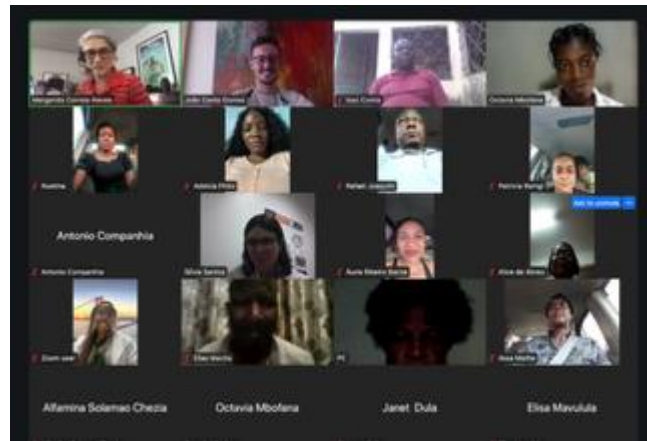 ->need to coordinate with other initiatives

Increase funding
->Apply for additional funding in collaboration with other institutions

Sustain continuous improvement and innovation
-> Continuously incorporate feedback – students, supervisors and advisors
-> Development of App to support self-evaluation of progress

Co-funded by
the European Union

Thanks for your attention

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