



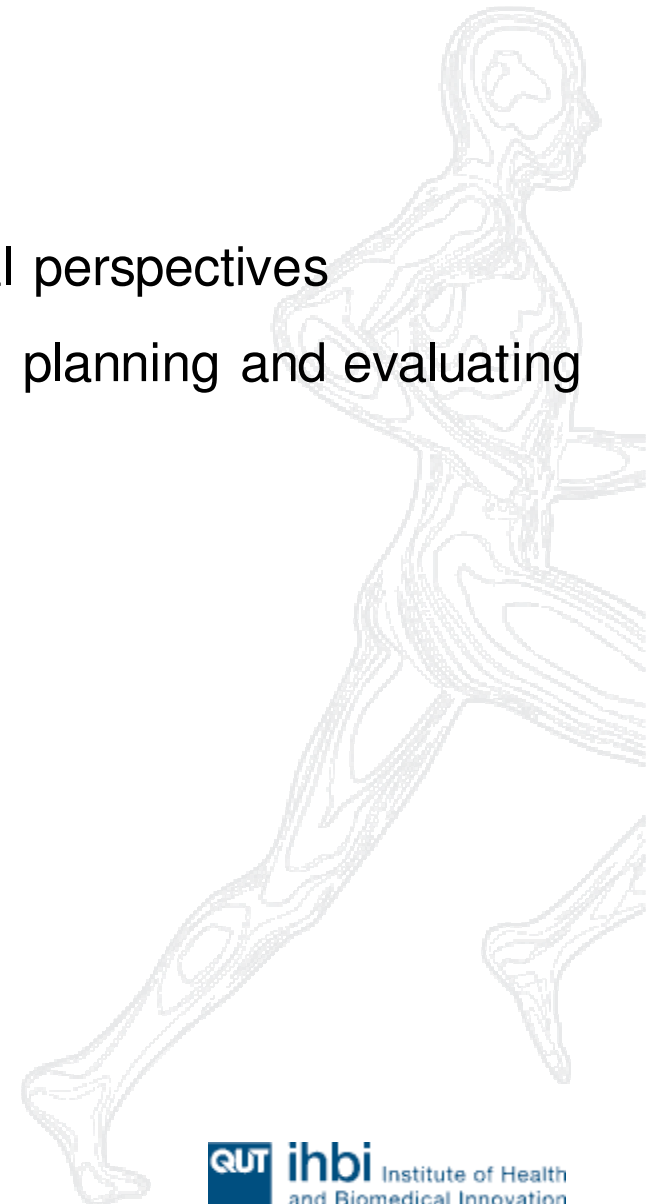
Effective health communication in the mining industry

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Outline

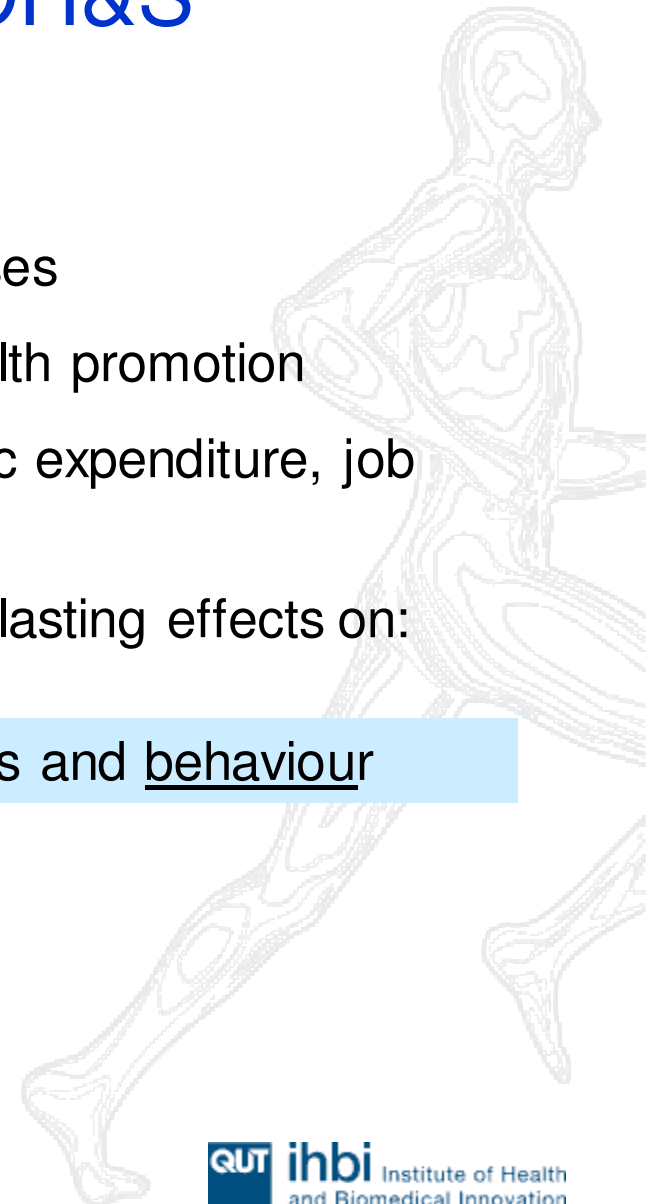
- Integrated health promotion
- Communication – Neuroscience and sociological perspectives
- Health literacy – A framework for understanding, planning and evaluating
- Recommendations



A comprehensive approach to OH&S

- Historical – Safer work environment
- Mining – Relative risk and management processes
- Comprehensive OH&S – Includes proactive health promotion
- Workforce health status – Productivity, economic expenditure, job satisfaction
- Establishing a healthy workforce – Positive and lasting effects on:

Health related knowledge, attitudes, values and behaviour



Miners taken to task on tax talk

MINING: INDUSTRY RESPONSE

Don't kill Queensland's golden goose

THE Federal Government is "rolling dice" on the future of \$100 billion resource sector projects in Queensland, according to the chief executive of the Queensland Resources Council, Mr Roche.

Mr Roche said the state's burgeoning resources will be hit with a 40 per cent tax on normal profits as part of the review, which is a overhaul of

the taxation system and infrastructure plans.

"On the face of it, what has been announced today is a major new taxing cost on the engine room of the Queensland economy," Mr Roche said yesterday.

The Resource Super Profits tax, which will have a five-year phase-in period, will be tested after

The tax is expected to raise \$5.6 billion over 10 years.

Mr Roche is adamant there must be consultation between the Government and the resources sector before the proposed tax is approved.

"Certainly not a quick and dirty consultation," he said.

source sector competitors in Africa, South America and Asia."

He said the Federal Government must avoid the mistakes of its former carbon pollution reduction scheme.

Mr Roche welcomed the refund credit for state mining royalties, but said a reduction in company tax



C: Mining giants Gina Rinehart and Andrew Forrest were among protesters who greeted Kevin Rudd in Perth.

Retirees affected

AM a self-funded retiree earning a modest income through investments and I will be adversely affected by Prime Minister Kevin Rudd's new tax on companies' profits.

Media has publicised the impact of the tax by the likes of Clive Palmer and Andrew Forrest but it is the thousands of ordinary older people who rely on the support of the mining industry who will be most affected.

are about half a million in shareholders to mention the mining industry's contribution to the Government's revenue.

Butler Hewitt

Scale tax to profits

IF the Federal Government is determined to make mining companies pay a higher rate of tax than other companies, it might consider having a sliding scale of the standard 30 per cent rate of company tax could apply to say, the first \$100 million of profit, 35 per cent for profits from \$101 million to \$500 million and 40 per cent over \$500 million.

If the Government wishes to away with royalties, it could add a levy on

Mines work for towns

PRIME Minister Kevin Rudd scoffs at the idea of mining companies providing infrastructure. Sitting in a house built by a mining company, I beg to differ, as would the other 600 families in our town.

Before mining the neighbours in Dysart

Id throws cash around to sweeten super tax grab

AP1 eastern Australia would receive more than \$2 billion. It is understood Queensland's share

super profits earned by the biggest mining companies to funnel back directly into infrastructure investments within

Australia's richest woman Gina Rinehart, who said the time for talking was over.

"Perhaps if there had been

Bay Chamber of Commerce and then visited an engineering supplies company in Mackay.

It is Mr Abbott's first visit as

Occupational health promotion

- An important setting:
 - Efficiencies, success and sustainability^{1,2}
 - Addressing risk factors and barriers, enabling positive health behaviour and building social capital³
- Impediments: Unstructured or unsustainable programs that are not appropriately evaluated¹
- Significant potential: Chronic injury prevention, biophysical and psychosocial health issues
- Relationships between settings (on and off-site)

¹ Egger, G., Spark, R. & Donovan, R. (2005). *Health promotion strategies and methods*. (2nd ed.). Sydney: McGraw-Hill.

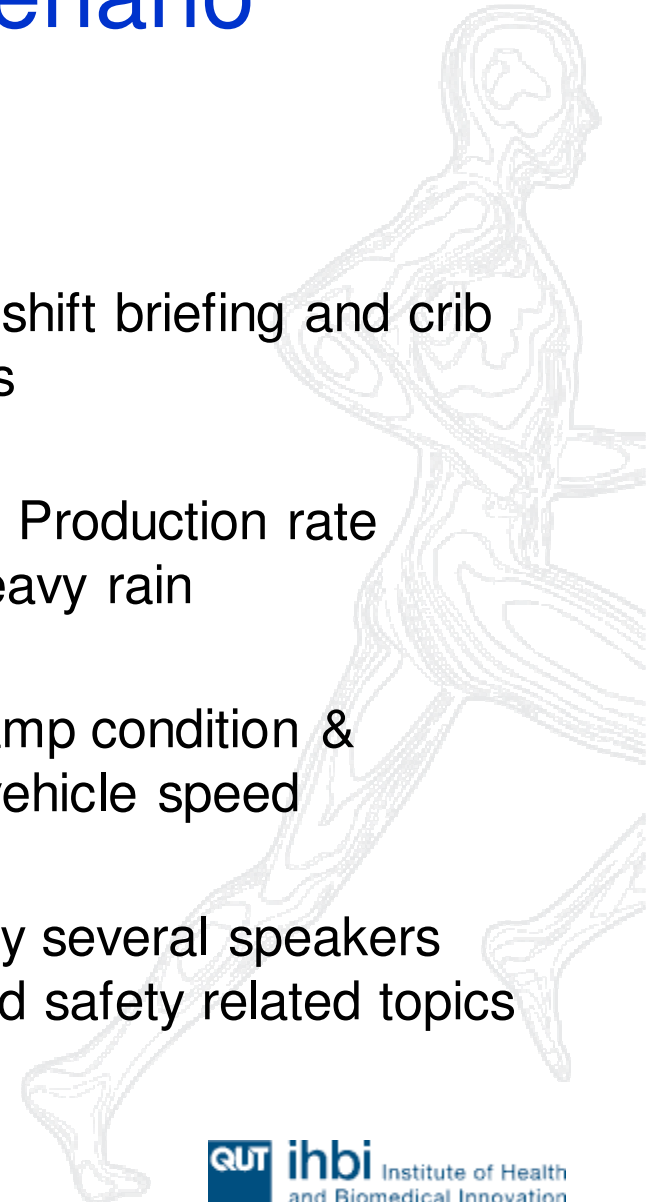
² Bilski, B. & Wierzejska, E. (2008). Occupational health promotion for healthcare workers. In R. Pierce & R. Schwartz (Eds.), *New perspectives on knowledge, attitudes and practices in health* (pp. 27- 37). New York: Nova Biomedical Books.

³ World Health Organization. (1998). *Health promotion glossary*. Retrieved 29 August, 2008, from; <http://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf>.



A mining scenario

- Open cut mine
- Early morning pre-shift briefing and crib room presentations
- Point of emphasis: Production rate following recent heavy rain
- Concerns about ramp condition & discussion about vehicle speed
- Briefing followed by several speakers covering health and safety related topics



A mining scenario

This scenario – Potential communication problems:



- Quantity of information
- Cognitive prioritisation (immediate applications)



Left image: Lansky, D. (2005). *Signspotting – Absurd and amusing signs from around the world*. Melbourne: Lonely Planet Publications.
Right image: Queensland Newspapers (2010, p. 17)Queensland Newspapers. (2010). Two tribes. *QWeekend*. Brisbane: QN.

Neuroscience and sociocultural perspectives

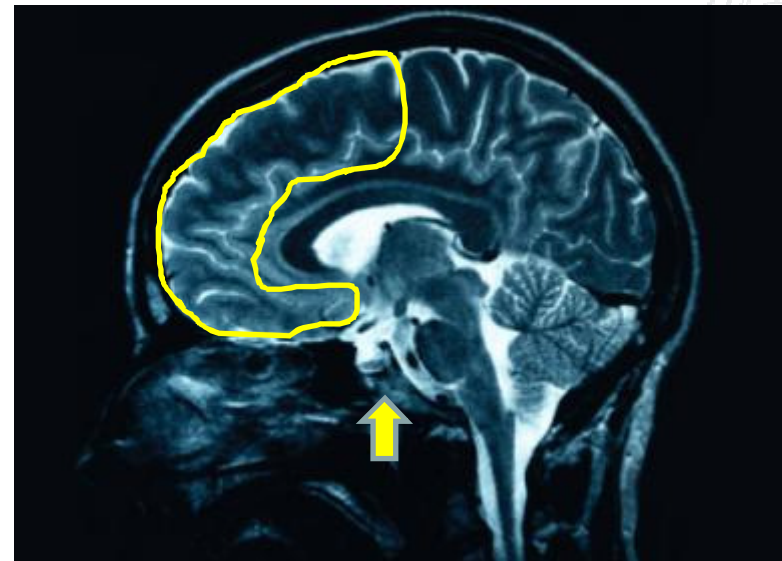
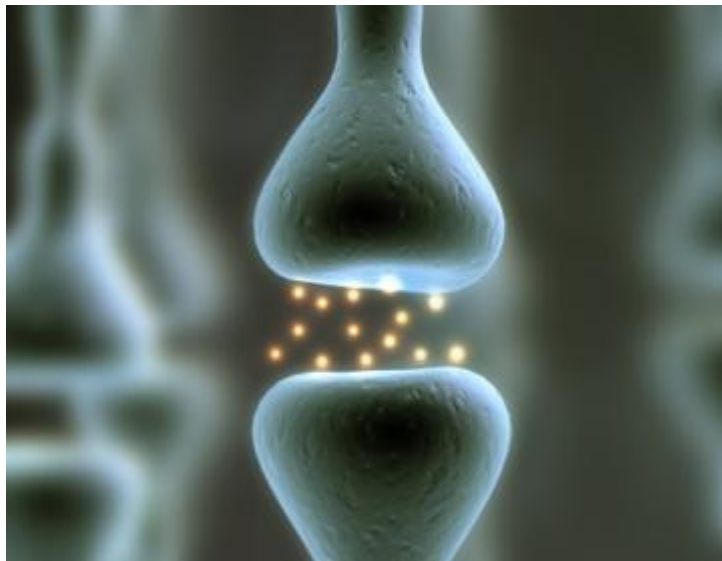
- Neural plasticity: Network expansion and retraction^{1,2}
- Adult neurogenesis^{1,2}
- Amygdala (Limbic system): screens sensory input & supports affective association with experience³
- Frontal cortical lobe: reasoning, planning and problem solving³



Learning & memory



Think, feel & act



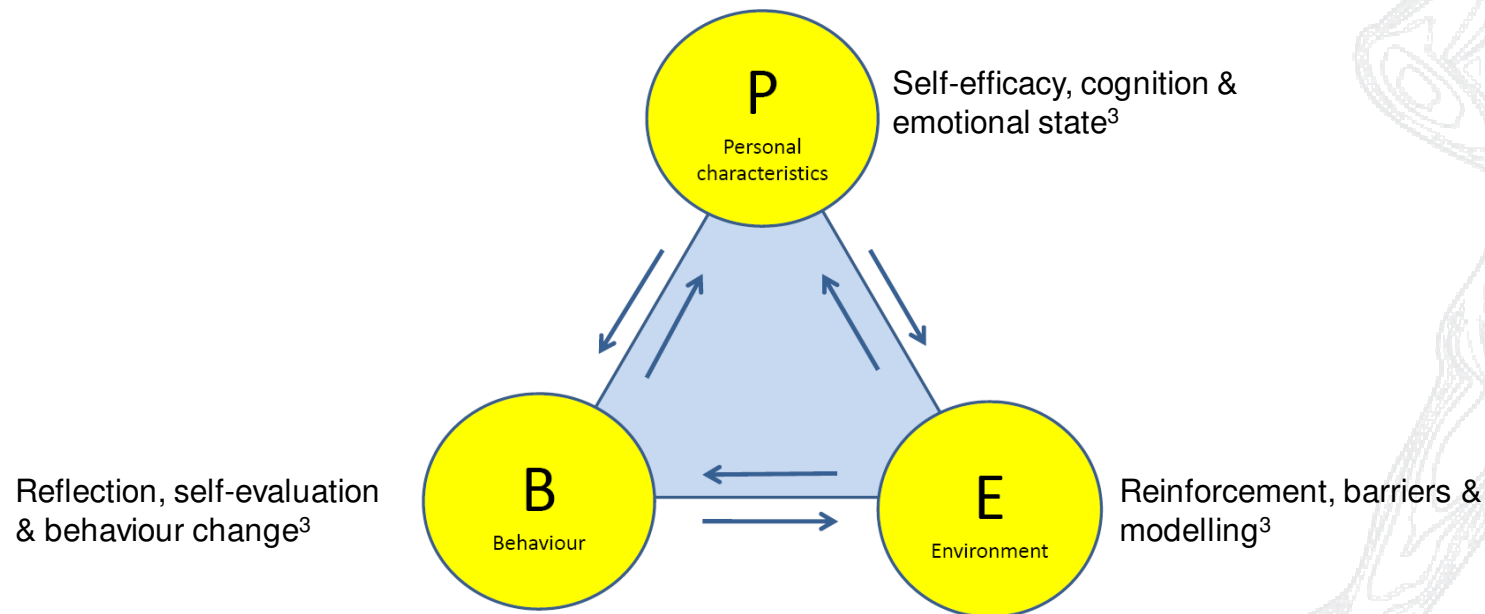
¹Azmitia, E.C. (2007). Cajal and brain plasticity: Insights relevant to emerging concepts of mind. *Brain Research Reviews*, 55 (2), 395–405.

²Will, B., Dalrymple-Alford, J., Wolff, M. & Cassel, J. (2007). The concept of brain plasticity – Paillard's systemic analysis and emphasis on structure and function. *Behavioural Brain Research*, 192 (1), 2-7.

³Zull, J.E. (2002). *The art of changing the brain: enriching the practice of teaching by exploring the biology of learning*. Stirling: Stylus.

Neuroscience and sociocultural perspectives

Social Cognitive Theory¹ & the **Triadic reciprocal causation model**²



¹ Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. New Jersey: Prentice-Hall.

² Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

³ Snowman, J., Dobozy, E., Scevak, J., Bryer, F. & Barlett, B. (2009). *Psychology applied to teaching*. (1st ed.). Brisbane: John Wiley & Sons.

Health literacy – A framework for understanding, planning and evaluating

- Health education represents:

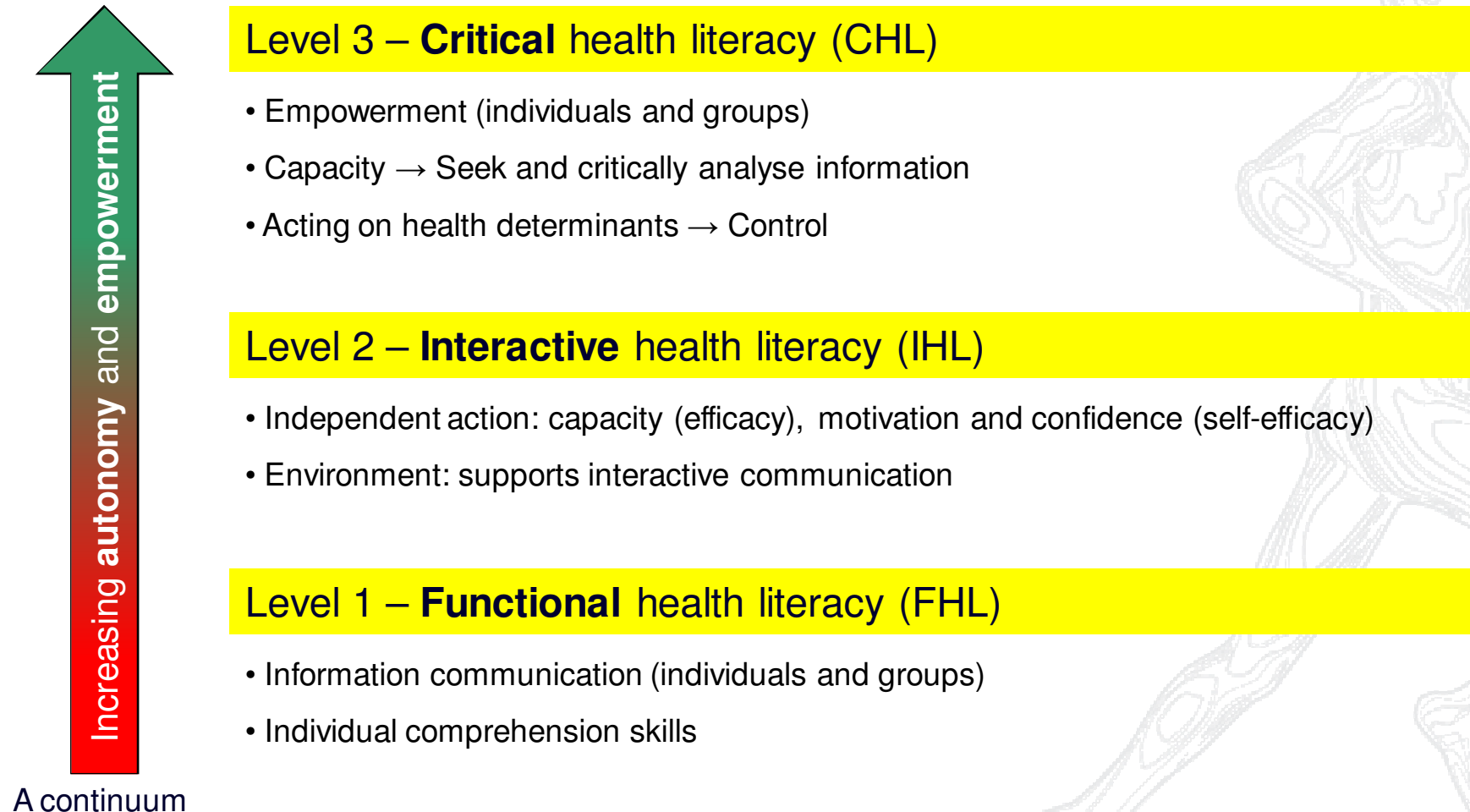
‘Consciously constructed opportunities for learning involving some form of **communication** designed to improve **health literacy**, including improving knowledge, and developing life skills which are conducive to individual and community health.’¹

- Health literacy defined as:

‘The cognitive and social **skills** which determine the **motivation** and **ability** of individuals to gain access to, understand and use **information** in ways which promote and maintain good health’¹

¹ World Health Organization. (1998). *Health promotion glossary*. Retrieved 29 August, 2008, from;
<http://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf>.

Nutbeam's conceptual model of health literacy¹



¹Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15 (3), 259 – 267.

Potential barriers to FHL & IHL

- Application opportunities
- Reinforcement
- Environmental support (on and off-site)



Level 2 – **Interactive** health literacy (IHL)

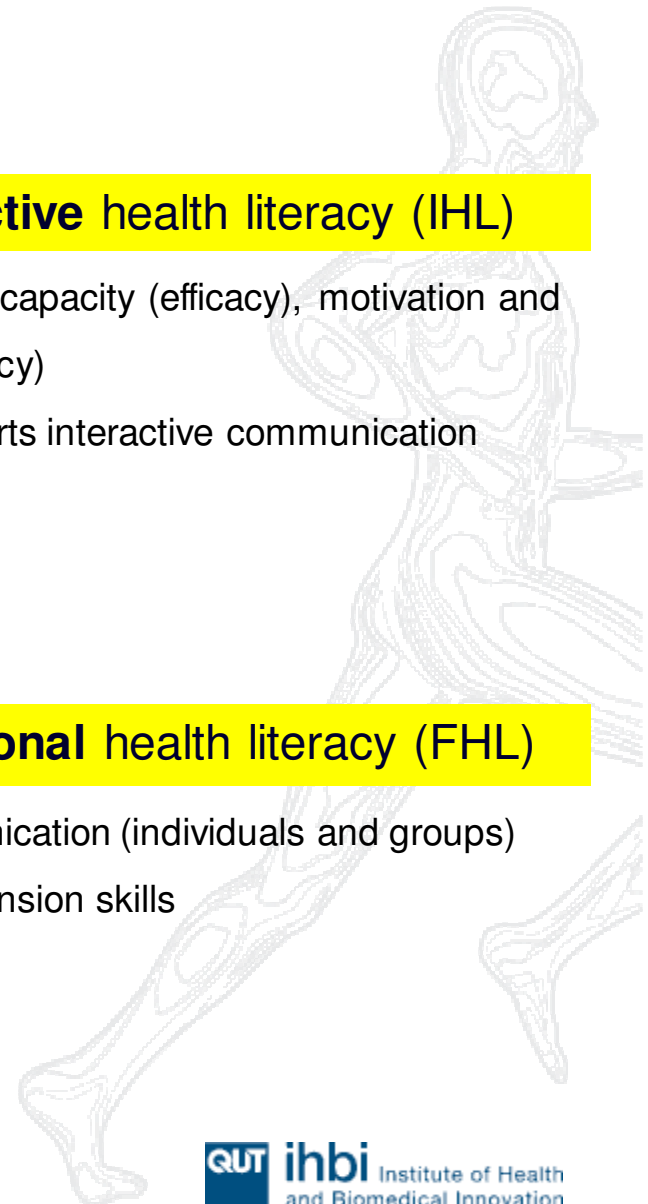
- Independent action: capacity (efficacy), motivation and confidence (self-efficacy)
- Environment: supports interactive communication

- ESL
- NESB
- Literacy
- Timing
- Quantity
- Perceived relevance
- Communication methods
- ICT familiarity



Level 1 – **Functional** health literacy (FHL)

- Information communication (individuals and groups)
- Individual comprehension skills



The main communication challenges

- Time
- Functional barriers
- Building capacity and facilitating behavioural response



Recommendations

The mining industry is a complex and challenging environment → *Efficient, high impact and timely communication methods*

- **Value** health promotion as part of a comprehensive approach to OH&S
→ Advocacy and supportive environment
- **Identify** workforce characteristics that could influence health literacy (barriers and enablers)
- **Information orientation:**
 1. Affective (attitudes and values): People in context (on and off site) → *Association, relevance and motivation*
 2. Application (health behaviour)

Recommendations

- Efficiency: short duration and ongoing reinforcement (developmental)
- Episodic communication: Avoid mixing immediate and future priorities
- Look for and use positive examples where possible
- Encourage worker involvement in the communication process (familiarity & ownership)
- Investigate information and communication technologies (value adding)
- Develop an evaluation strategy built around health literacy (functional, interactive and critical)

Evaluation informs future practice

Acknowledgements

- Conference committee and organisers
- Downer EDi Mining – Site access and employee insight
- QUT Workforce Health Innovation group



Questions and comments

