Comparing perceptions: A secondary analysis

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Contents

Introduction page 3
Educational productivity paradox page 4
Dennison 2013 page 6
Secondary analysis page 8
Method page 11
Findings page 19
Future research page 22
Questions page 23
Steven Vella

Research: Managing ICT in schools education

• 25 years in ICT; 20+ years supporting Tertiary and Secondary education; and 5 years in private enterprise

• Schools education:
  • Australian schools from Kindergarten to Year 12
Educational productivity paradox

Why?
To study perceptions of faculty members and IT leaders of what factors were critical for the successful adoption of innovative technology

Higher Education Critical Success Factor Innovation Model

Technological Innovation

1. Resource/Financial Support
2. Enhances Teaching & Learning
3. Technical Support
4. Quality Technology
5. Ease of Use
6. Perceived Value
7. Training
8. Faculty & Student Skill Level
9. Stakeholder Involvement
10. Exec/Admin Support
11. Proven Effectiveness
12. Innovative Culture
13. Strategic Planning
14. Cost Efficiency
15. Incentives
16. Technical Infrastructure
17. Project Management
Secondary analysis

Can we compare and identify common and unique perceptions that might be useful for

- improving benefits from common CSFs and
- resolving issues arising from unique CSFs impacting the implementation of innovative technology.
These factors important in the university?

Technology and infrastructure is in place

We get support from our executive and admin staff

We have quality, reliable and flexible technology

The technology enhances teaching and learning

Technology is easy to use

The technology has to be useful and addresses our needs

Both Faculty and IT agree
Where can the university improve?

- Provide skilled technical support
- Provide professional development and training
- Provide resources and financial support
- Manage projects better
- Prove the technology is effective
- Stakeholders should be involved

Faculty response

IT response
How can you find this out?
Dennison: Mixed method approach

1. Surveyed peer experts:
   • 17 CSFs

2. Interviewed select peer experts:
   • confirmed the 17 CSFs for a survey tool (context 1)

3. Surveyed participants to rank CSFs
   • Against the median from the peer experts (context 2)
   • Against university performance (context 3)

4. Analysed the survey results
   • Ranked 17 CSFs and interviews.
Context 2: Rank code from original tables

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<th>Key</th>
<th>Critical Success Factor</th>
<th>Faculty Mean</th>
<th>Key</th>
<th>Critical Success Factor</th>
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Table 1d: Rank against expert median by faculty experts

Table 1e: Rank against expert median by expert ICT leaders

Table 1f: Rank against expert median combined
Context 2: Combine them and average rank

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Graphical analysis

Sort factors by the calculated average rank

CSFs ranked equal to or above the group median
  • Considered relatively more important than those below

CSFs ranked with similar values
  • Considered in common to both groups

CSFs ranked relatively different
  • Considered unique to one group
Graph of results (Context 2)
CSFs against the expert median (Context 2)
CSFs against the expert median (Context 2)
Findings

No CSFs were ranked important across all three contexts but some important for two

• No single solution fits all contexts but
• Measurable in context

Can identify common and unique perceptions between groups that may be useful for

• improving benefits from common CSFs and
• resolving issues arising from unique CSFs impacting the implementation of innovative technology.
Future research

Review literature in schools education for CSFs

• IT competence

• Leadership context, The perceived role of both the teacher and principal

• Professional Development, and The availability of resources and support
Future research

Then survey and interview study participants
  • To rank the CSFs in specific contexts

Collect results
  • Analyse by comparing perceptions between groups for the context surveyed
Future research

Survey participants from schools education

• to investigate perceptions of CSFs impacting the successful adoption of innovative technology in schools.

Why educational productivity paradox?
Questions?

What critical success factors influence the adoption of innovative technology in your workplace?

How does this study help evaluate CSFs that are perceived to be facilitating or hindering successful adoption?

What suggestions could improve future studies?

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