



Mainstreaming OSH into Education : Singapore's Pre-Employment Training Initiative



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SCOPE



1. Overview of Singapore's WSH Journey
2. Pre Employment Training (PET) Initiative
3. Safety & Health Training in the Schools

Singapore's WSH Journey



2006 2007 2008 2009 2010 2011



WSH Act



Embodiment of WSH Framework in Legislation

Launch of WSH2015



A strategy for workplace safety and health in Singapore

Review & Enhance WSH2015



PM refreshes target: 1.8 fatalities per 100,000 by 2015

WSHC



Formation of the Workplace Safety & Health Council

Extension of WSH Act



WSH Act extended to cover 6 new sectors

WIC Act



Work Injury Compensation Act replaces the Workmen Compensation Act

Launch of WSH2018



Enhanced national strategy for workplace safety and health



Building WSH Competencies in Singapore

Launch of Strategy and Roadmaps



Workplace Health strategy and Sectoral Roadmaps to support WSH2018

WSHI

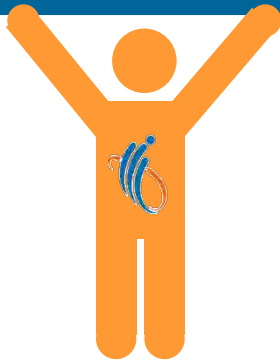


Formation of WSH Institute

An Evolving WSH Model for Singapore



Progressing WSH in Singapore



OSHD

Occupational Safety & Health Division

REGULATOR

Legislation, Policies,
Compliance Assistance &
Enforcement



WSHC

Workplace Safety & Health Council

**INDUSTRY
PARTNER**

Educating & Engaging
Stakeholders, Promoting
WSH



WSHI

Workplace Safety & Health Institute

THINK TANK

Charting New Grounds
for WSH Excellence and
Innovation



WSH 2018 VISION

Safe and healthy workplace for everyone and a country renowned for best practices in workplace safety and health

Strategic Outcomes

Reduction in workplace fatalities and injury rates

WSH is an **integral part of business**

Singapore is renowned as a **centre of excellence** for WSH

A **progressive and pervasive WSH culture**

Strategies

Build strong capabilities to manage WSH

Implement an effective regulatory framework

Promote the benefits of WSH and recognise best practices

Develop strong partnerships locally and internationally

building WSH

competencies in Singapore

"Singapore needs people in our workforce with the necessary capabilities, to get to international standards to compete effectively in the global arena... The Council will further deliver a national competency framework to cover the WSH Professionals and at least 30 trade-specific fields. Competency-based training will be delivered by credible and competent training providers, who will be monitored closely to ensure professionalism. Looking into the future, the Council intends to engage educational institutions to introduce workplace safety and health early to our younger generation. Exposing our young early to safety and health before they begin working will help set expectations, drive change through the generations, and support raising of standards, as well as build a strong WSH culture."

*Mr Lee Tzu Yang, Chairman of the Workplace Safety and Health Council,
at the Workplace Safety and Health Awards Ceremony 2007*

Pre Employment Training Defined as in “WSH 2018 Strategy”



“We will also work towards **educating individuals** on safety & health even **before they join the workforce**, by incorporating WSH into PET framework. By **encouraging students** to view safety & health as part and parcel of their daily life **at an early stage**, this will set the stage for the **creation of a strong safety & health culture** at the workplace subsequently”.

Page 21, WSH 2018

“.. Educational institutions help sow the seeds of a strong safety & health culture, by **instilling the value of safety & health in students**. Educational institutions should work closely with industry to **integrate WSH concepts into the curriculum of relevant courses**.”

Page 16, WSH 2018

Pre Employment Training Defined as in “WSH 2018 Strategy”



- In International Advisory Panel’s Recommendation
- From Industry Committee feedback

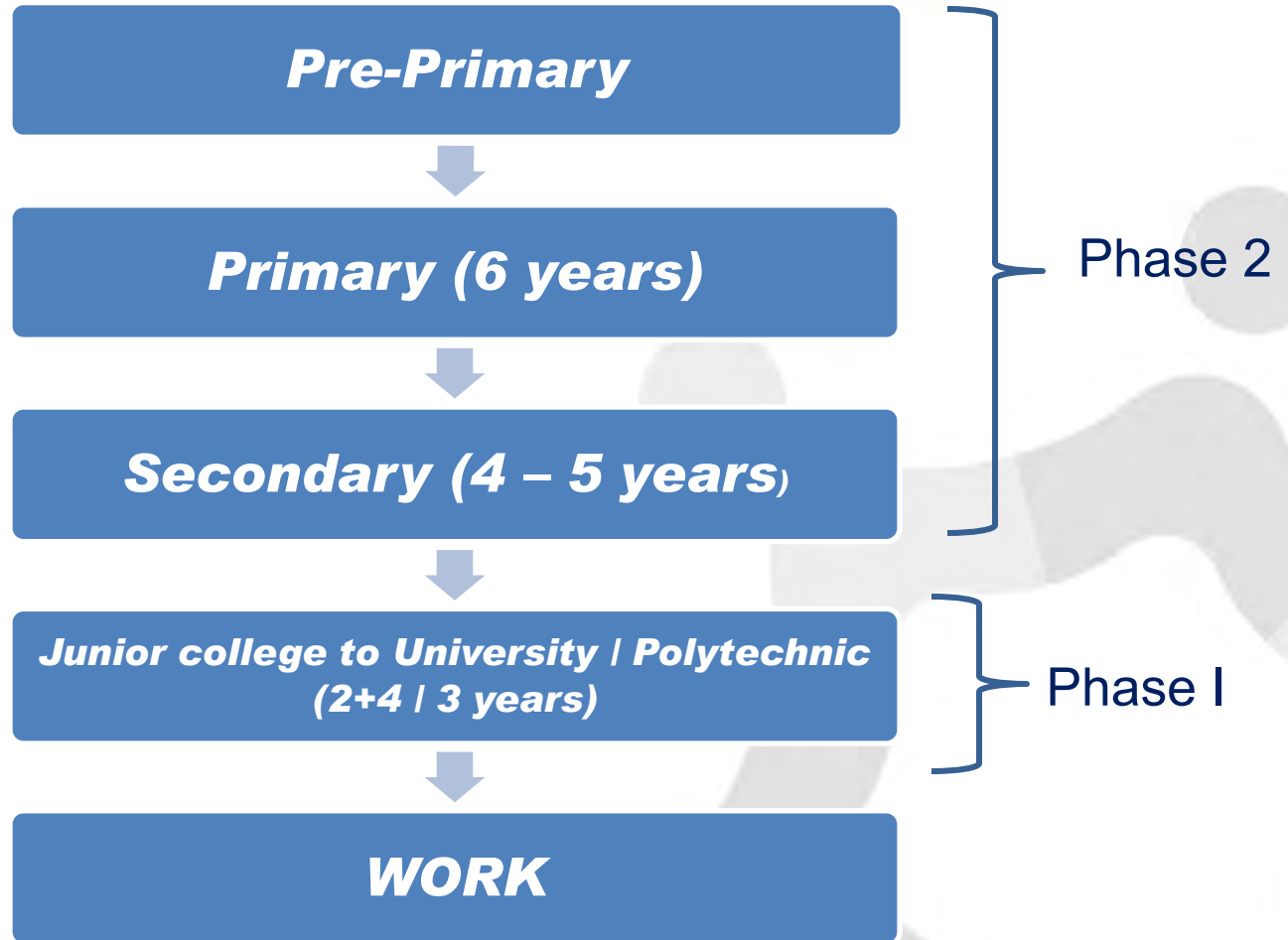
WSH values should be inculcated from young.

WSH messages could be included in the educational curriculum of children, when they are more ready to accept new values and beliefs.

Such values would stay with the individual for life and naturally translate to a greater emphasis on WSH when the individual enters

the workforce

Singapore Education Structure



Challenges faced in Phase I



- Existing academic curriculum already “overloaded” - cannot introduce new WSH curriculum / topics
- Students are not interested – see WSH not important to their educational outcome
- Overload with social & recreational activities
- Teaching staff are not equipped with the relevant WSH knowledge & competency
- Lack of easy-to-use teaching resources on safety & health

Challenges faced in Phase I



- Existing academic curriculum already “overloaded”
 - integrate WSH concepts into existing curriculum
- Students are not interested
 - Introduce WSH-related Studies / Electives
 - Conduct WSH briefings prior to industrial training
 - WSH briefings before graduation

Challenges faced in Phase I



- Overload with social & recreational activities
 - introduce WSH during orientation/ social activities
- Teaching staff are not equipped with the relevant WSH knowledge & competency
 - conduct training attachments for teaching staff who are interested in acquiring WSH knowledge
 - involve WSH professionals to teach
- Lack of easy-to-use teaching resources - tap on existing resources from WSHC, Ministry & others.

PET INITIATIVE



NCIL

Programmes / Activities	Universities, Polytechnics & ITE	Junior colleges, Secondary & primary
1. Integrate WSH concepts into existing curriculum	<p style="text-align: center;"><u>PHASE I</u> (from 2010 onwards)</p>	<p style="text-align: center;"><u>PHASE II</u> (from Aug 2012 onwards)</p>
2. Conduct WSH briefings prior to industrial training		
3. Introduce WSH-related Studies / Electives		
<i>Raising WSH Awareness</i>		
4. Briefings before graduation		
5. During orientation/ social activities		
6. Student advocates		

Engagement with IHLs (universities & polytechnics)



Forum	Date	Invites	Agenda
Inaugural	Jan 2011	<ul style="list-style-type: none">• Provosts and Principals of IHLs• Industry Committee members• Ministry of Education	<ul style="list-style-type: none">• WSH Act• bizSAFE Programme• Introduction of PET• Open discussion
2nd	July 2012	Provosts and Principals, IHLs' & PET champions	Open sharing by IHLs on their PET Journey

2nd PET Forum



<i>IHL</i>	<i>Topic</i>
National University of Singapore (NUS)	Making Safety Education relevant to NUS Undergraduates
Nanyang Polytechnic (NYP)	NYP's PET Journey
Singapore Polytechnic (SP)	WSH Orientation for all New Students at SP
Republic Polytechnic (RP)	Understanding WSH through Industry Visits
	Hazard Identification Contest and WSH forums

NUS PET Journey



2-Day Safety Lectures: Faculty of Science students prior to graduation

DAY 1 - *Why is safety important?* Hazards, Risks, Controls & Best Practices, Case Studies

HOME WORK

Assume role of manager/employer to improve safety. In groups of 4-5, students traverse the campus grounds to:

- a) Spot 5 hazards and photograph the hazards**
- b) Risk assess the hazards and identify the control measures for each hazard**
- c) Students required to present project prior to graduating**

DAY 2 – Safety Management system – Discussion on selected projects from Day 1

Industrial Attachment (IA): - Pre WSH briefing to all participating students prior to actual IA

Formal Curriculum - Examples



- **Faculty of Engineering**
 - Safety Health and the Environment
 - Process Design and Safety
 - Fundamentals in Industrial Safety
 - Structural Mechanics
- **Yong Loo Lin School of Medicine**
 - Occupational Health
- **School of Design and Environment**
 - Safety, Health and Environmental Management
- **Faculty of Science**
 - Food Safety
 - Environment and Public Health

NUS PET Journey



NUS PET Journey



NUS PET Journey



NUS PET Journey



- safety manual for Rag Day
- basic WSH training

NUS PET Journey



Float
Construction
Worksite



NUS PET Journey

Float Construction Worksite



NUS PET Journey

CASE STUDY 1 - FLOAT CONSTRUCTION SITE



Can you identify the hazards?

NUS PET Journey



“If our students do not see and experience safety & health best practices being implemented in the university, they will also most likely enter the workforce ignorant of safety & health issues.

So, in NUS, our responsibility to maintain high safety standards is even greater.”

***Prof Tan Chorh Chuan
President
National University of Singapore***

SP PET Journey



Year 1

Briefing to all new students on:

- WSH Act
- School safety

Year 2

Before **Industrial attachment**, all students will go through on-line WSH learning package and to take an on-line test

Year 3

Project supervisors together with the students will carry out **Risk Assessment** before the commencement of the projects

Incorporating WSH Into relevant course contents e.g. machine safety, chemical safety, construction safety, healthcare safety etc),

Students will be briefed / taught **in the respective modules**

E-learning and online quiz



The screenshot shows a web browser window displaying an e-learning platform. The browser's address bar shows 'http://spet.pet.edu.sg'. The website has a blue header with the 'OSH' logo and a yellow and black hazard stripe. The main content area features a large image of a worker on a steel structure. A blue box on the right lists the course chapters:

- Chapter 1 : Introduction
- Chapter 2 : Developing A Positive Attitude Towards Sa
- Chapter 3 : Occupational Safety
- Chapter 4 : Occupational Health
- Chapter 5 : Good Housekeeping Practices
- Chapter 6 : Safe And Health Legislation

The bottom of the page includes a collage of images showing students and a man in a yellow shirt, and the Singapore Polytechnic logo on a yellow background.

RP PET Journey



WSH taught as part of course curriculum:

- Types of hazards identification , Risk Assessment, Communications & OSH Standards

All students :

Safety Orientation Briefing - Students are briefed on the importance of conducting fire evacuation briefings /routes, fire safety procedures

School of Applied Science - ***WSH Industry Visits***

Total number of participating students: 100 (2nd & 3rd year students)

Centre for Innovation & Enterprise – ***Conducts Hazard Identification Contest cum WSH Talk***

NYP PET Journey



Areas of WSH learning:

Knowledge of ***Employee*** Responsibilities

Knowledge of ***Employer*** Responsibilities

Hazards Identifications & Risk Assessment (HIRA)

Means to learning:

Incorporating WSH into course curriculum

Pre- Industrial attachment briefings

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Secondary Level



<i>Safety in Design and Technology Studios</i>	<i>Safety in Science Laboratories</i>	<i>Safety in Home Economics</i>
ASK – DO NOT ASSUME	ASK – DO NOT ASSUME	ASK – DO NOT ASSUME
Machine Safety e.g. Machine guarding	Personal Hygiene Management	Cooking/Baking appliance safety
Wearing of PPE	Wearing of PPE	Sharp object & Fragile glass management
Workshop tool safety i.e. use correct tools	Chemical & Biological Waste disposal	Chemical avoidance during food science experiment
Workshop Cleanliness	Sharp object management	Use & location of Fire Extinguishers
Dressing Safety e.g. no long sleeves	Proper labelling of Chemicals	Proper ventilation in kitchen

Primary Level



<i>Physical Health</i>	<i>Environment & Health</i>	<i>Emotional & Psychological Health</i>
Good Hygiene Habits & Practices	Safety on Roads & Public Places	Stress Management
Food, Diet & Exercise	Water & Fire Safety	Emotions & Self Esteem Management
Vision & Oral Care	Simple First Aid	Peer Influence Management
Personal Hygiene	Prevention of Spread of Diseases	Managing Puberty changes
Puberty & Physical Changes	Waste Water & Air Pollution	Caring for others & Conflict Management



Dr Lee Kong Chian
Chancellor
1962-1965

“Barang siapa yang ingin memetek padi yang bagus, hendak-lah menaborkan benih yang bagus pula.”

“Whoever wants to harvest good rice, must also plant good seeds.”

- Malay proverb

Installation Address by His Excellency the Chancellor on Tuesday, 12 June 1962, as the first Chancellor of the University of Singapore at the Victoria Theatre, Singapore.