

Introduction

- The unprecedented COVID-19 crisis apparently has questioned our systems' survivability nationally or even globally.
- During the pandemic restrictions, METIs were exposed to many **uncertainties** that directly threaten their role and may have led to unprecedented consequences.
- In such scenarios, many questions arise to challenge whether the institutional/organizational levels of control are sufficient or additional control measures are needed to keep the risk as low as reasonably practicable.

Objectives

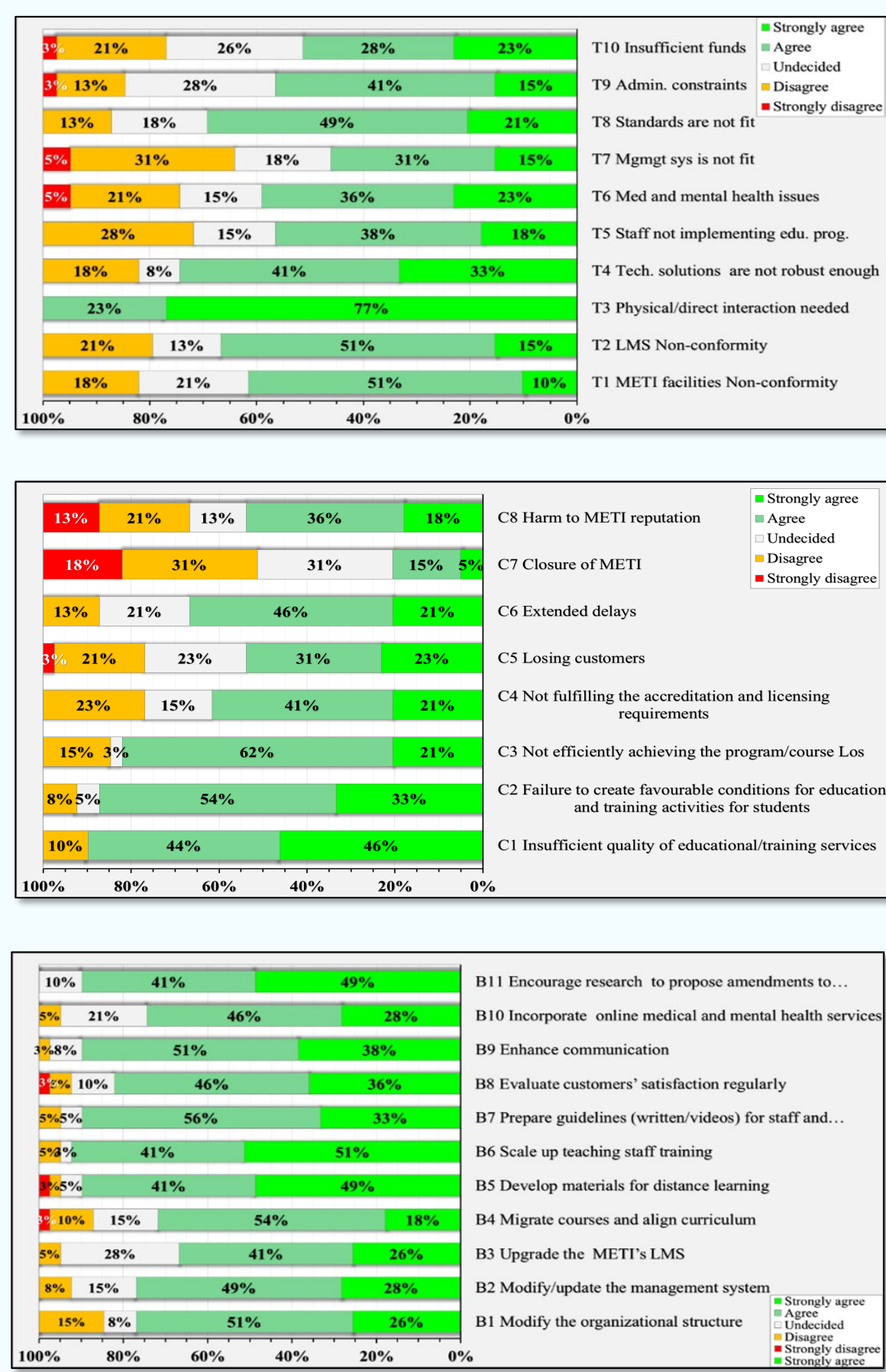
- Identify the possible **threats** to METIs under pandemic restrictions.
- Assess the potential **consequences** if METIs lose control on their operations under such circumstances.
- Propose applicable **barriers** to prevent/detect/protect the METIs from failure.

- The survey has three main sections.
- All the survey questions follow the **Likert Scale** with 5 alternative answers.

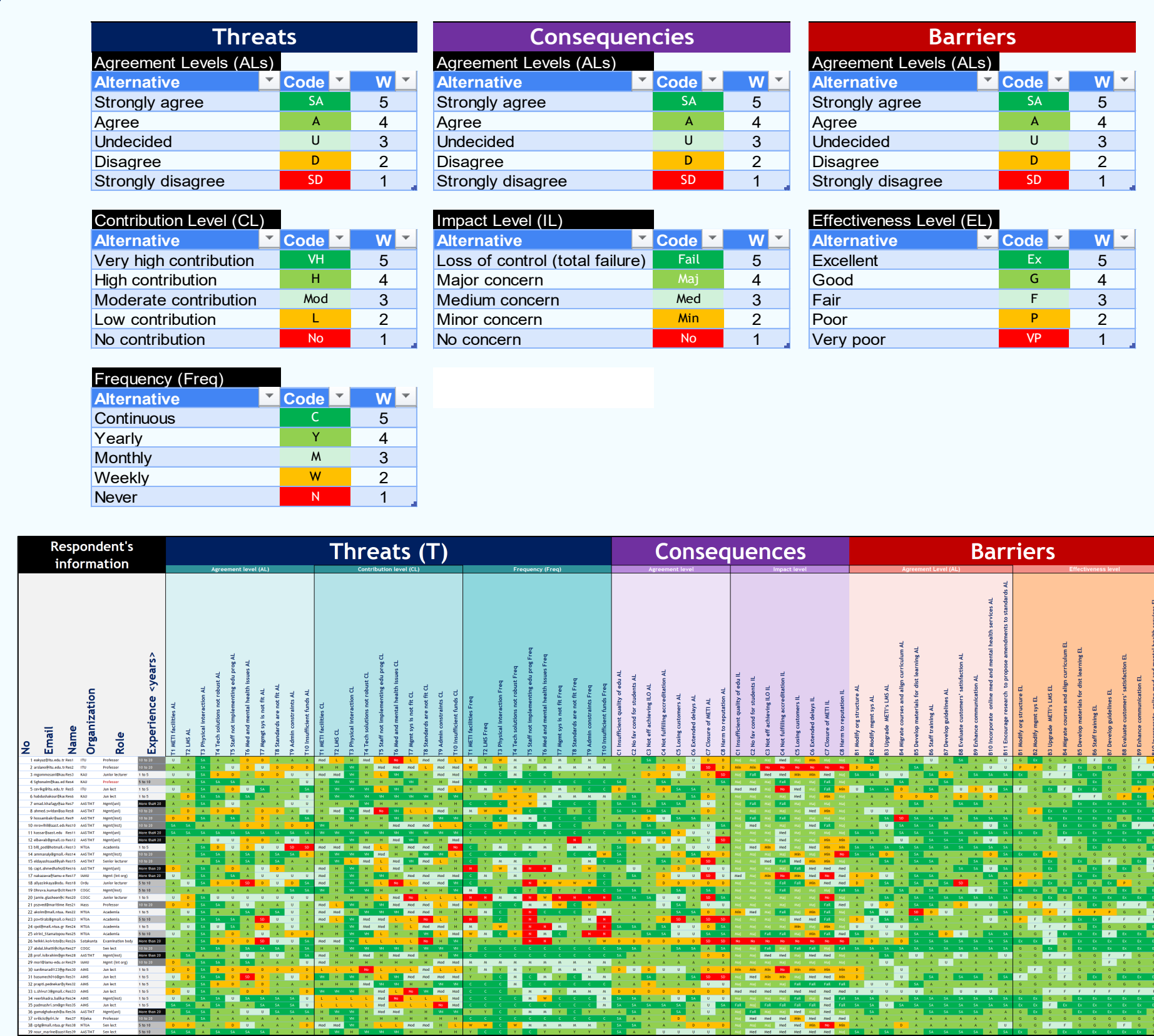
METIs Experts' survey

- (39) responses.
- (11) MET organizations from Egypt, Turkey, UK, Greece, India, Japan, Saudi Arabia, Croatia, Finland, and the USA.

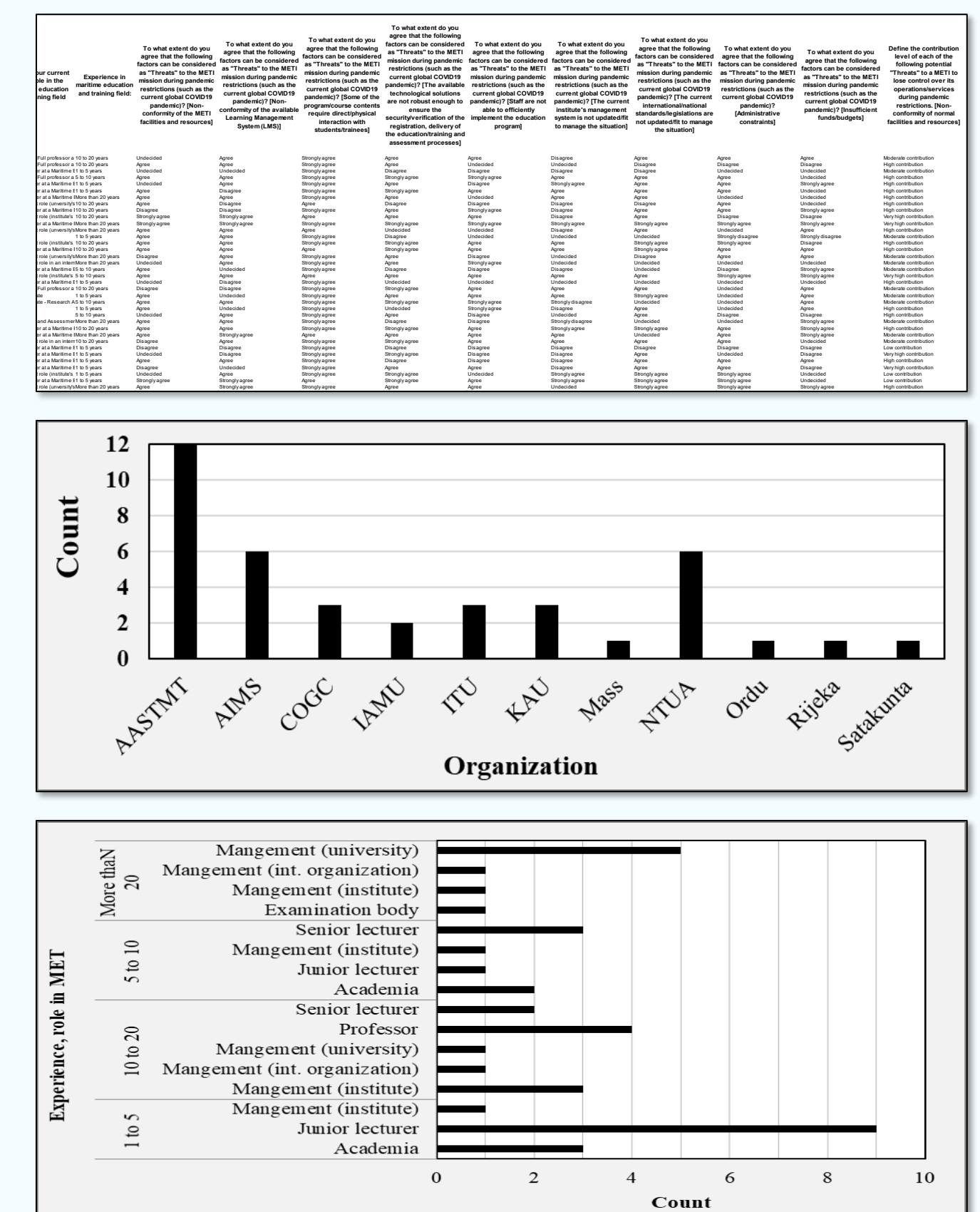
Analysis



Quantification



Data Collection



Results

Rank	Threat	RII score
1	T3 Some of the program/course contents require direct/physical interaction with students/trainees.	0.95
2	T4 The available technological solutions are not robust enough to ensure the security/verification of the registration, delivery of the education/training and assessment processes.	0.78
3	T8 The current international/national standards/legislations. are not updated/fit to manage the situation.	0.75
	T9 Administrative constraints.	0.75
4	T2 Non-conformity of the available Learning Management System (LMS).	0.72
5	T1 Non-conformity of the METI facilities and resources.	0.71
	T10 Insufficient funds/budgets.	0.71
6	T6 Medical and mental health issues of staff (infection, overload, stress, etc.).	0.70
7	T5 Staff are not able to efficiently implement the education program.	0.69
8	T7 The current institution management system is not updated/fit to manage the situation.	0.64
Rank	Consequence	RII score
1	C1 Insufficient quality of educational/training services.	0.85
2	C2 Failure to create favourable conditions for education and training activities of the students.	0.83
3	C3 Not efficiently achieving the program/course learning outcomes.	0.77
4	C6 Extended program/course delays.	0.75
5	C4 Not fulfilling the accreditation and licensing requirements.	0.72
6	C5 Losing customers of the METI's services (students/trainees).	0.70
7	C7 Closure of METI	0.65
8	C8 Harm to the Institution's reputation.	0.52
Rank	Barrier	RII score
1	B6 Scale up teaching staff training for online teaching.	0.88
	B11 Encourage research activities to propose amendments to the current international/national standards/legislation.	0.88
2	B5 Develop new materials/techniques that incorporate distance learning/online teaching.	0.86
3	B9 Enhance the communication with staff and customers.	0.85
4	B7 Prepare guidelines for staff and customers for better engagement with the new communication means.	0.84
5	B8 Continuously measure and evaluate customers' satisfaction (trainees, shipping companies, manning agencies).	0.82
6	B2 Modify/update the METI management system.	0.80
7	B10 Incorporate an online mental health and medical services for staff.	0.79
8	B1 Modify the METI organizational structure.	0.77
	B3 Invest more fund to upgrade the METI's LMS.	0.77
9	B4 Migrate courses and align curriculum competencies.	0.75

Conclusion

- To achieve the research aim, a survey was designed to capture the expertise of a group of Maritime Education and Training (MET) experts.
- The experts' survey responses have been quantified and statistically analysed to comprehensively identify these risk factors, their contribution, and their effectiveness.
- The paper endorses a group of barriers to assure the METIs' delivery of their mission despite the plethora of activities, customers, regulators, governance instruments, stakeholders, especially under restrictive conditions.

Future work

- The current study only focused on METIs' perspective. Still, further investigation is needed for other MET stakeholders as well, such as shipping companies, manning agencies, regulators ... etc., for a more inclusive result.
- The obtained data will be employed in a **Bowtie** model to link the identified risk threats and consequences together and assess the effectiveness of the proposed barriers.