



# **Assessing changes in university academic staff knowledge intensive business service skills**

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# Outline



- Third stream activity **resource and capability requirements**
- New **skills** and new **ways of working**
- **General** training and development position
- **Specific development issues** in **multi-disciplinary working** and operating as **KIBS**
- Can we **develop a measure** of skills that is sufficiently **sensitive** to detect changes following **training and engagement**?
- Case study – 28 staff – used **pre and post self assessment**
- Detected **meaningful capability developments**
- **Further research**

# Third stream activity resource and capability requirements (from Prince (2007: p751))



## Activity

### Programmes

Networks  
Facilities  
Location  
Staff  
teaching  
administrative  
bus. development  
marketing  
Brand  
Reputation  
Org. routines  
QA & validation  
HR policies

### Contract research

Networks  
Staff expertise  
Reputation

### Funded projects

Bid expertise  
Networks  
Location

### KTPs

Bid expertise  
Networks

### Training & consultancy

Staff expertise

# New skills, new ways of working



- may not have fully developed the requisite capabilities but may have **'latent capacity'** (HEFCE, 2006)
- “requires **new skills and new support**” Blackmore and Castley (2006: 45)
- includes **“business development and client management skills”**, and **“customer orientation.”** Prince (2007: 745)

# Training and development



- “As **training and mentoring** become more widespread, there is a **greater preparedness and confidence to engage**” (PACEC, 2009: 111)

BUT

- “training opportunities for ordinary academics still seem **scarce**” Hatakenaka (2005: 24)
- **less than 1% of HEIF funding** being spent on training and development PACEC (2009: 41)
- May be **helpful to understand development needs** in terms of **multi-disciplinary team working** and **knowledge intensive business services**

# Multi-disciplinary team working



- in **Mode 2 knowledge creation** (Nowotny et al, 2003: 186)
- an increasing characteristic of working in an **'entrepreneurial' university** (Gjerding et al, 2006)
- a **development challenge?**

# KT in knowledge intensive business services



- some aspects of knowledge transfer across the KIBS-client boundary have been studied (Webb, 2002)
- **means** through which universities (as KIBS) can affect innovation studied by Sparrow et al (2006)
- Sparrow et al (2009b) highlight facets of **new knowledge and skills required** by universities

# Current research question



- **Can we assess** university staff skills and knowledge associated with multi-disciplinary KIBS working?
- **Can we identify changes** in such profiles associated with **training and practical engagement?**



# Methodology (1)



- BCU as **case study** university
- **28 staff** training and working as **Innovation Mentors** over **nine month** period
- Used Sparrow et al (2006) assessment of university role in **pre and post comparison** to identify 'improvements'

# Methodology (2)



- product, market, process, organisational and relational innovation (Tether, 2005)
- organisational processes in achieving innovation (Leiponen, 2005)
- source, carrier, facilitator (Hertog, 2000)
- specialised research units; joint co-operative ventures; and, interdisciplinary projects (Bercovitz and Feldmann, 2006)
- generative, developmental (Gunasekara, 2006)
- expert consulting; experience-sharing – ‘bees cross pollinating’; brokering; diagnosis and problem clarification; benchmarking, change agency (Hertog, 2000)
- educator/lecturer, trainer, expert/technical consultant, coach/mentor, formal quality assessor, facilitator
- alignment with techno-economic conditions of the region; embeddedness in established cluster and other regional networks; role given the number of other KIBS in the region (Koch and Stahlecker, 2006)

# Findings (1)



- significantly higher perceived personal capability to support aspects of **client organisational processes** (Leiponen, 2005)
  - **internal cooperation of employees** ( $F= 4.325$ ,  $df(1,67)$ ,  $p<0.05$ )
  - **organisational use of vertical and horizontal information from suppliers, customers etc.** ( $F=3.516$ ,  $df(1,67)$ ,  $p<0.05$ )

## Findings (2)



- significantly higher perceived personal capability to:
  - Work with clients where the **university** is not the source of innovation, nor carrier of innovation but **facilitator** of innovation (Hertog, 2000) ( $F=4.502$ ,  $df(1,67)$ ,  $p<0.05$ )

## Findings (3)



- significantly higher perceived personal capability to operate in some **innovation support roles** (Hertog, 2000)
  - **brokering** role ( $F=6.294$ ,  $df(1,67)$ ,  $p<0.05$ ),
  - **systematic evaluation** role ( $F=5.025$ ,  $df(1,67)$ ,  $p<0.05$ )
  - **change agency** role ( $F=2.981$ ,  $df(1,67)$ ,  $p<0.05$ )

## Findings (4)



- In terms of **functional roles** (i.e. educator/lecturer, trainer, technical adviser, coach/mentor, formal quality assessor/assurance and facilitator), significantly higher perceived personal capability to operate in:
  - **coach/mentor** role ( $F=3.196$ ,  $df(1,67)$ ,  $p < 0.05$ )
  - **facilitator** role ( $F=5.824$ ,  $df(1,67)$ ,  $p < 0.05$ )

# Conclusions



- **it is possible** to assess KIBS capability in a way that **can capture personal development** through training and experience
- meaningful **pattern** of statistically significant changes associated with a **specific KT approach**
- need for **broader longitudinal study** (underway)
- need for **larger scale multiple case evaluation**
- need to **move beyond self-assessment** of capabilities



**Any questions?**