



Enhancing the value and impact of research into vocational education and training: an Ako Aotearoa view

Peter Coolbear, Kirsty Weir & Warren Sellers
Industry Training Research Forum, 22nd April 2009

Background

- **Is there a lack of research into vocational education and training in New Zealand?**
- **The Ako Aotearoa Research Register has identified 118 pieces of work in the last three years alone.**
- **So, why is there a lack of impact on practice?**

Possible reasons

- Research is of poor quality
- Research is high quality, but not practice focussed
- Research is practice focussed but educators are not aware of it
- Educators are aware, but there is no coherent body of evidence on which to base change
- Educators have access to a coherent body of evidence, but have no incentives to change practice.

The UK debate in the 1990's

- **Considerable controversy about the quality and value to practice of educational research (Hargreaves, 1996)**
- **Tooley and Darby (1998) found that only a third of research articles sampled could be characterised as high quality**

The UK debate

- Problems in educational research relate to the ***conduct***, ***presentation*** and ***focus*** of the work
- Specific limitations of work included the **fragmentation** of research and/or failure to build on other work; **partisanship** by researchers; problems of **methodology**; and the **focus** of educational research
- Tooley and Darby / ESRC use the concept of Pasteur's Quadrant to identify the type of research needed to improve practice.

Pasteur's Quadrant

Quest for fundamental knowledge?	Yes	Pure basic research (Bohr)	Use-inspired basic research (Pasteur)
	No		Pure applied Research (Edison)
		No	Yes

Conditions of use?

(Stokes, 1996)

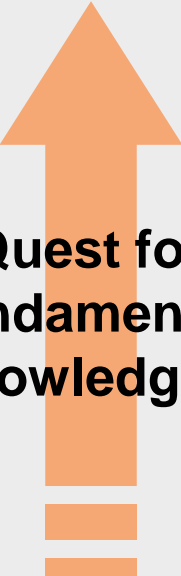
Pasteur's Quadrant

Quest for fundamental knowledge?	Yes	Pure basic research (Bohr)	Use-inspired basic research (Pasteur)
	No	Poor quality research	Pure applied Research (Edison)
		No	Yes
		Conditions of use?	

(Stokes, 1996)

Pasteur's Quadrant: the drivers

Quest for fundamental knowledge?



Yes

Pure basic research

Use-inspired basic research

No

Poor quality research

Pure applied Research

Methodological Integrity

No

Yes

Conditions of use?



Potential Impact

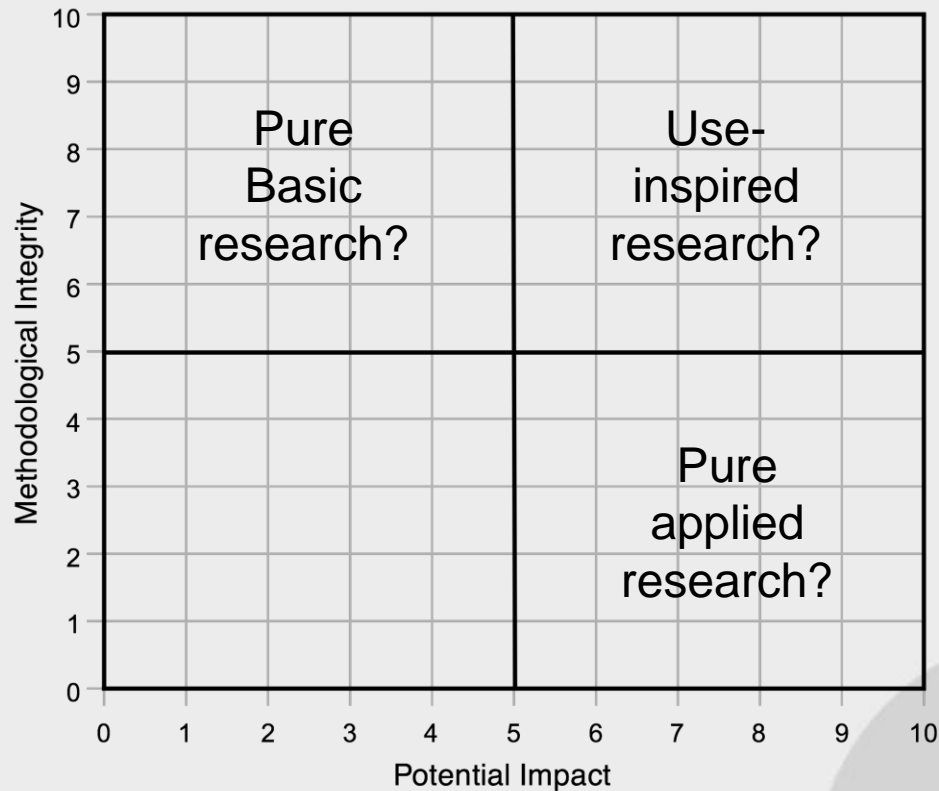
Mapping against Pasteur's Quadrant

- **Can recent research into vocational education and training in New Zealand be mapped against Pasteur's Quadrant?**
- **40 articles selected randomly from 118 pieces in the workplace learning discipline**
- **21 from the health sector; 19 from other types of workplace**
- **Reviewed and scored on 2 dimensions**

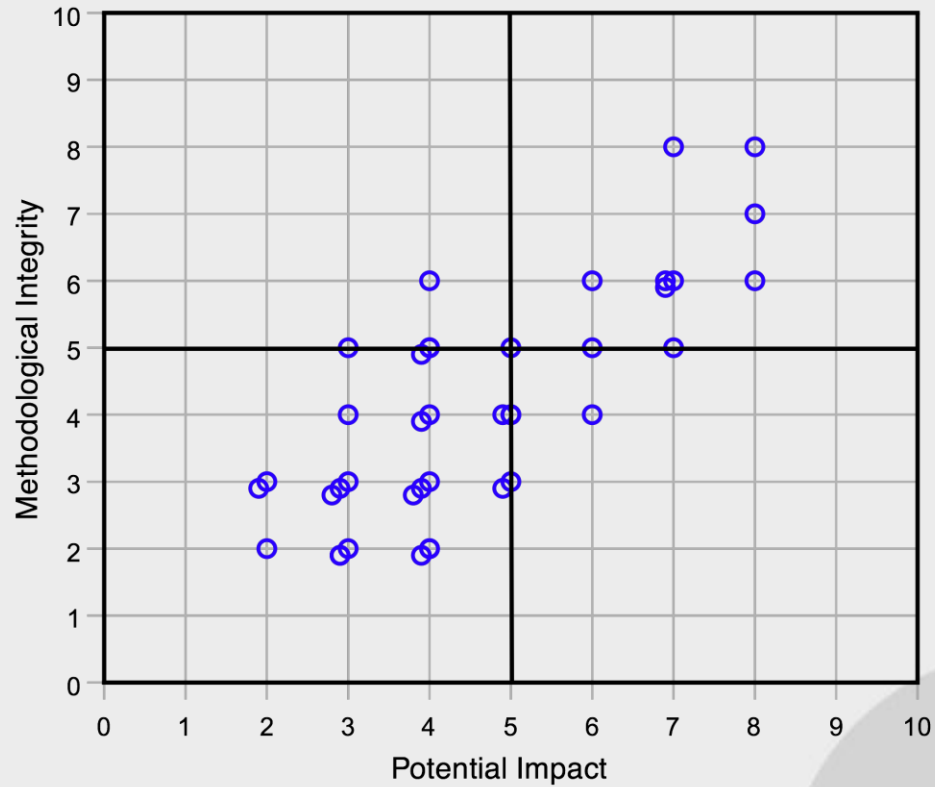
Mapping against Pasteur's Quadrant

- **Methodological Integrity** includes methodological considerations; contribution to cumulative knowledge; non-partisan approach
- **Potential Impact** includes consideration of users/practitioners; creating synergies and/or relationships; dissemination and accessibility of results
- Research scored between 0-10 on each axis

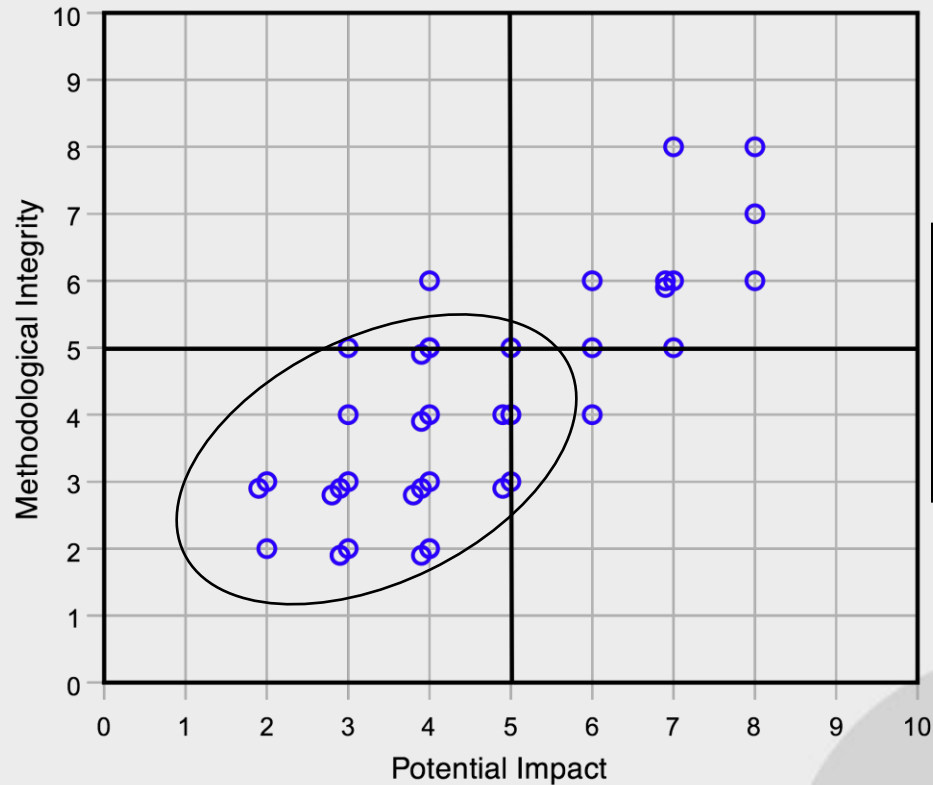
Predictions?



Results

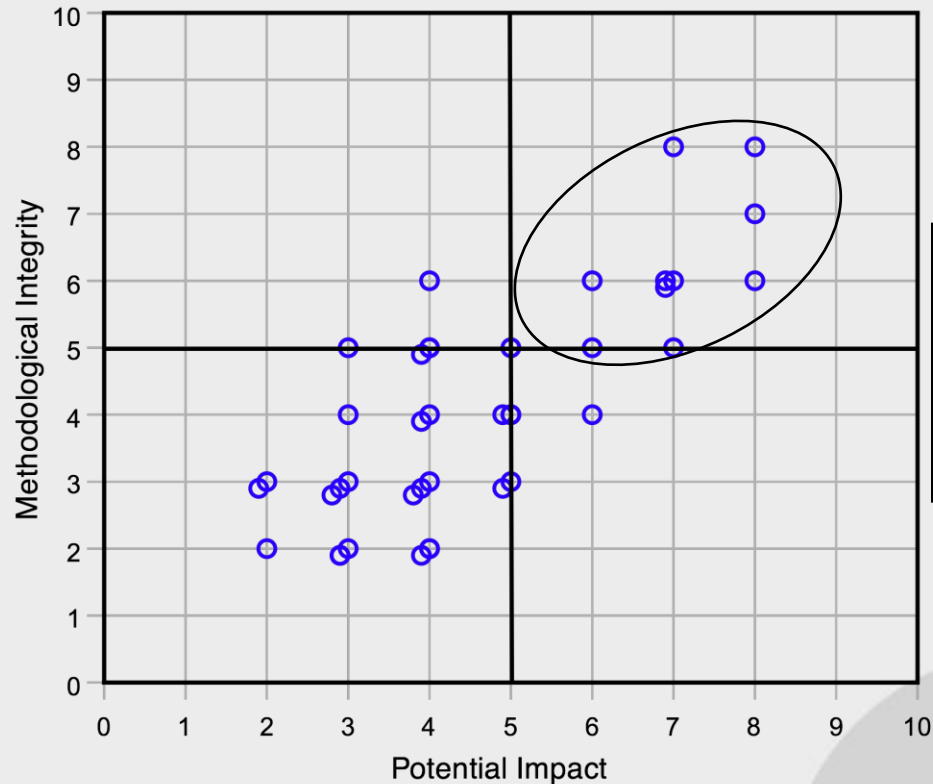


Results



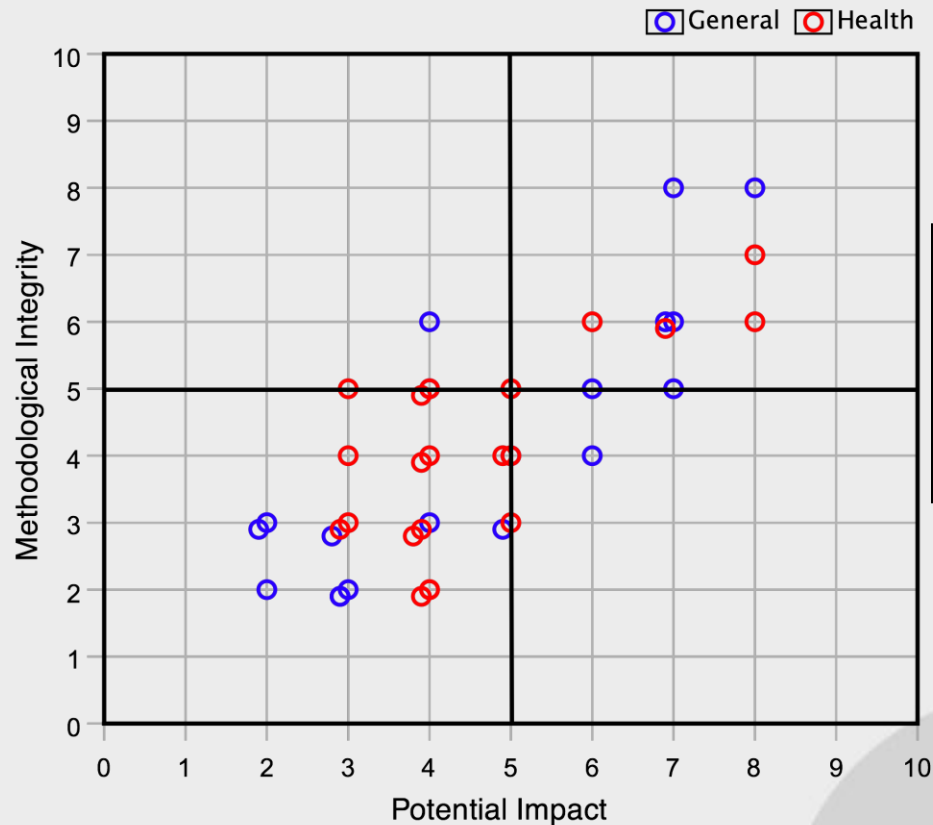
70% of the sample was in the low MI – Low PI quadrant

Results



Only 25% of the sample was in the use-inspired quadrant

Result



Roughly even spread between health and other disciplines

Limitations of current research work on VET

- Implications of results often unclear – much work description of practice and not much more
- Often work does not build off previous literature
- Very little triangulation – even in mixed method designs
- Most quantitative research measured perceptions rather than the outcome of interest *i.e.* learning
- Lack of generalisable findings

Moving research into Pasteur's Quadrant

- Enhance methodological integrity
 - Develop research questions that have potential to both contribute to current knowledge and improve practice
 - Match robust methodologies to research questions using a range of potential techniques
- Enhance Potential Impact
 - Consider potential applications of work in the design stage the study
 - Develop accessible outputs for each targeted audience
 - Look for parallels in other forms of tertiary education practice

How can we work together?

1. Foster use-inspired research

- Support large scale use-inspired projects through our National Project Fund
- Encourage collaboration and debate about undertaking research that has the potential to impact on practice
- Support collaboration, bringing together diverse research skills
- Showcase work that meets the criteria we are looking for

How can we work together?

2. **Support and encourage practitioners to take advantage of use-inspired research**
 - Build a coherent knowledge base of evidence about tertiary teaching and learning that can impact upon practice
 - Assist with dissemination of findings of work that meets use-inspired criteria
 - Give practitioners permission to be innovative
 - Support and show-case further implementation and evaluation of evidence-based enhancements to practice