Cyber Security

International Benchmarking

What is the TVET Model in place that helps raise standards amongst students?

Chinese Taipei	South Korea
Chinese Taipei (Taiwan) has adopted a comprehensive Technical and Vocational Education and Training (TVET) model to enhance standards and proficiency among students in various fields, including cybersecurity. This approach aims to bridge the gap between academic knowledge and industry needs, ensuring students are well-prepared for the challenges in the cybersecurity domain. Here's an overview of the TVET model in place and what Taiwan is doing differently:	South Korea's TVET model in cybersecurity is characterised by strong industry-education collaboration, government support, early and inclusive education, global partnerships and a focus on emerging technologies. These elements create a dynamic and effective educational environment that not only meets current industry needs but also anticipates future cybersecurity challenges. By adopting these innovative practices, South Korea ensures that its cybersecurity workforce is well-prepared, highly skilled and capable of protecting against evolving cyber threats. Here's an overview of South Korea's TVET model in cybersecurity, as well as what the country is doing differently:
- Early Educational Integration	- Industry-Education Integration
- Funding and Incentives	- Competency-Based Training
- Global Partnerships	- Hands-On Learning
- Exchange Programmes	- Cybersecurity Centres of Excellence
- Focus on Emerging Technologies	- Competitions and hackathons
- Research and Development	

How do these countries work with Industry to develop their TVET systems?

Chinese Taipei	South Korea
- Collaborative Curriculum Development: Educational institutions and industry experts collaborate closely in Taiwan's TVET system to develop curriculum that aligns with current industry standards and practices. This ensures that students acquire relevant skills and knowledge.	- Collaboration: South Korea's TVET system emphasises collaboration between educational institutions and industry leaders to develop a curriculum that meets the current demands of the cybersecurity field. This ensures that students learn the most relevant and up-to-date skills.
- Industry Partnerships: Many vocational schools and universities have partnerships with cybersecurity firms, allowing students to gain hands-on experience through internships, co-op programmes and joint research projects.	- Schools and universities partner with leading tech companies and cybersecurity firms, offering students opportunities for internships, co-op programmes and real-world project experiences.

In terms of training and developing WorldSkills Competitors – what do these countries do differently?

Chinese Taipei	South Korea
- Early identification and nurturing of talent, including rigorous national competitions - Collaborations with industry leaders - Integration with Educational Institutions - Financial and logistical support - Recognition and Rewards - Community and alumni engagement	- Early identification and selection are included in rigorous national competitions. - Institutional Collaboration - Industry Partnerships and Real-World Training - Incentives and Rewards

Thinking back to previous international competitions or pressure tests – What insights can you share where countries have showcased excellence within their skill?

Chinese Taipei

Chinese Taipei has consistently demonstrated excellence in the WorldSkills Competitions, particularly in cyber skills. Several key strategies and initiatives underscore their commitment to developing top-tier talent in this field, contributing to their success. Here are some insights into how Chinese Taipei has showcased excellence in recent WorldSkills competitions:

Innovative Solutions: Competitors are known for developing innovative solutions to complex cyber challenges presented during the competitions. This includes advanced techniques in threat detection, incident response and system hardening.

Adaptability: The ability to quickly adapt to unexpected challenges and think on their feet is a hallmark of Chinese Taipei's competitors.

Cross-Disciplinary Skills: Competitors often display a strong understanding of related disciplines such as computer networking, software development and systems administration, enabling them to approach problems holistically.

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What do international Standards of Excellence look like in Cyber Security?

Professionals in the field expect competitors and educators to master a set of competencies, practices and attributes that define international standards of excellence in cyber skills. These standards ensure that individuals are equipped to handle the complexities and challenges of cybersecurity in a global context, including network, systems security, cryptography, communication, application security, incident response and forensic investigation. It emphasises the importance of designing, implementing and managing secure network infrastructures, configuring firewalls, managing security patches, understanding encryption standards, implementing secure communication protocols, conducting thorough security testing and responding to security incidents.