

The potential of formative assessment at work

ASEM

Workplace as a learning space

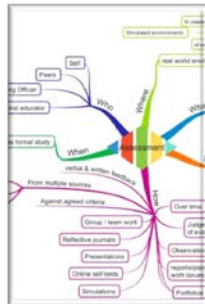
4th October 2016

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**WE INSPIRE, ADVOCATE AND
LEAD ADULT LEARNING AND
PROFESSIONAL PRACTICE**



Learning & assessment – our assumptions

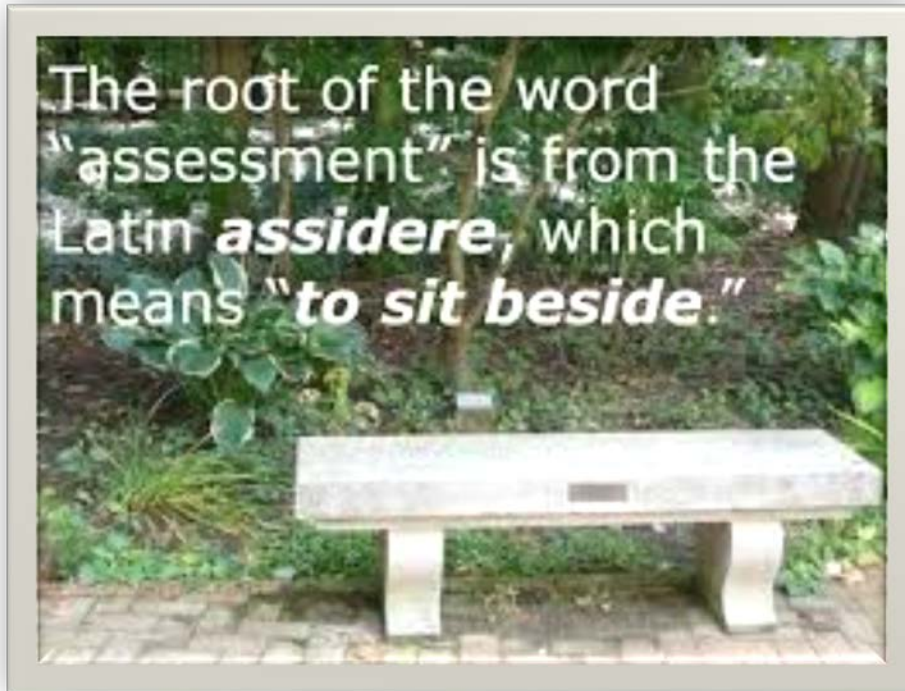


The research project



Tales from the field & the 'so what' factor.

Our assumptions



Learning and assessment:
separate but entwined



Formative assessment



Assessment *for* learning

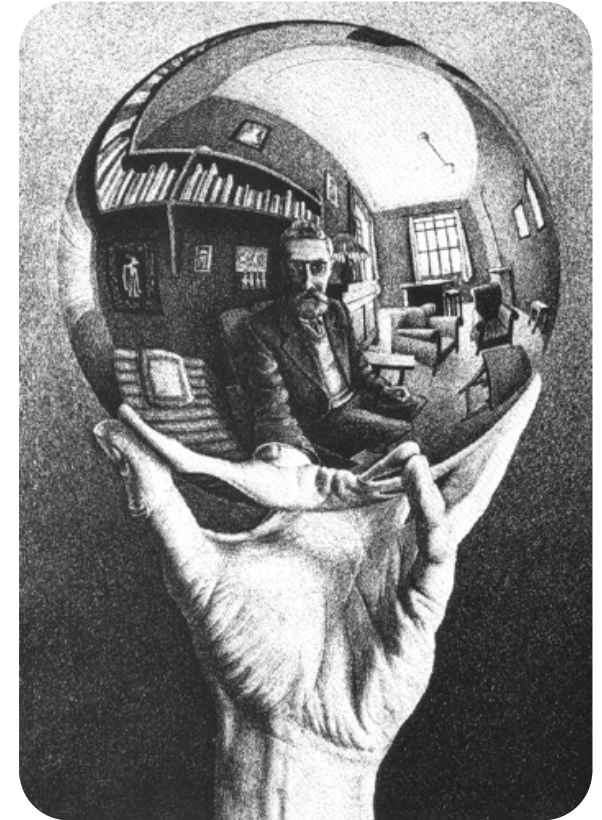
- **Engaging** participants to know:
 - What they are succeeding at what, why and how to improve
 - Continuous **dialogical** feedback from variety of sources



**For
improved
performance**

Context (spaces for learning & assessment)

- Type of work - the vocation, profession
- Conditions and affordances for learning at work
 - Development capabilities available
 - Perspectives, understandings of L&A
 - Degree of challenge and discretionary power
- Learner agency and learning biography



Singapore Context

SkillsFuture

- Workplace-based learning
- Including IHLs

Training providers

- Most private for profit
- Engage adjunct (freelance) 'trainers' (adult educators)

Historical practices

- WSQ (CBT)
- Mainly classroom delivery

Assessment for the changing nature of work: Research questions

How can assessment **design** and **practices** be shaped to meet **changing policy** directions and **workforce development needs**?

1. How do **different contexts** (e.g. different institutional policy contexts, their purposes including credentialing, discourses and practices) **mediate assessment practices and decisions**?
2. What are the current **experiences** of and **challenges** in assessment for learners, AEs, providers, and employers?
3. What factors **enable and/or disable an establishment** and **practitioners** in **adopting leading practices** in assessment?

Research team: Dr Helen Bound, Dr Arthur Chia and Annie Karmel



6 case studies

Case	Duration	Assessment activities
Workplace learning facilitators	10 months	Formative assessment from coaches; summative assessment through learning journal, enterprise report and final assessment interview; 70% attendance required.
New promotional menu items	4 weeks	Live cooking demonstration; close coaching by chefs; written feedback from chefs; site visits by chefs after launch of new menu items.
Rota commander	7 months	Simulated (evaluation) exercises; written theory tests; presentations.
Resident doctor	3 years	360 feedback, monthly evaluations, Mini-CEX, written exams.
Aircraft engineer	3 years	Individual Final Year Project; summative assessment through learning journal, FYP report & final presentation, written exams.
Certified IP Associate	1 week	Observation of basic skills by facilitator; formative assessment of problem solving exercises; written test involving a range of network problems to identify.

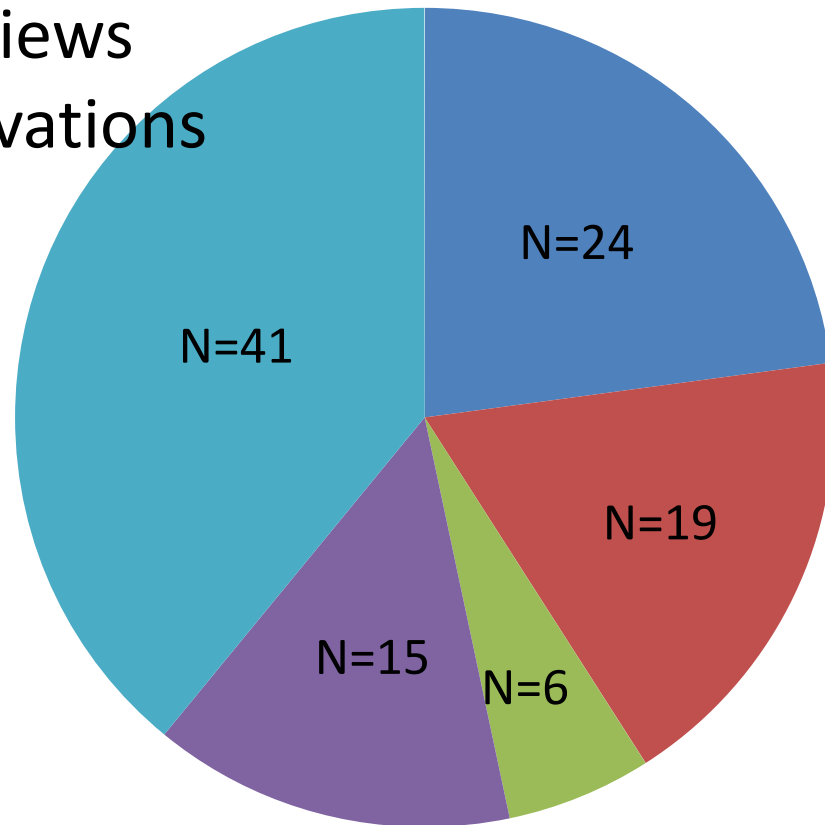
Types of data collected

Data points **n=105**



Semi-structured interviews, observations and curriculum documents, assessment artifacts

Interviews
observations



■ Learner interviews

■ Facilitators Assessors
Curriculum designers
interviews

■ Employer interviews

■ Observations

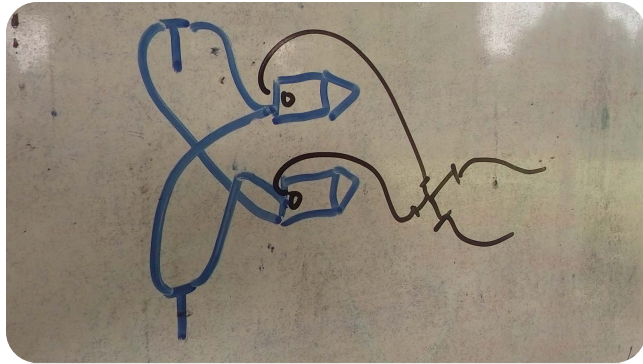
Tales from the field: Flash over training 5/11/15)



Exercise briefing; review; feedback



Dry run: instructor instructs trainees on entry procedure



Tactical schematic: pumps, bridging, hoses, nozzles



Into the compartment fire; 'smoke reading'

Tales from the field - Flash over training

- **Identify symptoms** of a flashover fire.
- **Techniques** to handle flashover fire in an enclosed environment – entry & exit procedures; smoke cooling; equipment handling i.e. nozzle control – ‘pulsating’, holding/aiming the nozzle, half-squat position.
- Compartment fire **simulates the conditions**: intensity, heat, smoke and danger of flashover.
- *‘So it’s not just the ‘theory’ or watching a video. They are there so that they can smell the problem; see the magnitude (of the problem); realize how tired the men are; understand how difficult it is to control the entire scene...’ (MAJOR W).*
- **Embodied learning** – see, smell, feel **to know**; bodily techniques to move, position, hold and handle (equipment). Mastery through experience and practice, practice, practice!

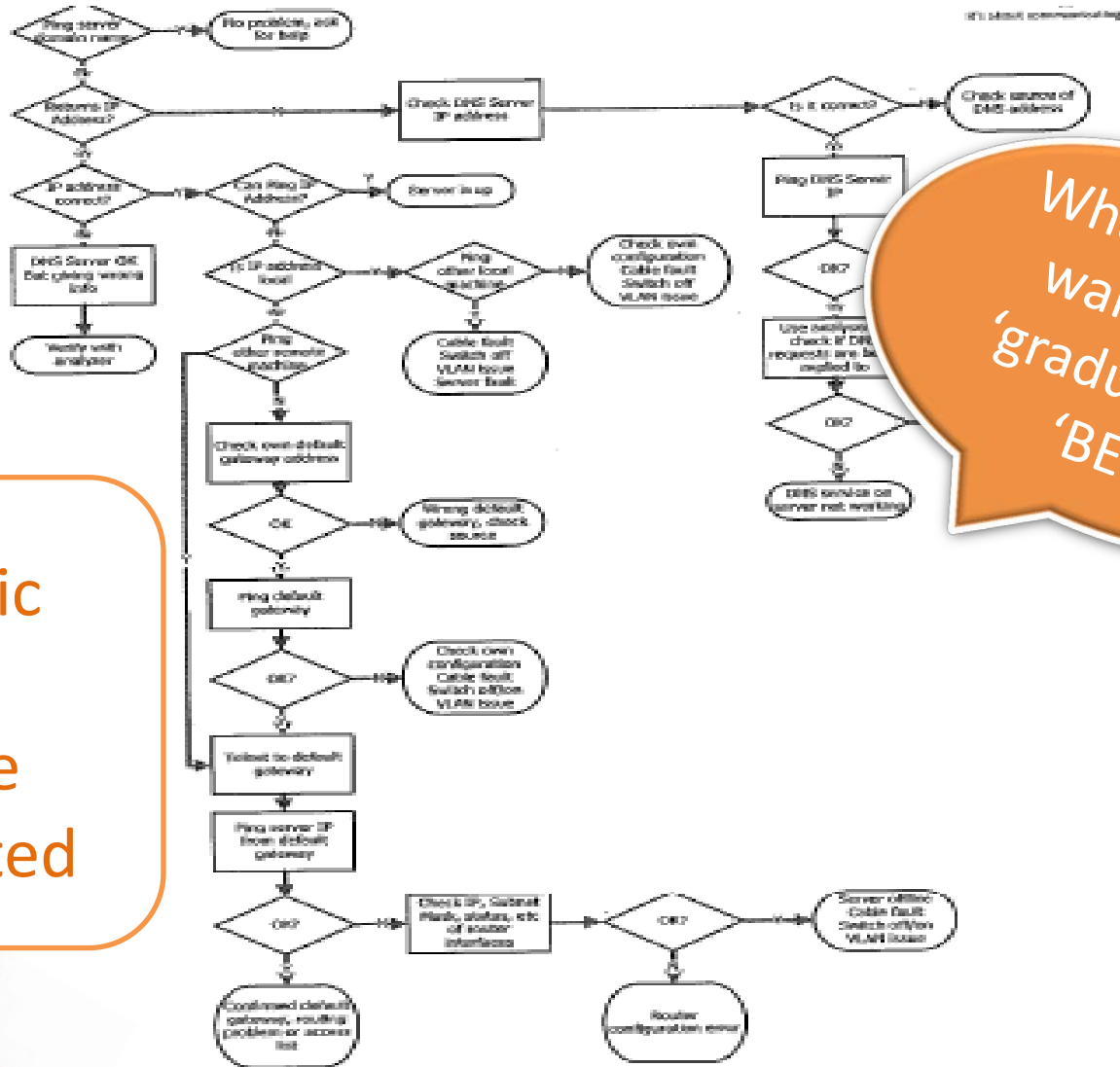
Insights

- Nature of fire-fighting knowledge/know-how is embodied rather than distinct or easily separable;
- Much of the knowing is demonstrated in the doing, and involves developing/cultivating capacities like awareness, responsiveness and fortitude.
- Shifts understanding of 'skill' as highly technicalized and de-contextualized to 'skill' as embodied learning, personal formation, systems of knowledge and forms of knowing.
- Modularized training package (planned, documented)→ Integrated, summative-formative assessment during Final Exercise (in practice), suggests issue of 'alignment'.

Implications for assessment

- Assessment needs to reflect the multifaceted and complex ‘realities’ of learning i.e. learning is no longer understood simply as mechanical processes of acquisition and transfer of knowledge and skills but encompasses notions of embodiedness, of knowing- **‘Authenticity’; ‘Future-Orientedness’**.
- The integratedness of learning and know-how suggests that assessment be designed holistically. Yet the design of assessment is still premised on “traditional” dichotomies of mind-body, knowledge-skills, and theory-practice – **‘Holism’; ‘Alignment’**.

Tales from the field: IT Network Engineers



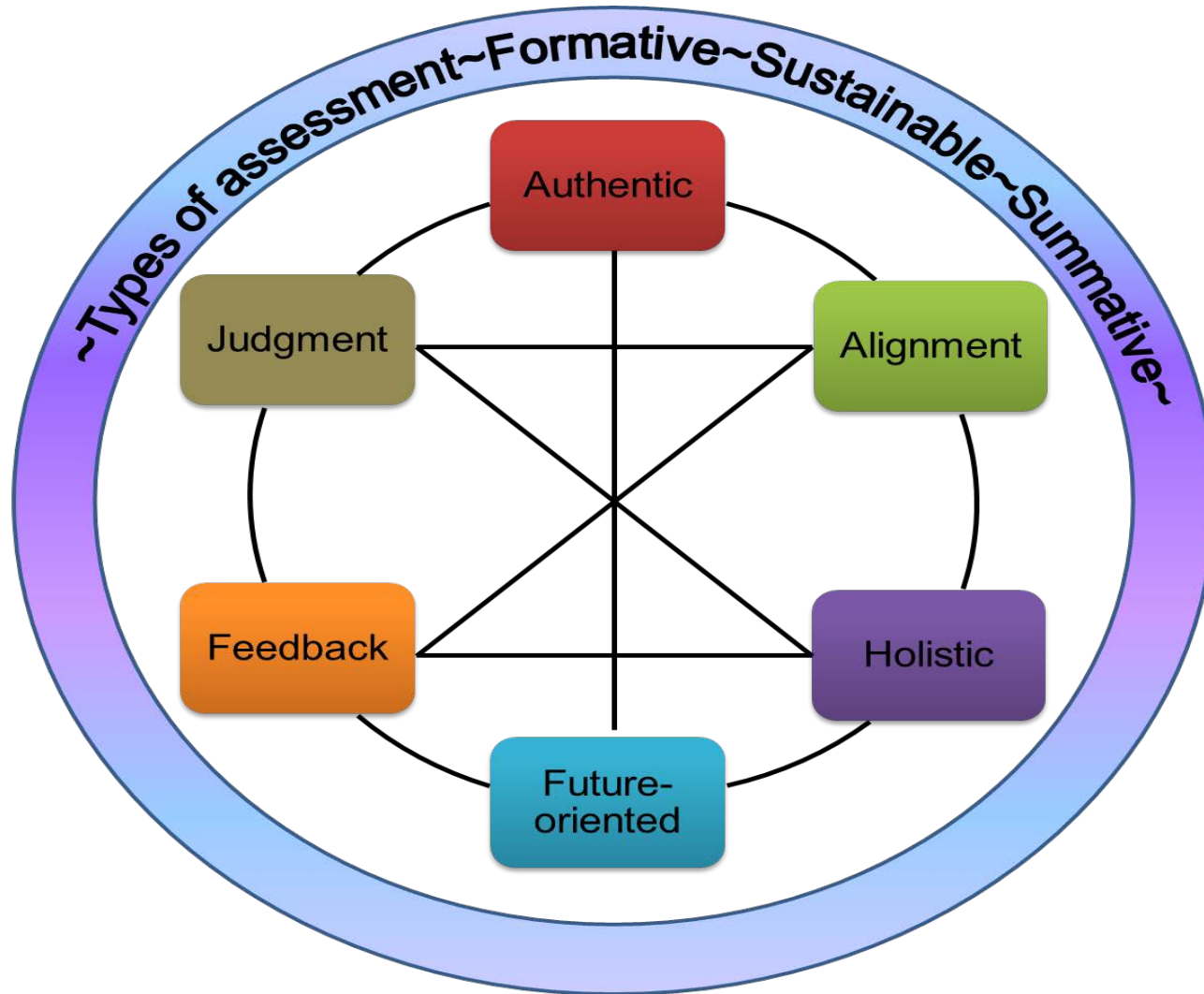
What do you want your 'graduate' to 'BE'?

- Holistic
- Future oriented



Thinking like an engineer

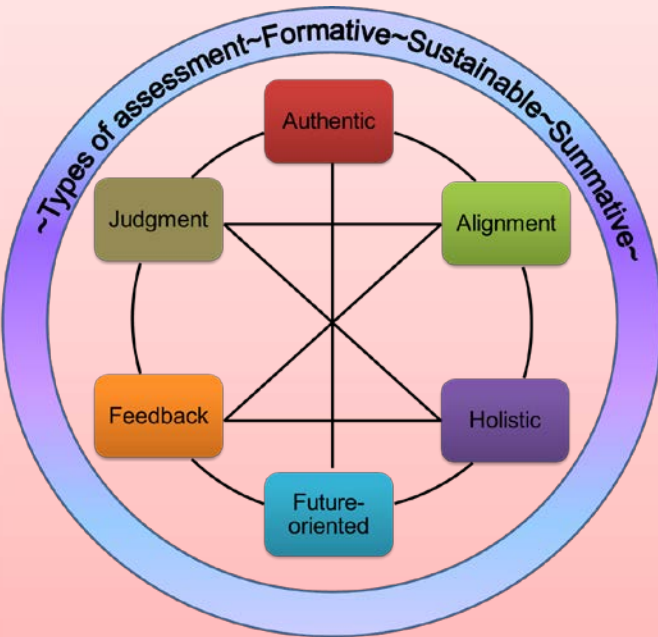
Our conceptual frame – from the data \leftrightarrow lit.



Elements of assessment for the changing nature of work

Our conceptual frame – from the data ↔ lit.

Elements of Assessment for the changing nature of work



Authentic		
Formative	Sustainable	Summative
Feedback	Judgment	Future-oriented
Judgment	Feedback	Holistic
	Future-oriented	
	Holistic	
Alignment		

Feedback

“... the contribution of others to learning through assessment, and repositioning the notion of feedback **not as an act of information giving** to students, but as a **co-productive process** in which both students and others have key roles to play.” (Boud & Soler, 2016, p.403)

- **Helps/enables** learners to improve and grow
- **Provision** of many opportunities to give and receive feedback
- **Feedback** is not limited to dialogue, includes interaction with texts, artefacts, etc.
- **Key** elements of good feedback/dialogue are:
 - “responsivity” &
 - “the attempt to achieve enhanced understanding”

Judgment

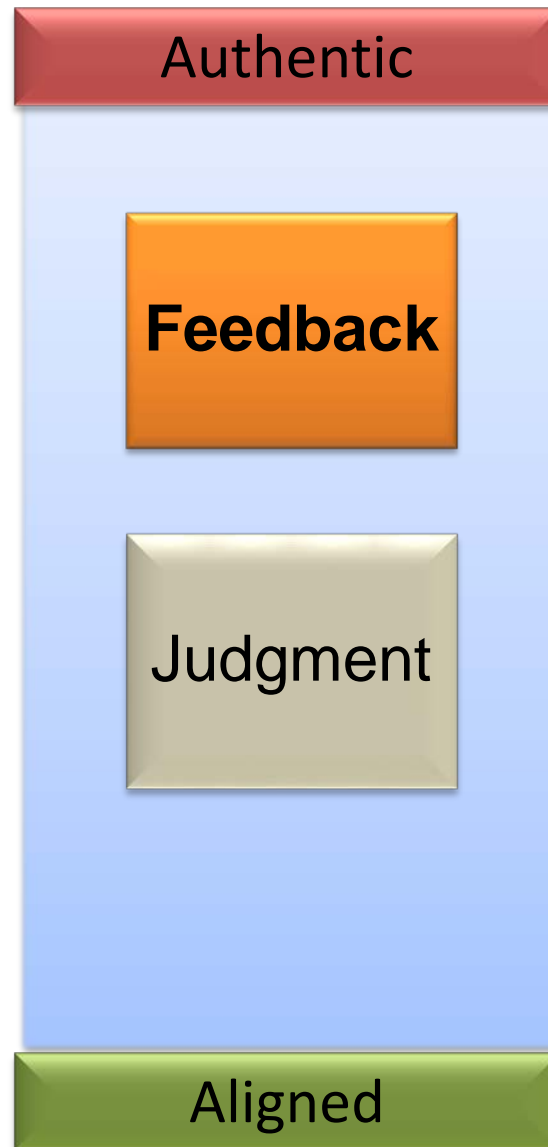
Support capability to
make judgments

- **Learners** are enabled to **make judgments** about their **own performance**
- Assessors have a **shared understanding** of expected performance
- Acceptance of **variation** of judgments but within the criteria/expected standard of performance

*Stakeholders have
shared understanding*

Not same for everyone
(CBT regime)

Formative assessment for work



Spaces for learning and assessment

In, through and for work

Affordances for learning and development


- Conditions for learning
- Challenge in the work
- Capability to support assessment *for* learning
 - Workplace pedagogies

Partnerships

- Enterprise-training provider/educational institution
- Shared intent or motive



Discussion

The image shows a close-up of two footprints in a sandy surface. The footprints are arranged vertically, with the top one slightly to the left and the bottom one slightly to the right. The sand is a light tan color with some darker, shadowed areas within the prints. The text "Change is a process, not an event." is centered between the two footprints in a white, bold, sans-serif font.

**Change is a process,
not an event.**

Dimensions of assessment for the changing nature of work (1 of 3)

Authenticity:

- Uses, draws on and/or is embedded in real work practices
- Focuses on performance in various circumstances of work – within the scope of the learning outcomes
- Enables learners' engagement.

Alignment:

- Program designers integrate assessment and learning
- There is consistency and connectedness between the espoused purposes, and learning activities and assessment

Dimensions of assessment for the changing nature of work (2 of 3)

Holistic:

- Courses integrate knowing, doing & thinking
- Outcomes, learning activities and assessment embody the complexity of work.
- Reflective of the inter-dependence between different aspects & 'wholeness' of work

Future-Orientedness:

- Readiness for work, ability to face future unknowns and new challenges beyond the course/training.

Dimensions of assessment for the changing nature of work (3 of 3)

Feedback:

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