The Student as Researcher

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This session...

- Research: the common view
- The student as researcher: the ‘academic’ view
- TAFE and applied research: towards a new paradigm
- Broadening research: vocational students and the applied research partnership.
- Defining student/trainee research: Boyer and ‘vocational’
- Student/trainee as researcher: types of research
- Students and applied research: ‘future proofing the workforce’
- Student research and TAFE
Research: the common view

The academic focus... basic or ‘pure’ research

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The student as researcher…the ‘academic’ view

Chapter 1: Background
1.1 Introduction
1.2 Research Objective
1.3 Research Methodology
1.4 Sampling
1.5 Strengths
1.6 Limitations

Chapter 2: Literature Review
2.1 Literature Review
2.2 Literature Summary Table
2.3 Importance of Literature Study

Chapter 3: Research Methodology
3.1 Introduction
3.2 Overview of the Method of this research work
3.3 Research Approach
3.4 Justification behind selecting the specific Approach
3.5 Research Design
3.6 Justification behind the selection of the specific design
3.7 Research Strategy
3.8 Data Collection: Secondary Data Sources
3.8.1 Secondary research
3.9 Methodology
3.10 Quantitative Method
3.11 Data Analysis
3.12 Summary

Chapter 4: Corporate Governance Analysis
4.1 Abstract
4.2 Introduction
4.3 Analysis of Variables
4.4 Descriptive Analysis

Chapter 5: Conclusions and Recommendations
5.1 Summary
5.2 Conclusion
5.3 Recommendations
Applied research and innovation

- **Practical research**

- Produces workable solutions to industry or community based problems

- Mission driven, goal oriented

*Apply new or existing knowledge to produce, or to improve, new materials, products, services, devices, policies or work processes.*
The applied research partnership

Students as researchers…

- Staff researchers
- government and community
- SMEs
- University collaborations
- Student/trainee based inquiry research

Applied research
Broadening research...

DNA Barcoding: student learning and applied research
Broadening research…

‘Bringing the Trades In’: the role of the ‘trades’ in the development of applied research and innovation in TAFE.
Broadening research…

Smith’s Beach Access Ramp
Building students and staff work with community groups to construct an access ramp at Smith’s Beach
'Universities)... are 'ecosystems' made up of 'communities of learners’ where students are perceived as researchers who ‘observe and participate in the process of both discovery and communication of knowledge’ (Boyer, 1998).
Defining student research: the vocational sector

If we understand research based learning as an inquiry or investigation that:

- allows the student or trainee to either make an original or creative contribution to the discipline (industry); or
- allows them to develop a wider understanding of their programme of studies/training and their industry,

then there is active engagement in the research and inquiry process.
The student as researcher

Student research

- 'live-work' projects
- Academic or ‘basic’ research
- Placements, class research projects
- Project based learning, capstone projects
‘Live-work’ projects in the trades and projects with industry or community partners:

- Sustainable house: design and construction
- Neighbourhood project: retrofitting project for homes
- ‘Houses for Homeless Youth’ building programme in co-operation with Rotary and local suppliers
- Smith’s Beach Access Ramp
- Water harvesting project
- Trialling of paint cleaning technologies
Research driven learning

Working co-operatively on self-directed research:
- ‘capstone projects’
- project-based research in diploma and advanced diploma level programmes, e.g. advanced diploma of building design (architectural)

Degree studies in vocational institutions:
- research-based units taken as part of a course of study, usually as a part of an applied degree programme
Working in industry and applied research

- student entrepreneurship activities
- internships
- work placements.
Applied research: ‘future proofing the workforce’

Student participation in applied research:

- Enhances a student’s technical knowledge;
- Contributes to an understanding of the ways in which innovations to work processes and product development may be applied ‘on the job’;
- Supports problem solving in the workplace - understand the need to look for innovative solutions and capacity to apply knowledge to overcome costly and time-consuming industry problems;
- Develops ability to work autonomously, as well as in a team; and
- Improves communication and planning skills.
Fostering student research: its significance for TAFE

- Encourages the formulation of inquiry based activities and learning programmes (project-based learning; ‘live work’ projects; work placements, student entrepreneurial schemes and internships).

- Assists development of new knowledge and improvements to work techniques; facilitates knowledge transfer from vocational institutions to the community and to industry.

- Supports projects undertaken in partnership with industry and community.

- Enhances the profile of TAFE institutions in the conduct of applied research and strengthen TAFE’s contribution to the future economy.