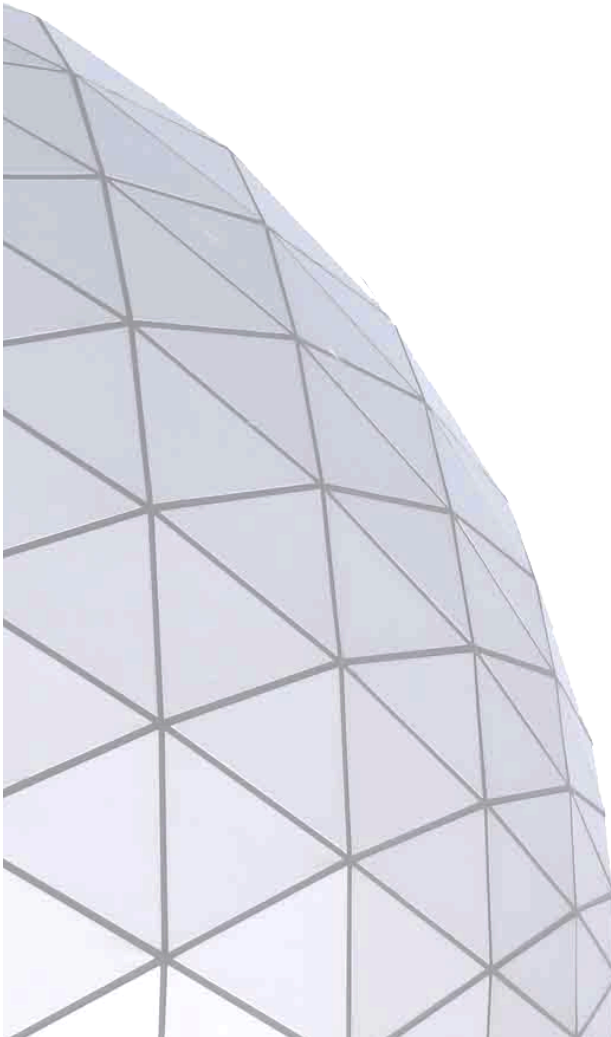


# Informal Learning

Peter Trevitt, CEO, Techniquest



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# A few quotes...

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# A few quotes...

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**'It's all about asking  
the right question'**

Professor  
Richard Gregory

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# A few quotes...

**“Do good work for a hundred years, then see if things are better.”** [Deli Lama, quote sourced by the Exploratorium]

**“...impact is hard to define and harder still to measure.”** [At-Bristol RAP]

**“Proof of a causal link using properly controlled academically rigorous study may well be impossible...”** [REV, Ecsite working group]

**“That informal settings provide opportunities for learning is not in doubt. Measuring the extent and depth of that learning is, however, difficult.”** [Heather King, Justin Dillon, Kings College London]

**“...a single, coherent approach to learning in science centres does not currently exist”** [Richard Walton]

# Different terminology

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Learning in an informal context (Kings College et al)

Informal learning (standard terminology)

Experiential learning using participative methods (Ecsite's wording)

Motivational learning/attitude change

etc...

# Models and mechanisms

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**Learning theory** e.g. constructivism

**Learning styles** e.g. visual, kinaesthetic

**Learning outcomes** e.g. conative, affective, cognitive, behavioural

**Learning mechanisms** e.g. control, multi sensory, achievement of goals, social interaction

**Indicators of learning** e.g. behaviour change, memory, questioning, social factors, talking, smiling

**Neurological** e.g. Translational education (China)

Also...

Importance of personal choice and prior knowledge

# Types of impact

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Knowledge, memory, enjoyment, influencing, social cohesion, friendships

Attitude change, e.g. more positive view of science

Immediate/long-term

Individuals, society as a whole

Choice about career or further education

# Types of evidence of impact

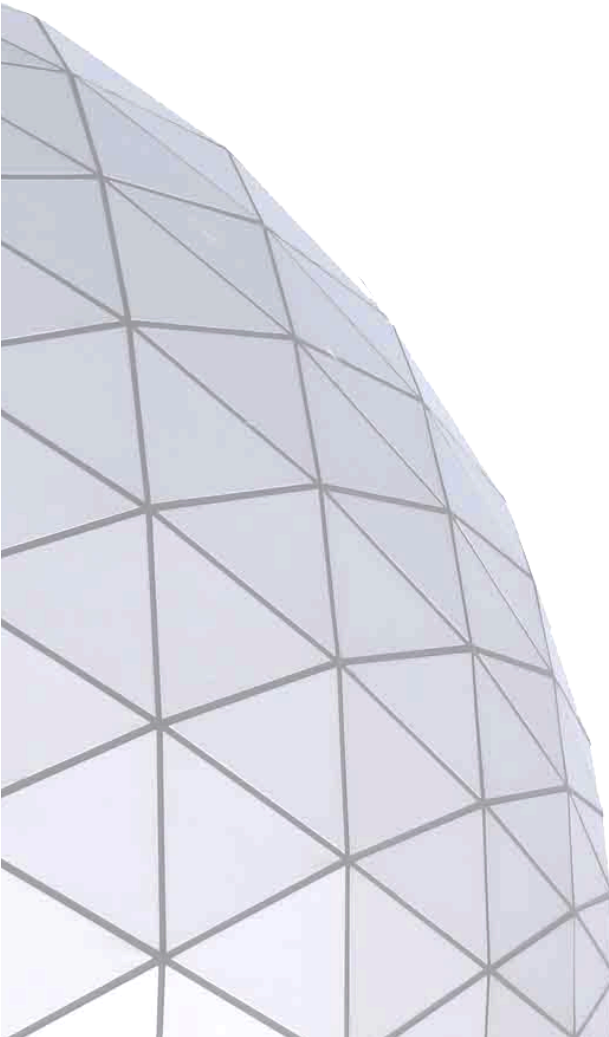
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Teachers views/choices

'Classic' causal proof

Circumstantial

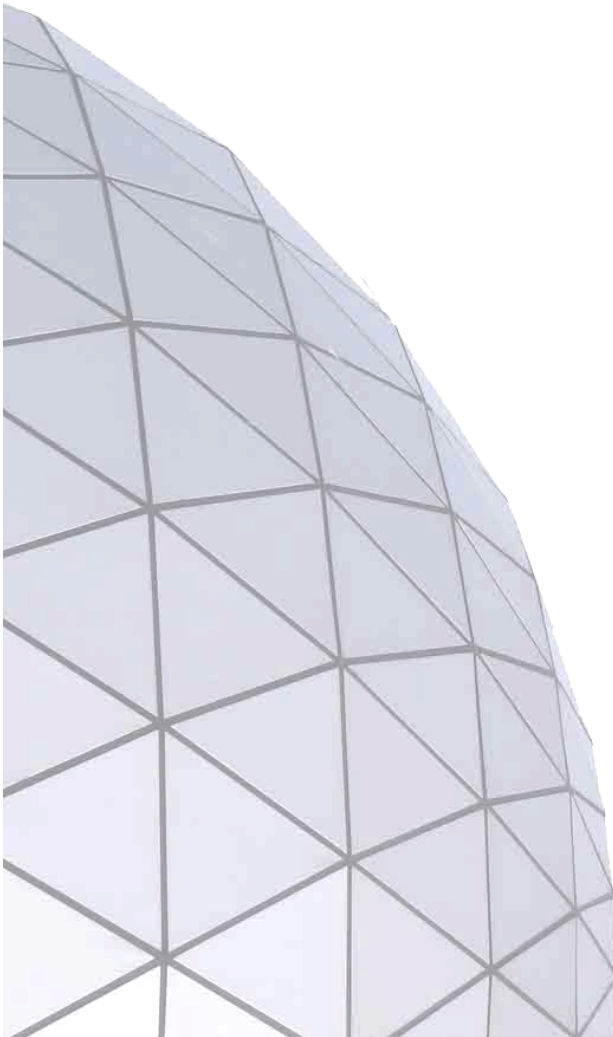
Anecdotes





# Need for proof of impact

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Funders

Governments

Partners

Trustees

Staff

(Audiences)

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# Communication of evidence

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Networking bodies

Individual centres

Academics

Governments

Scientists?

# Practical difficulties

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Cost of studies, especially large, statistically significant ones

Establishing prior knowledge/attitudes

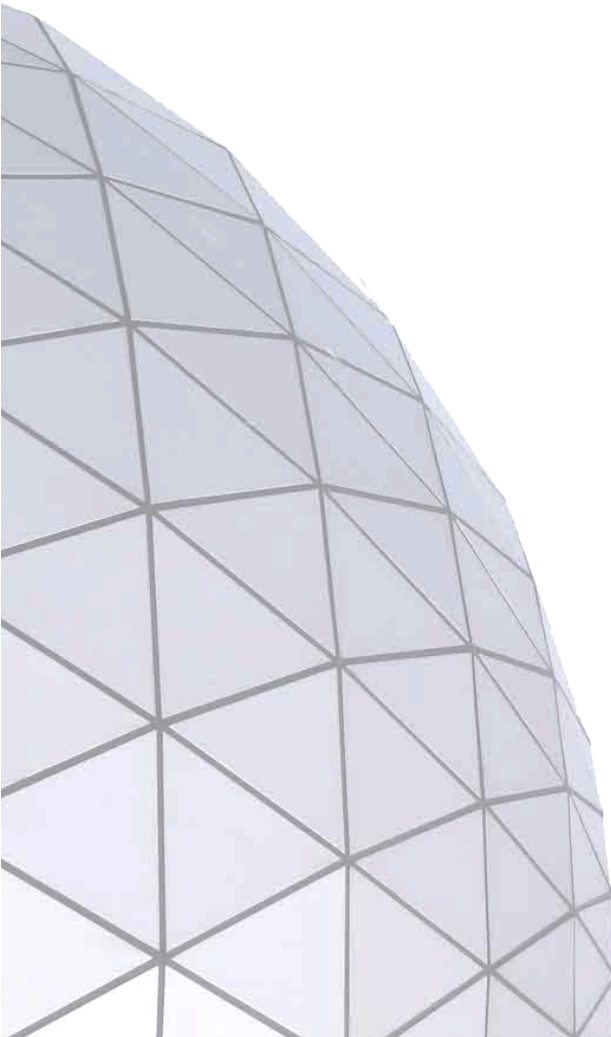
Complexity of the link between knowledge, attitude and behaviour

Long-term study “impossible” due to differentiating from other effects: influence of teachers (good and bad), impact of television, influence of parents

Research expertise – collaborations with academics essential

# Studies already conducted

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There are many...

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# Questions...?

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What do you think are the three most valuable educational impacts of your centre?

What three characteristics of your centre lead to the three most valuable educational impacts?

Are there particular types of educational impact that you feel are of interest to all members, and if so, what are they?

Would an annual report on educational impact research be of value to members, and what key information should such a report contain?

What would you use data from educational impact research for?