



Health and Safety

Education and Motivation

4th Atlantic Alliance Conference

Tegernsee, 20th + 21st April 2007





... in brief



- oldest active mining university
- app. 4.900 inscribed students - winter term 2006/2007
- by far the largest mining/geoengineering university in Germany
- 90% students finish within the regular time frame
- 22 Masters studies, five of which consecutive with BSc option
- Bachelor and Masters courses taught in English
- International Cooperation: US, UK, France, Italy, Hungary, Poland, ...
- further education – e. g. Occupational Health and Safety in Mining





Content

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- Education and Motivation
- Different Regions
- Advanced Concept
- Summary

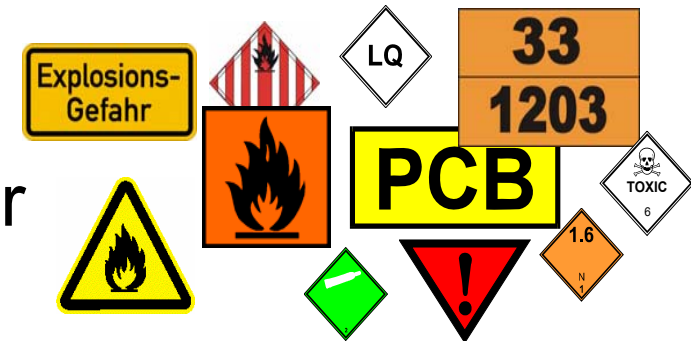




Introduction

(Health + Safety) * (Education + Motivation) =

- provide theoretical + practical knowledge as well as experiences
- cover all aspects
 - occupational + private sector
 - all life phases
- sustainable internal + external motivation to update, enhance and apply, knowledge + capabilities continuously





Education and Motivation

Problems often start early ...

... and grow with time



Survey amongst pupils:

- not enough sleep
- no or low quality breakfast: hungry, poor nutrition
- drug abuse problems
- tardiness to class because of smoking
- stressed-out
- afraid of violence
- family/peer problems that occupy their thinking
- sick, not only insufficient health care available

... true for adults, too.





Education and Motivation Current Situation



- first contact: way to kindergarten/school
- very often: no or only limited additional knowledge is taught at school thereafter
- second contact: driver's license
- third contact:
occupational health and safety at work
- individually: raised awareness and interest when health problems occur





Different Regions South East Asia





Different Regions South East Asia



Official Information

- “Beneficial cooperation and solidarity among the national OSH institutions of the ASEAN countries”
- “High capability of national OSH institutions in OSH promotion, training and research”
- “Free flow of OSH information, particularly through utilisation of information and communication technology”
- “Harmonisation of OSH standards and guidelines”





Different Regions Thailand - Education



- School
- Technique School
- College
- University

But - no specific content is defined,
- no specific programs are taught.





Different Regions Thailand – Occupational Accidents



Type of Severity	1999	2000	2001	2002	2003
Fatalities	611	620	607	650	769
Permanent total disability	12	16	20	14	14
Permanent partial disability	3,396	3,516	3,510	3,424	3,470
Temporary disability over 3 days	50,239	48,338	48,077	49,012	51,656
Temporary disability up to 3 days	117,739	127,076	137,407	137,879	153,315
Total	171,997	179,566	189,621	190,979	209,224





Different Regions Thailand – Occ. Injuries + Fatalities



	1999	2000	2001	2002	2003
Workers under WCF	5,321,872	5,417,041	5,544,436	6,541,105	7,214,548
Number of injuries	171,997	179,566	189,621	190,979	209,224
Fatalities	611	620	607	650	769
Accident rate/1,000 workers	32.30	33.15	34.20	29.20	29.00
Fatality/100,000 workers	11.48	11.44	10.94	9.94	10.66





Different Regions

Thailand – Occ. Illnesses (2003)



Illnesses caused by	Number of cases
Lifting heavy load	7,071
Bad posture	1,613
Contacting hazardous chemicals	3,762
Allergic to substances	661
Occupational diseases	127
Total	13,234





Different Regions

Thailand - HSE-Regulations



- Labor Protection Act, 1972
- Hazardous Substances Act, 1992
- Factory Act, 1992
- Public Health Act, 1992
- The Enhancement and Conservation of the National Environmental Quality act, 1992
- TIS 18001 - Occupational Health and Safety Management System: Specification, 2005
- TIS 18004 - Occupational Health and Safety Management System: Technical Guides on Implementing OHS-MS, 2005





Different Regions

Russia – Education at School





Different Regions

Russia - Education at Universities



Courses:

- 280102 - Safety in production (БТПиП)
- 280101 - Occupational Health and Safety (БЖвТ)
- 280200 - Environmental Protections (ЗОС)





Different Regions

Russia – Occupational Health and Safety



Health Protection System

(Охрана труда - ОТ)

- supports occupational health and safety
- includes law, social and economic aspects (governmental standards - ГОСТ Р ССБТ)
- additional company specific standards may be added (ОСТ ССБТ)



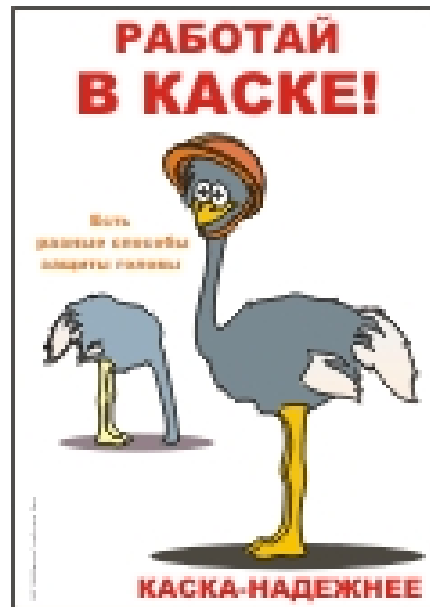


Different Regions

Russia – Further Education



- “... work safety (Техника безопасности - ТБ) is a catalogue of countermeasures, which are implemented in production to increase health and safe working conditions ...”





Different Regions

Russia – State Supervision

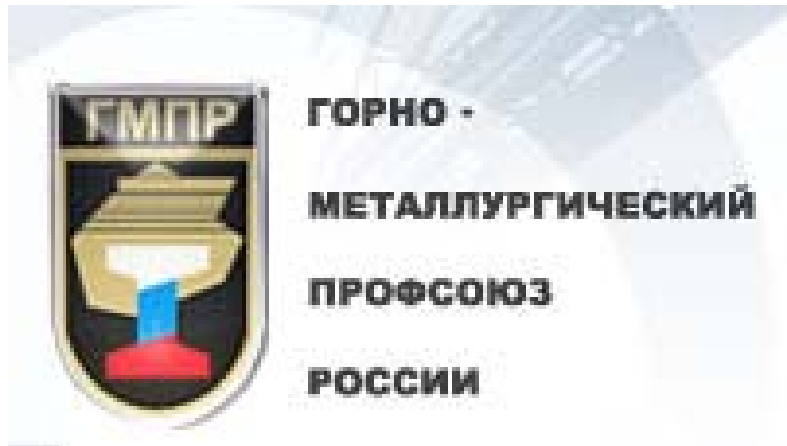


**GOSTECHNADSOR
(ГОСТЕХНАДЗОР) –
governmental technical
supervisory**



**GOSGORTECHNADSOR
(ГОСГОРТЕХНАДЗОР) –
governmental mining
technical supervisory**

Different Regions - Russia
Employer's Liability Insurance Ass.





Western Countries Kindergarten



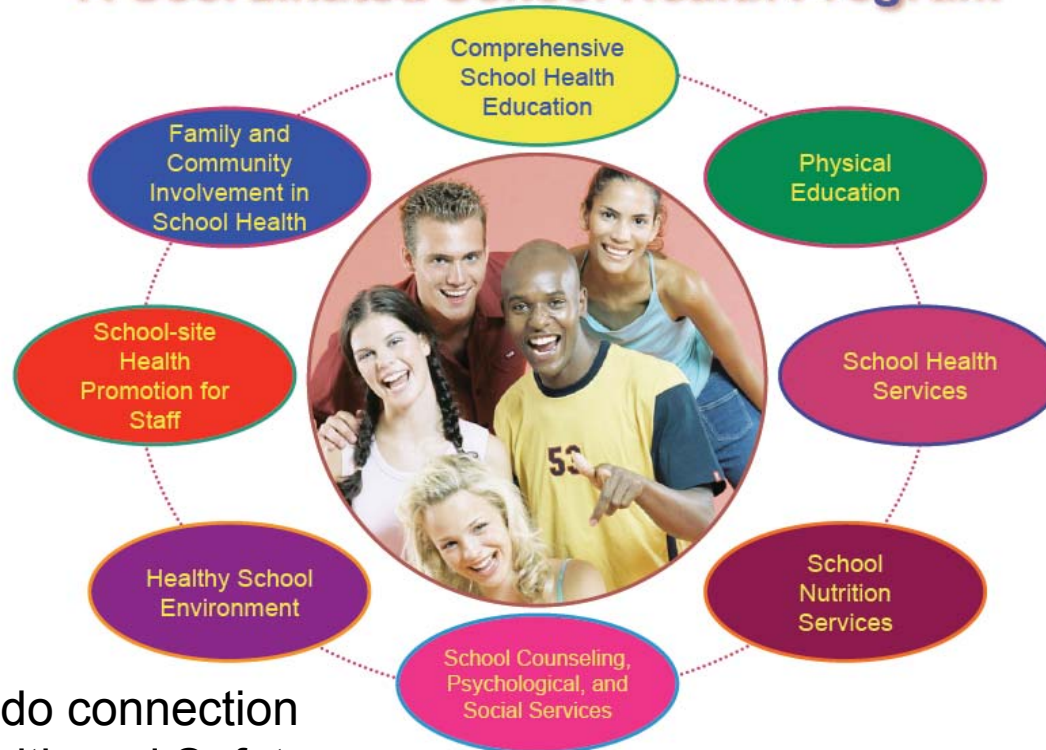
- Road Safety
- Health
- Hygiene



Western Countries Health Management at School



A Coordinated School Health Program



First trends towards
Safety Management
Systems
extending into non-
work related areas

Colorado connection
for Health and Safety



Ireland

Road Safety Education (RSE)



Example for positive development:

- prior 1999: No nationally or regionally structured RSE system in place at pre-school/kindergarten level
- Road Safety Education (RSE) since 1999 – at school and pre school level
- since 2007: new subject
“Social Personal and Health Education (SPHE)”





Western Countries University Education



Mine Rescuing Course at BBG training centre, Leipzig

only taught at some universities

not even part of many chemical and other engineering programs

mostly theoretical contents



Western Countries Systematic Continuous Education



set-up in different countries

well accepted by motivated employees

difficult to reach non-motivated employees





Advanced Concept

- start to implement HSEQ as early as possible
- provide knowledge when children are eager to learn – e.g. at primary and secondary school
- no gaps – continuous education throughout life (similar to OHSAS 18001)
- cover all aspects and areas of life
- re-new / enhance motivation





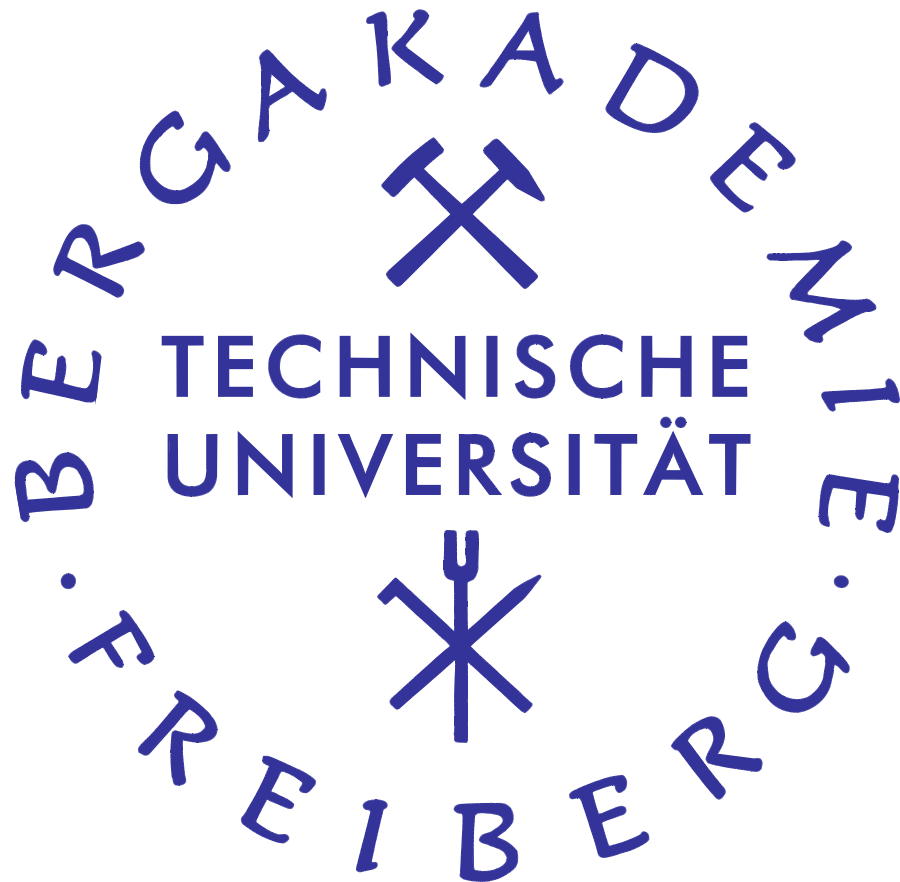
Summary

Continuous Education

Motivation

Research

monitor work and living
conditions systematically



Which questions do you have?

Glückauf!

