SEAMEO CENTRES POLICY RESEARCH NETWORK (CPRN) SUMMIT 2025

Building Bridges to a Sustainable Future: Inclusive Collaboration and Innovation in Education, Science, and Culture

TVET Teachers' Readiness for Greening Curriculum:

A Regional Study of Southeast Asian SEAMEO Countries

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Background

- Urgency of green transition in ASEAN: low carbon economy, renewable energy; climate change challenges
- ASEAN TVET Council Work Plan (2021-2030):
  - Capacity building for TVET instructors
  - Harmonization of instructor's training standards
- TVET teachers key agents of change in terms of green skills development

Theoretical framework

Purpose: To collect baseline data among ASEAN countries on the capacity of TVET educators and leaders to green TVET and use it for planning capacity building programs in the region

- Used previous research on professional competency framework for Professional Teaches standards (Pavlova, 2019)
- Based on Australian Professional Standards for Teachers
  - Professional knowledge
  - Professional practice
  - Professional engagement

Research Question

- What is the level of proficiency among TVET teachers and leaders in terms of competencies required for greening curriculum?

Data collection

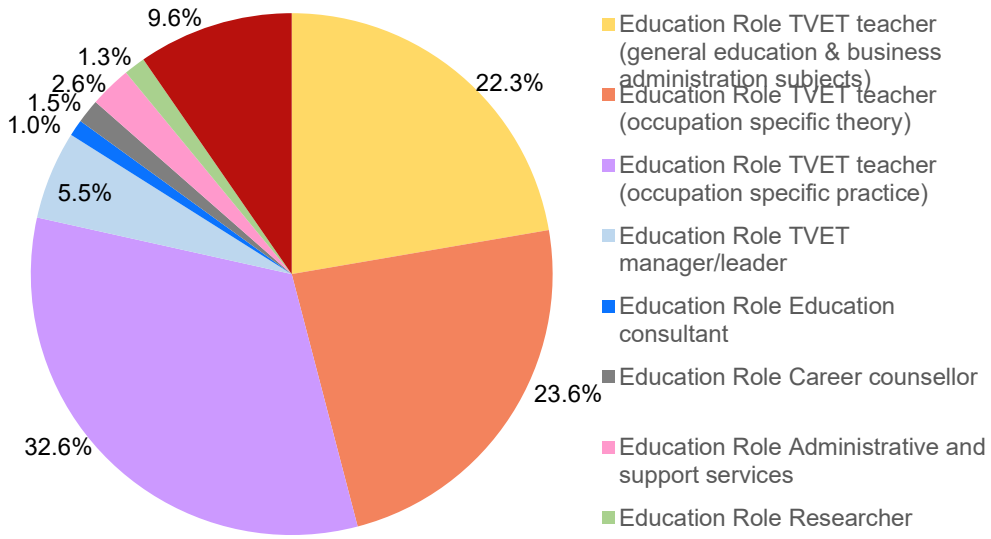
- Instrument: Self-assessment tool of proficiency on the scale from 1 to 5
- Survey was translated and distributed online
- Data collected from TVET teachers in 10 Southeast Asian countries (all SEAMEO members, except Singapore due to limited number of responses).
  - Total responses: 1,760
  - Valid responses: 1,290
  - Over 500 responses excluded due to incomplete answers in the Professional Engagement section

Methodology

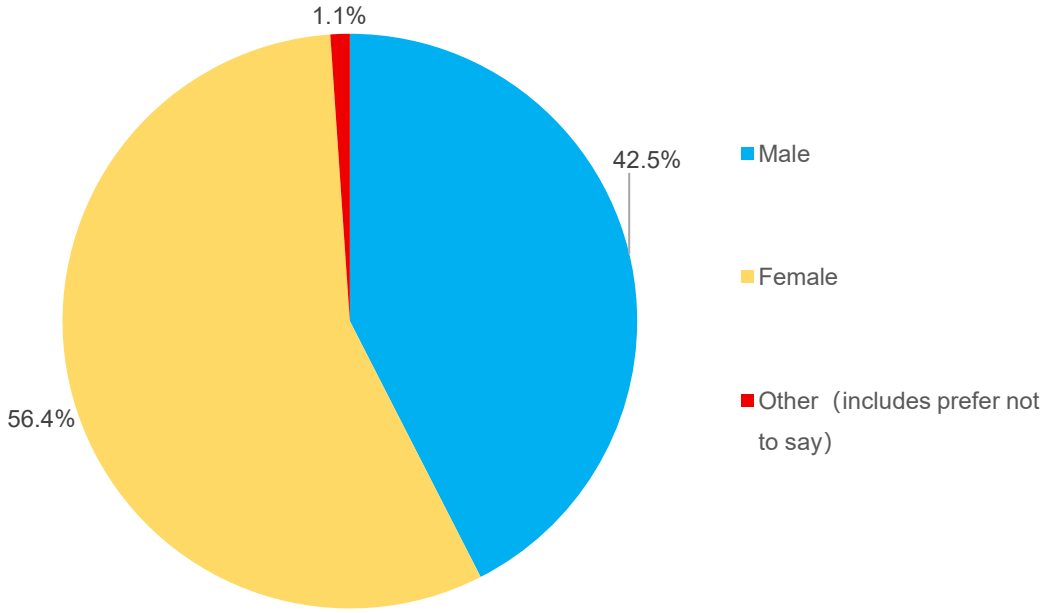
Standard	Focus area	Proficiency
Professional knowledge	Content and teaching strategies	Demonstrate knowledge and understanding of the SD concepts that form the basis for greening curriculum. Demonstrate understanding of generic green skills and their role in greening curriculum and in development of students' green mindset and generic competencies in the context of greening Demonstrate knowledge and understanding of student-centered strategies that can support active students engagement into learning about greening
	Content selection and organisation	Organize concepts into themes or modules to be taught across different subjects or as a separate subject. Organise content in a logical sequence to achieve effective learning and teaching
	Curriculum assessment and reporting	Design and implement teaching related to greening effectively; use assessment as a tool for learning and a way to provide a feedback for students. Implement assessment that is aimed to evaluate students' thinking capacity, ability to find innovative solutions to problems, explore, debate, etc.
Professional practice	Establish challenging learning goals	Set clear learning goals (challenging but achievable) for all students for each learning activity that explore SD concepts, industry-based case-studies and others
	Plan, structure and sequence learning programs	Plan each activity within or across several lessons, at a workplace or extra-curricula in a coherent and structured way to effectively engage students.
	Use teaching strategies	Choose and apply variety of teaching strategies, use effectively student-centered strategies to engage students in critical thinking, problem-solving and innovation within the context of greening
	Develop, select and use resources	Select and design resources that are appropriate for your institutional context and industry greening practices in your region/country
Professional engagement	Identify and plan professional learning needs	Demonstrate an understanding of the areas in relation to SD concepts that they need to address in their professional development
	Engage in professional learning and improve practice	Understand and identify sources for professional learning in relation to greening curriculum
	Engage with professional teaching networks and broader community	Understand the importance of external professional networks and actively participate in networks and forums to broaden knowledge in relation to greening curriculum and improve practice

Demographics

Education Roles Among Respondents Across 10 Countries (Completed Surveys)

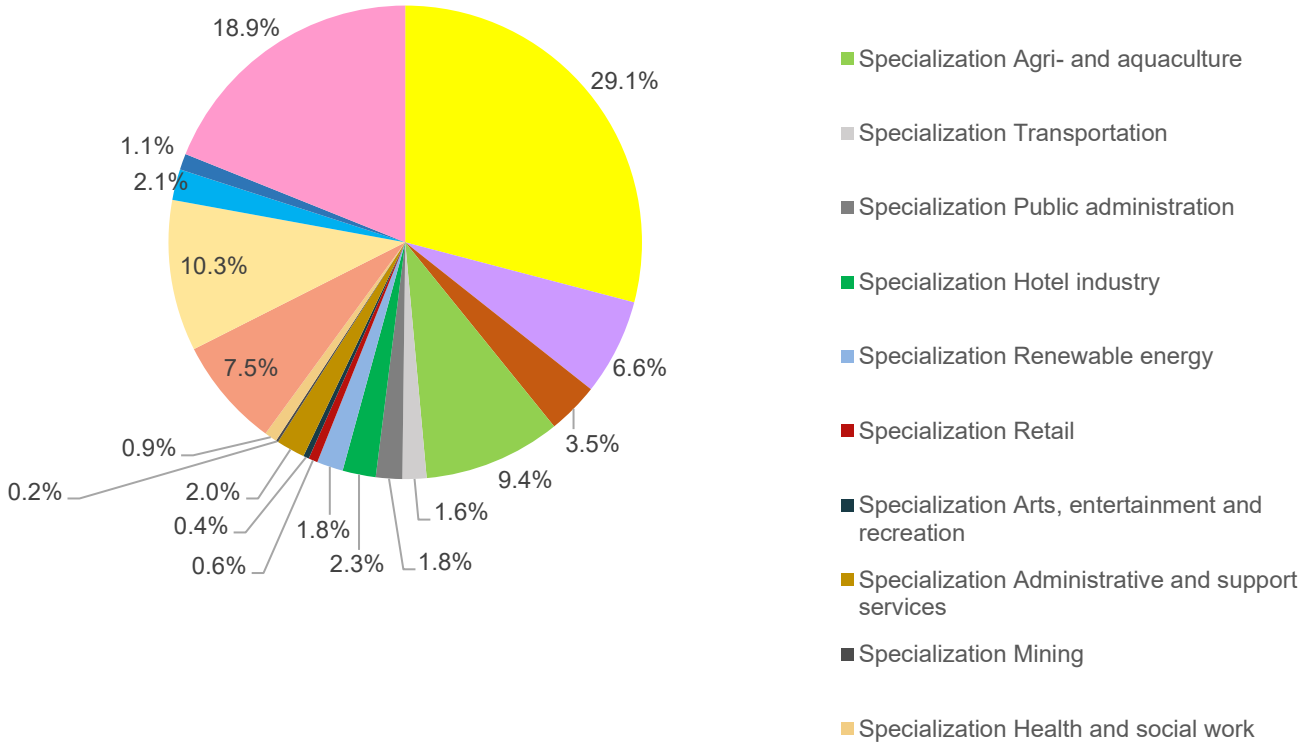


Gender Among Respondents Across 10 Countries (Completed Surveys)



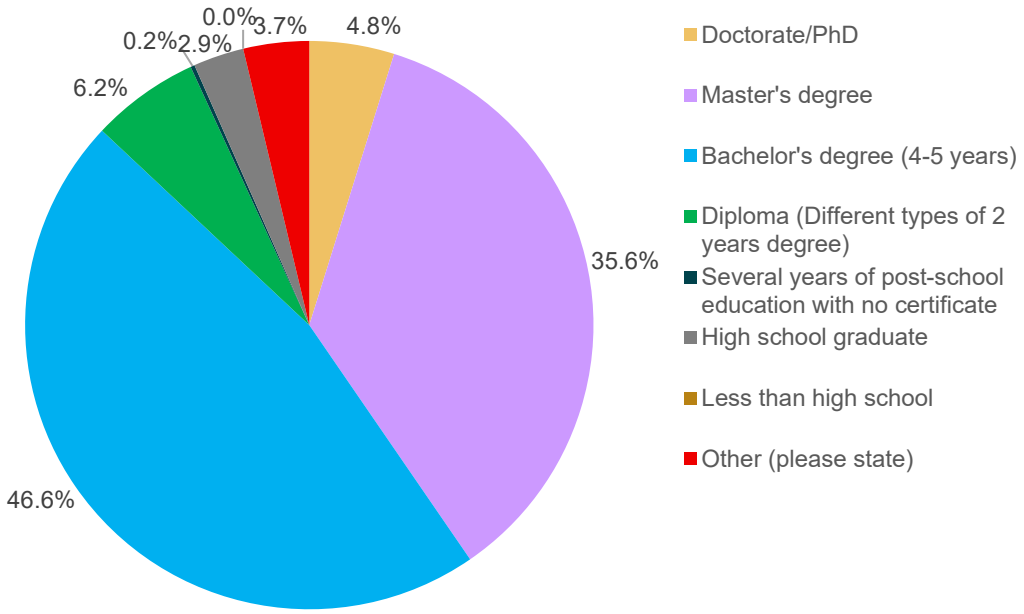
Demographics

Specialization Among Respondents Across 10 Countries (Completed Surveys)

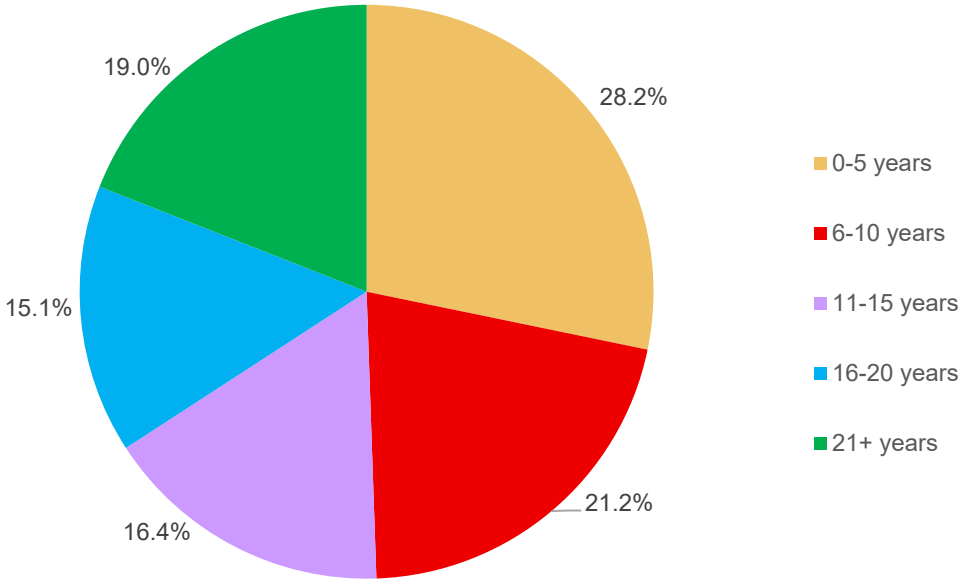


Demographics

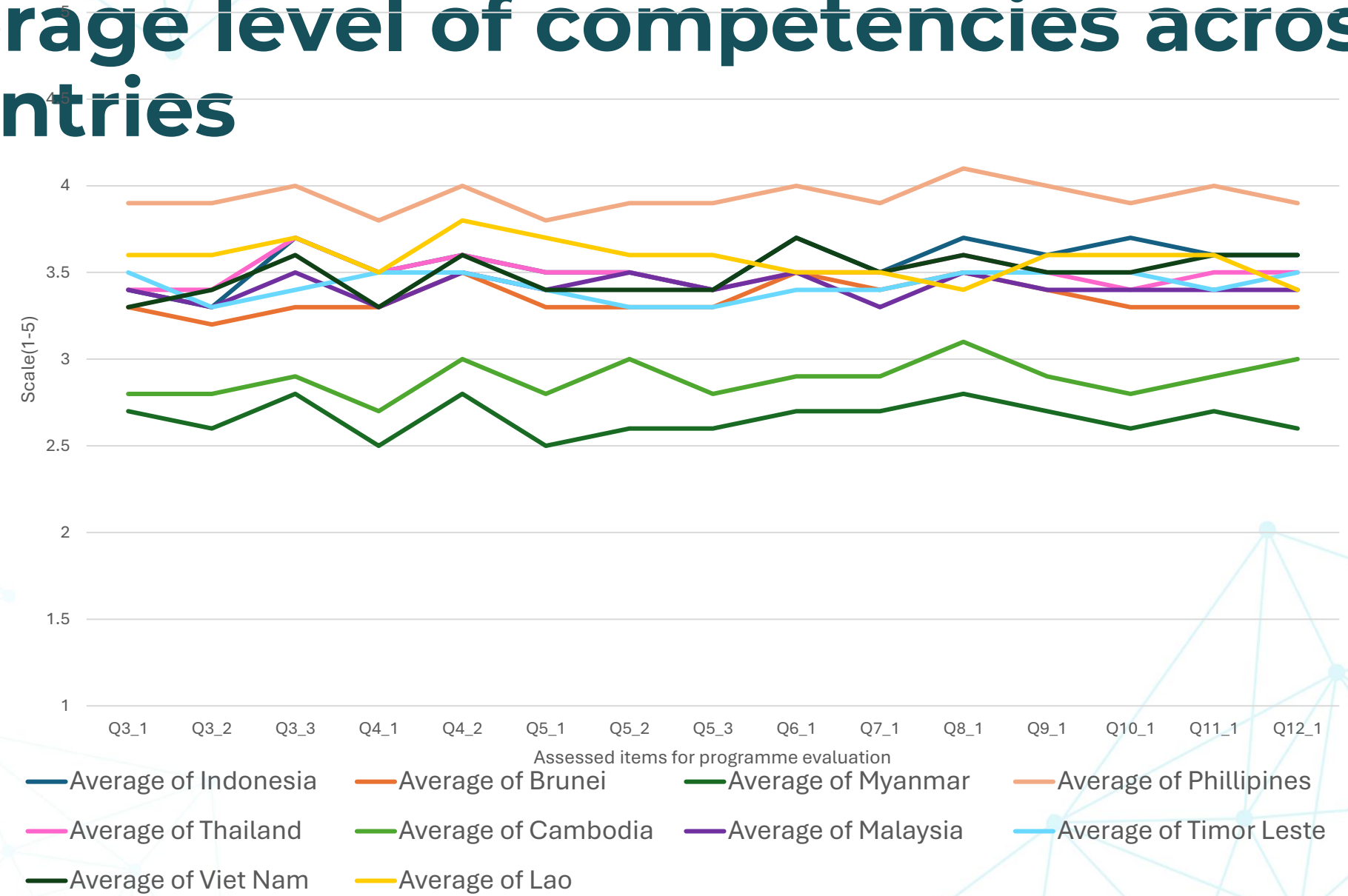
Highest Education Level Among Respondents Across 10 Countries (Completed Surveys)



Years of Teaching Experience Among Respondents Across 10 Countries (Completed Surveys)

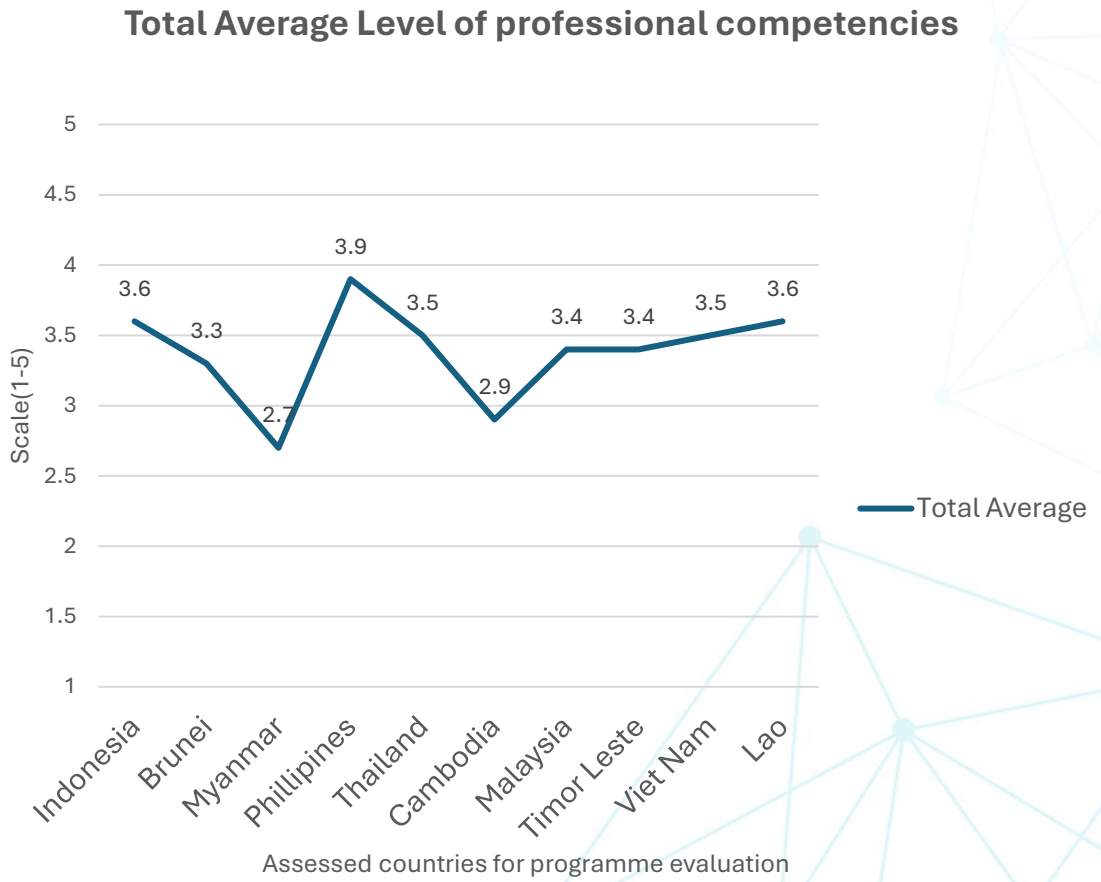


Average level of competencies across countries

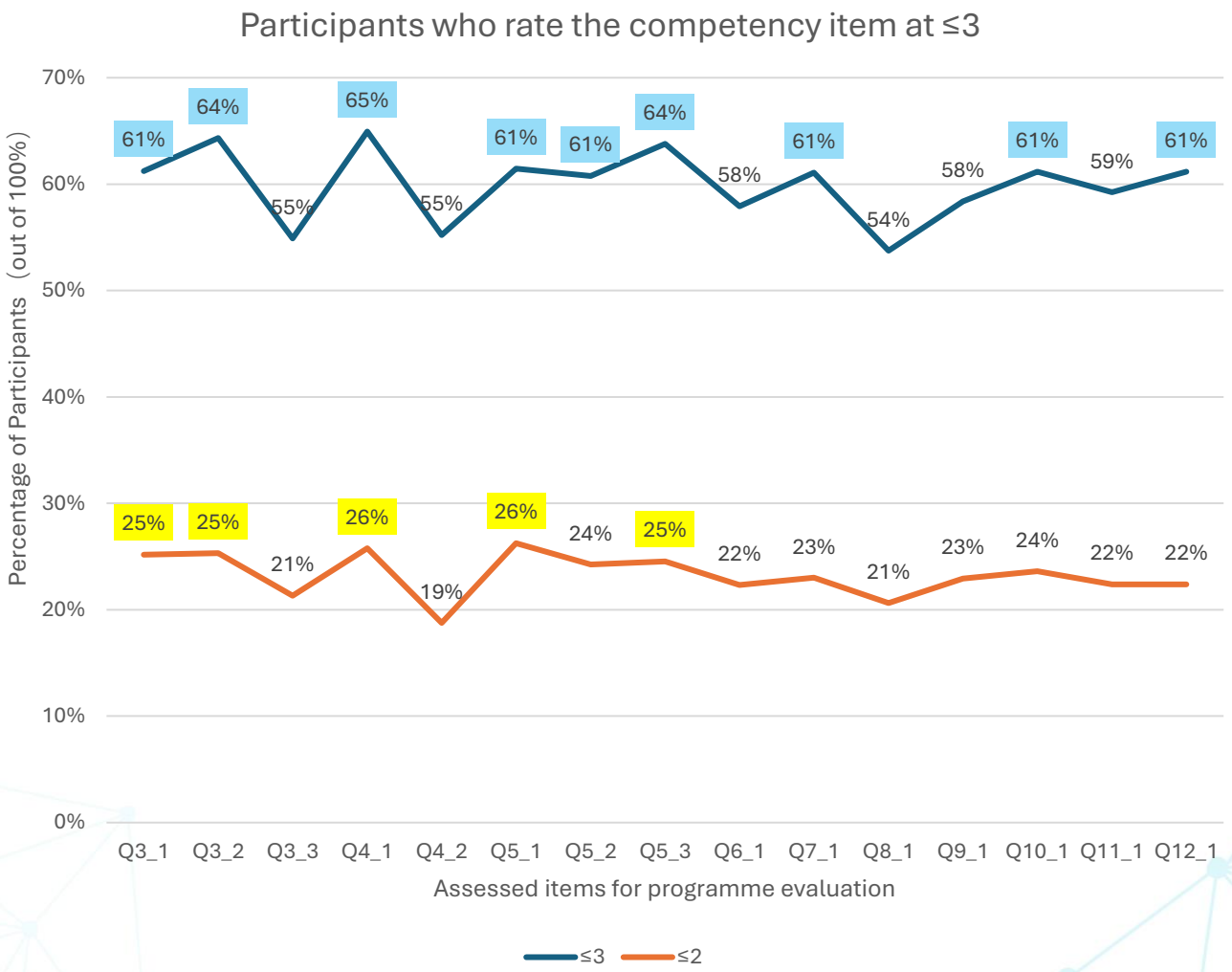


Overall level of competencies per country

- Average professional knowledge scores across all competencies range from 2.7 to 3.9 across countries



Problematic competencies



Findings – priorities for capacity building

Professional Knowledge:

Q3. In terms of the **content and teaching strategies**, I can demonstrate knowledge and understanding of:

- Q3-1: The sustainable development (SD) concepts that form the basis of greening the curriculum.
- Q3-2: Generic green skills and their role in developing students' green mindset and their generic competencies in the context of greening economies and societies.

Green colour – 61%; white colour – 64% of respondents

Findings – priorities for capacity building

Professional Knowledge (cont.):

Q4. In terms of **content selection and organization**, I can:

- Q4-1: Organize concepts related to SD into themes or modules that can be taught across different subjects, or as a separate subject.

Q5. In terms of **curriculum assessment and reporting**, I can:

- Q5-1: Design and implement learning activities related to greening that can be effectively assessed.
- Q5-2: Use assessment as a tool and means of providing feedback to students about their generic green skills development.
- Q5-3: Implement assessment that is aimed to evaluate students' generic green competencies (knowledge, values and attitudes) about finding innovative solutions to problems, exploration of challenges related to SD and greening of industries, debate SD issues, etc.

Findings – priorities for capacity building

Professional practice:

Q7. In terms of **planning, structuring and sequencing learning programs/modules for generic green skills development**, I can:

- Q7-1 Plan each activity within or across several lessons, at a workplace or extra-curricular in a coherent and structured way to effectively engage students.

Findings – priorities for capacity building

Professional Engagement:

Q10. In terms of **identifying and planning professional learning needs**, I can:

- Q10-1 Demonstrate an understanding of the areas in relation to the SD concepts that needed to be addressed in my professional development.

Q12. In terms of **engaging with professional teaching networks and the broader community**, I can:

- Q12-1 Understand the importance of external professional networks and actively participate in networks and forums to broaden my knowledge in relation to greening the curriculum and improving my practice.

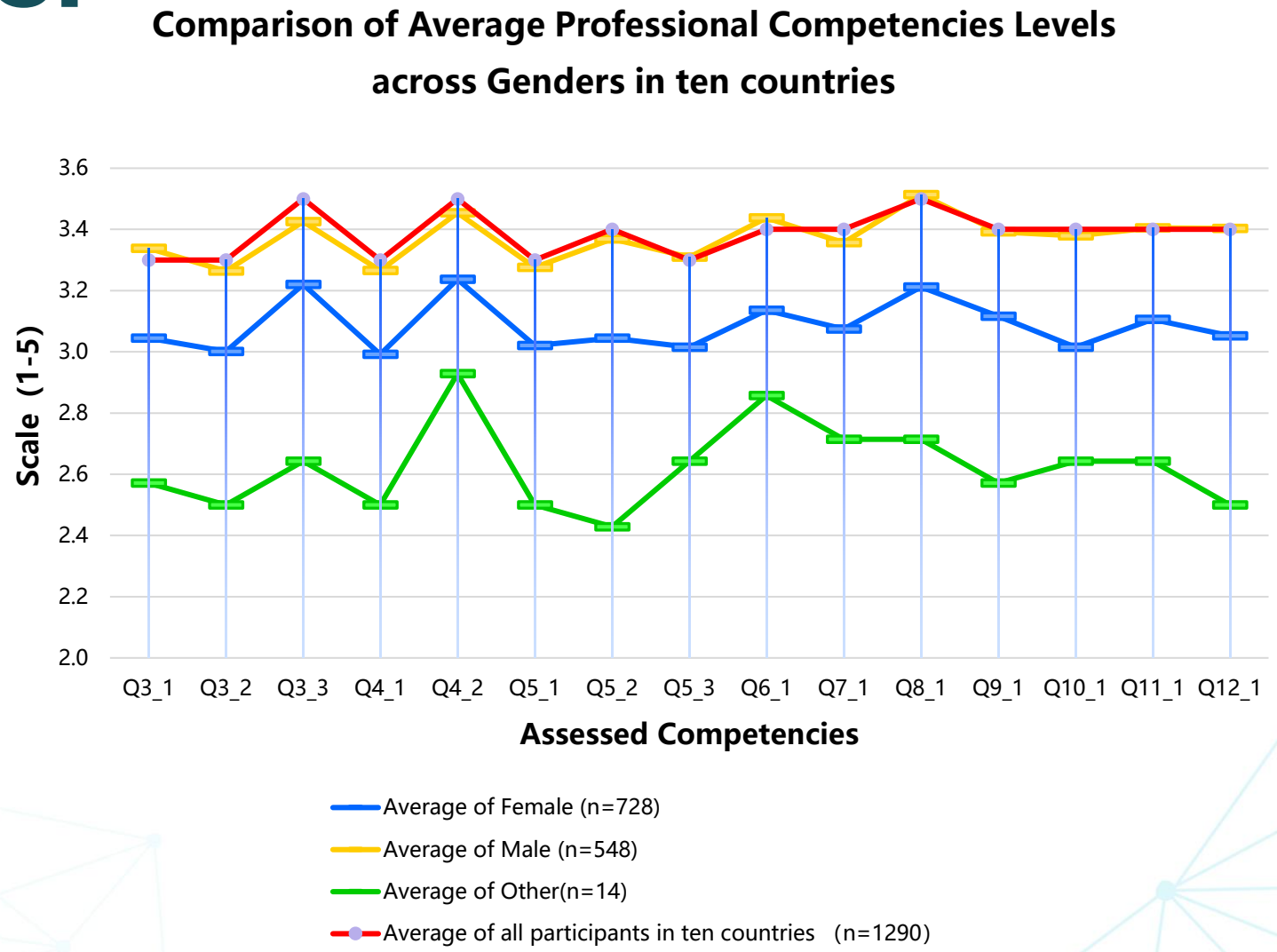
Findings – professional engagement

More than 500 teachers did not fill in the part of the questionnaire related to **professional engagement**. This indicates the following focus areas are required special attention:

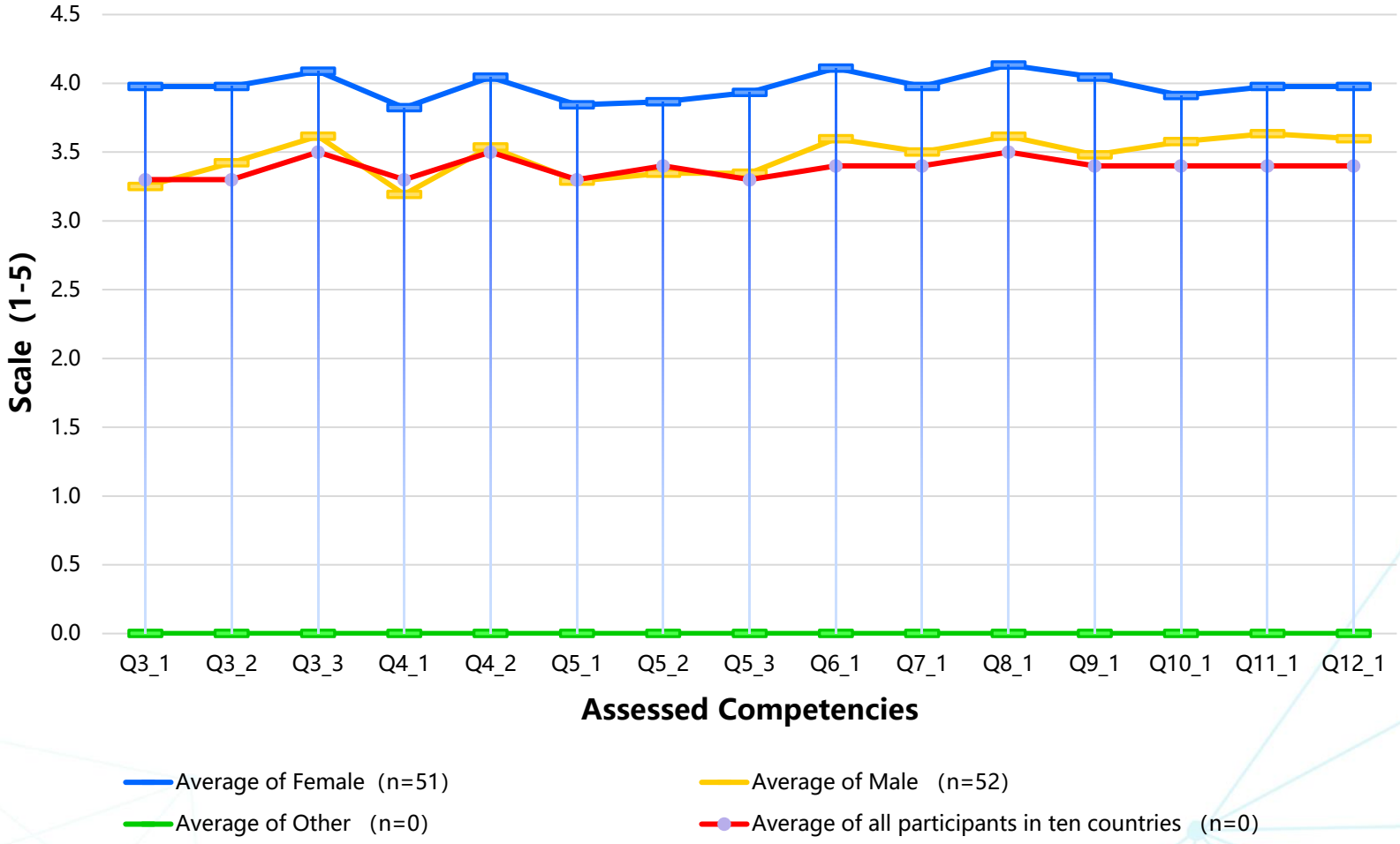
- Identify and plan professional learning needs
- Engage in professional learning and improve practice
- Engage with professional teaching networks and the broader community

Availability of professional networks and forums that allow broadern knowledge in relation to greening curriculum and sharing of good practice are not available in the region.

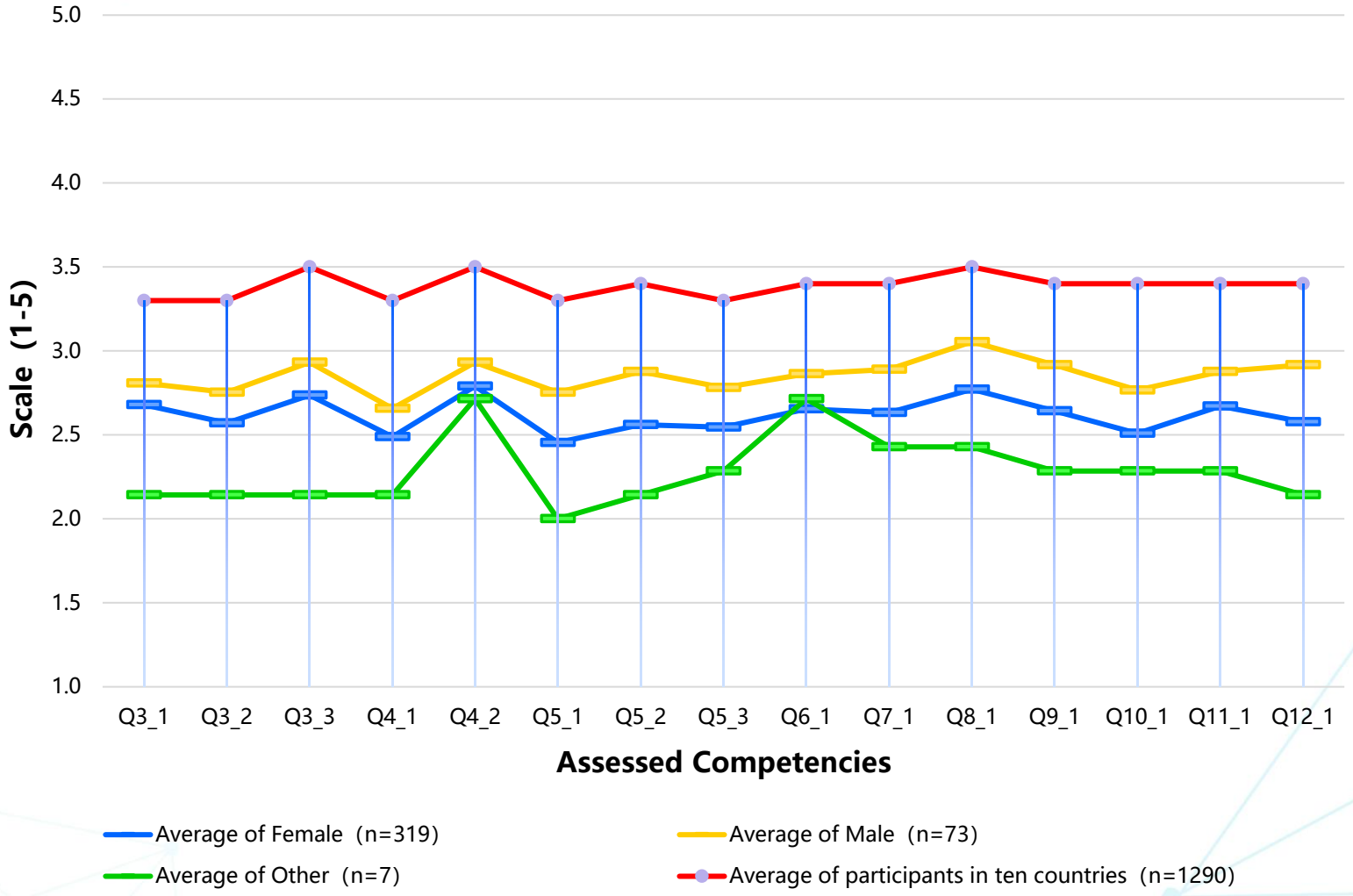
Gender


Comparison of Average Professional Competencies Levels across Genders in ten countries
Scale (1-5)
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
Q3_1
Q3_2
Q3_3
Q4_1
Q4_2
Q5_1
Q5_2
Q5_3
Q6_1
Q7_1
Q8_1
Q9_1
Q10_1
Q11_1
Q12_1
Assessed Competencies
Average of Female (n=728)
Average of Male (n=548)
Average of Other(n=14)
Average of all participants in ten countries (n=1290)

Comparison of Average Professional Competencies Levels across Genders in Viet Nam (n=103)



Comparison of Average Professional Competencies Levels across Genders in Myanmar (n=399)



Conclusion and implications

- TVET teachers play a critical role in preparing learners for green, low carbon economies
- Required competencies include pedagogical knowledge, practice and engagement, with a number of competencies that need a particular attention (identified through this study)
- Although there are general patterns, country profiles are different and should be taken into consideration in designing capacity building programs
- Addressing gaps in teacher training requires policy support, and possibly, regional guidelines on **Green Proficiency Standards for TVET teachers** to support the achievement of the regional sustainability goals