What tradies know about what tradies know: an exploratory study of the views of trade instructors about knowledge and knowing

Colin H. Ducker
University of Wollongong

Follow this and additional works at: https://ro.uow.edu.au/theses

Recommended Citation

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au
Declaration of Originality

I certify my authorship of the thesis report submitted today entitled:

What tradies know about what tradies know:
An exploratory study of the views of trade instructors about knowledge and knowing

in terms of the University of Wollongong Course Rules set out in the Postgraduate Calendar.

Colin H Ducker
30 June 1995
Abstract

This study began in observations about an apparent tension between the views held by trade instructors and the curriculum and instructional formulations with which they work in the vocational education and training setting. Three research questions emerged: Do trade instructors use frameworks or systems of beliefs, values, attitudes and feelings that guide their approach to knowledge and knowing? What are the main typologies that underpin these frameworks? Do the views of trade instructors embody characteristic ways of presenting or perceiving reality? These questions guided a systematic search for understandings of the ways trade instructors construe knowledge. It involved uncovering, clarifying, and authenticating the ways in which they interpret and give meaning to knowledge and knowing.

The trade instructors in this study portrayed a strong commitment to a typology based on a practical-theoretical dichotomy. They presented 'practical' knowledge as the essence of what constitutes valued and valid knowledge. This is a concept that has breadth and complexity. Essential characteristics of practical knowledge are captured in terms such as 'craftsmanship', for it enables the tradeworker to perform with mastery, excellence and proficiency across a variety of settings, and within the full tutelary spirit of the trade. It outcrops in the tangible processes, materials and outcomes of the trade and these act as the primary referents for what counts as valid knowledge. Because the dominant context in their lives is the skilled trades, these trade instructors derived significant aspects of their views from the nature and practices of work in the skilled trades, including the notion of lineal descent as the process for acquiring valid knowledge.

In seeking theoretical development, the study moved through several major phases: the systemisation of existing theories and research; an in-depth and intensive study with a small number of trade instructors to expose constructs that underpin their views; and a survey of a large number of trade instructors to explore the extent to which the constructs are shared by other trade instructors.
Acknowledgments

Dr Michael Wilson was my supervisor. He was the consummate supervisor - rigorous and incisive, supportive and empowering, generous with his time and his intellect. His commitment to the research effort and to my candidature was principled and unerring. Any attempt I make to represent my appreciation for his efforts always will be inadequate.

I am very grateful to the tradies who worked with me and supported this study - the greyhound, wild billy, the old bloke and all the rest of them. I feel privileged to have been able to gain some insights into who they are and to project, through this thesis, something of what they're about.

I thank, most sincerely, Dr Ken Russell, of the Faculty of Informatics. His responses to my dilemmas about data-manipulation and statistical treatments were meticulous and erudite.

Professor Ron King opened up my study opportunities at the University of Wollongong; and Associate Professor Tony Fielding provided encouragement and direction during the early and tentative steps of the study. I thank them both.

The staff and the graduate students of the Faculty of Education and the Graduate School of Education provided a stimulating and invigorating context within which to work. They created the ferment of scholarly excitement that promotes the research endeavour.

Many of the senior staff of the TAFE institutions in the Illawarra region and the Australian Capital Territory facilitated my work. I thank them all and hope that this thesis vindicates their trust in me.

The members of my family shared the process of my study and gave unending support. Throughout it all, and well beyond, Camille was my mentor, my counsellor and my first-best friend.

C.D
# Contents

The Title of the Thesis .......................... i  
Declaration of Originality ..................... ii  
Abstract ......................................... iii  
Acknowledgments ............................... iv  
Contents ......................................... v  
List of Figures ................................... ix  

## Chapter One  
**Theoretical Considerations: The Research Problem and its Background**  
1.1 The Focus of the Study ........................ 1-3  
1.2 The Structure of the Chapter ............... 1-8  
1.3 The Background to the Study ............... 1-9  
1.4 An Early Expedition into the Literature .... 1-14  
1.5 Some Emerging Directions .................... 1-31  
1.6 The Structure of the Study ................... 1-36  

## Chapter Two  
**Theoretical Considerations: Related Literature**  
2.1 Introduction to the Chapter .................. 2-2  
2.2 The Structure of the Chapter ................ 2-4  
2.3 A Backdrop of Theoretical Perspectives ...... 2-5  
2.4 From Workshop to Classroom: Identity and Culture 2-15  
2.5 Teachers' Views of Knowledge and Knowing ... 2-33  
2.6 Institutional and Operational Knowledge .... 2-39  
2.7 Some Emerging Directions .................... 2-51  

## Chapter Three  
**Theoretical Considerations: The Skilled Trades**  
3.1 Introduction to the Chapter .................. 3-2  
3.2 The Structure of the Chapter ................ 3-4  
3.3 Conditions of Work and the Formation of Views 3-5  
3.4 The Nature of the Skilled Trades .......... 3-11  
3.4.1 Skill ..................................... 3-12  
3.4.2 Specialisation .............................. 3-19  
3.5 The Autonomy of the Skilled Tradeworker .... 3-28  
3.6 The Route to the Status of Skilled Tradeworker 3-34  
3.6.1 Apprenticeship and Indenture ............. 3-36  
3.6.2 Apprenticeship and Social Control ......... 3-43  
3.6.3 The Filial Status of Apprentices .......... 3-50  
3.7 Emerging Directions ........................... 3-54  
3.8 The Next Step ................................ 3-58
Chapter Four
Method
4.1 Introduction to the Chapter 4-2
4.2 The Structure of the Chapter 4-4
4.3 A Qualitative Study 4-5
4.4 Context 4-11
4.5 The Research Design 4-13
4.6 Research Methods 4-17
  4.6.1 Sample Selection 4-17
  4.6.2 Semantic Taxonomy Interviews 4-22
  4.6.3 The Classification Task 4-24
  4.6.4 Postnate Interviews 4-30
  4.6.5 Cluster Analyses 4-31
4.7 The Next Step 4-33

Chapter Five
Grounded Investigation: Phase B Results
5.1 Introduction to the Chapter 5-2
5.2 The Structure of the Chapter 5-4
5.3 Context and Climate 5-4
5.4 Presentation of Phase B Results 5-12
  5.4.1 Informant AP001: Will 5-14
  5.4.2 Informant AP002: Stew 5-26
  5.4.3 Informant MF001: Jack 5-37
  5.4.4 Informant PB001: Lou 5-49
  5.4.5 Informant UH001: Tom 5-60
  5.4.6 Informant TM001: Mitch 5-73
5.5 The Next Step 5-84

Chapter Six
Grounded Investigation: Exploration of Phase B Results
6.1 Introduction to the Chapter 6-2
6.2 The Structure of the Chapter 6-4
6.3 An Ambience of Pragmatism and Functionalism 6-4
6.4 What Counts as Valid Knowledge 6-8
6.5 An Emerging Typology 6-13
6.6 The Practical-Theoretical Dichotomy 6-16
6.7 Reflections on Method 6-24
6.8 The Next Step 6-27
Chapter Seven
Grounded Investigation: Phase C
7.1 Introduction to the Chapter 7-2
7.2 The Structure of the Chapter 7-3
7.3 The Process of Phase C 7-4
7.4 A Profile of the Respondents 7-5
  7.4.1 Response Rates 7-5
  7.4.2 Educational Profile 7-9
  7.4.3 Industry Experience 7-12
  7.4.4 Gender 7-13
  7.4.5 The Formation of Subsets 7-14
7.5 Presentation of Phase C Results 7-15
  7.5.1 The Set of All Respondents 7-19
    Respondents grouped by:
    7.5.2 Trade Area 7-22
    7.5.3 Industry Experience 7-28
    7.5.4 Instructional Experience 7-31
    7.5.5 Instructional/Industry Experience 7-33
    7.5.6 Industry Setting 7-36
    7.5.7 Gender 7-38
    7.5.8 Educational Qualification 7-40
7.6 Emerging Directions 7-43
  7.6.1 A Focus on the Practical 7-43
  7.6.2 Subject-Matter Themes 7-46
  7.6.3 School subjects 7-50
  7.6.4 A Place for Selling? 7-51
7.7 Reflections on Method 7-53
7.8 The Next Step 7-55

Chapter Eight
Consolidation Speculation and Reflection
8.1 Introduction to the Chapter 8-2
8.2 The Structure of the Chapter 8-3
8.3 Consolidation 8-4
8.4 Speculation 8-11
  8.4.1 Implications for Training in the Skilled Trades 8-11
  8.4.2 Future Research 8-17
8.5 Reflection 8-20
  8.5.1 On Method 8-20
  8.5.2 On Limitations 8-24
8.6 A Concluding Comment 8-26

References A-1
Appendices
Appendix One: Semantic Taxonomy Interview A-22

Appendix Two: Classification Task A-24
  A2.1 Phase B A-24
  A2.2 Phase C A-24

Appendix Three: Data Management in Phase C A-28
  A3.1 Data Codes A-28
  A3.2 Data File A-29
  A3.3 Coded Data A-31

Appendix Four: Cluster Analysis A-46
  A4.1 Dendrograms/Agglomeration Schedules A-46
  A4.2 Cluster Analysis Results A-48
List of Figures

Chapter One
1.01 The structure of the study and the thesis 1-36
1.02 The research timeline 1-39

Chapter Two
2.01 Diagrammatic representation of the main typologies within teachers' epistemologies, as described by Young (1981, 1980) 2-37
2.02 Diagrammatic representation of the major typology in the perceptions of working class women about knowledge and knowing, as described by Luttrell (1989, 1984) 2-42

Chapter Three
3.01 Major occupational groupings in the ASF, ASCO and ISCO classification schemes 3-26

Chapter Four
4.01 Diagrammatic representation of the research approach 4-16
4.02 Attributes of informants in Phase B 4-18
4.03 Trade areas represented in Phase B 4-19
4.04 Selection of sample of trade areas for Phase C 4-20
4.05 Sample sizes for Phase C by region and by trade area 4-21
4.06 Practical-theoretical dichotomy and typical knowledge areas from Informant AP001 4-27
4.07 Dimensions and typical examples of areas of knowledge derived from Semantic Taxonomy Interviews in Phase B 4-28
4.08 Dimensions and typical examples of areas of knowledge derived from research precedents 4-29
4.09 Knowledge Areas used in the Classification Task 4-30
4.10 An example of a set of clusters generated by Cluster Analysis 4-31

Chapter Five
5.01 Distribution of consultations required to gain approval to conduct the study 5-7
5.02 Domain Structure: Informant AP001 5-15
5.03 Major Typology: Informant AP001 5-18
5.04 Rule-like elements: Informant AP001 5-18
5.05 Classification Task results: Informant AP001 5-20
5.06 Domain Structure: Informant AP002 5-28
5.07 Major Typology: Informant AP002 5-30
5.08 Rule-like elements: Informant AP002 5-31
5.09 Classification Task results: Informant AP002 5-32
5.10 Domain Structure: Informant MF001 5-38
5.11 Major Typology: Informant MF001 5-41
5.12 Rule-like elements: Informant MF001 5-41
5.13 Classification Task results: Informant MF001 5-43
5.14 Domain Structure: Informant PB001 5-50
5.15 Major Typology: Informant PB001 5-52
5.16 Rule-like elements: Informant PB001 5-54
5.17 Classification Task results: Informant PB001 5-55
5.18 Domain Structure: Informant UH001 5-61
Chapter Six
6.01 Rule-like elements portraying criteria for judging valid knowledge 6-7
6.02 Rule-like elements portraying the nature of valid knowledge 6-8
6.03 Rule-like elements portraying sources of, and processes for acquiring valid knowledge 6-10
6.04 Characteristics of the master-apprentice process 6-13
6.05 Major typologies 6-14
6.06 Descriptors used for practical and theoretical categories 6-17
6.07 Distribution of knowledge areas across practical and theoretical categories 6-18
6.08 Associations of each knowledge area with all other areas 6-19
6.09 Strong/weak associations between knowledge areas 6-21
6.10 Diagrammatic representation of the stronger associations between knowledge areas 6-22

Chapter Seven
7.01 Response rates by region and trade area 7-6
7.02 Low response rates 7-7
7.03 High response rates 7-8
7.04 Respondents' post-compulsory education qualifications 7-10
7.05 Respondents' prior work experience 7-12
7.06 Respondents by gender and region 7-13
7.07 Subsets of respondents 7-14
7.08 Annotated example of a Dendrogram output 7-16
7.09 Main typology, major clusters and subclusters of the sample Dendrogram of Figure 7.08 7-18
7.10 Cluster analysis results: All respondents 7-19
7.11 Cluster analysis results: Trade area 7-22
7.12 Cluster analysis results: Industry experience 7-28
7.13 Cluster analysis results: Instructional experience 7-31
7.14 Cluster analysis results: Industry/Instructional experience 7-33
7.15 Cluster analysis results: Industry setting 7-37
7.16 Cluster analysis results: Gender 7-38
7.17 Cluster analysis results: Educational qualifications 7-40
7.18 Subsets containing the practical groupings 7-43
7.19 Descriptors of the practical groupings 7-44
7.20 Subject-matter themes by Subsets 7-46
7.21 Typical descriptors of Theme 1 7-47
7.22 Typical descriptors of Theme 2 7-47
7.23 Subsets displaying 'school subjects' subclusters 7-50
7.24 Typical descriptors of 'school subjects' groupings 7-50
7.25 Subsets displaying Selling subclusters 7-51
7.26 Typical descriptors of Selling 7-52

Chapter Eight
8.01 Rule-like elements 8-8
Appendices
Appendix One
A1.01 Main elements of the Semantic Taxonomy Interview protocol A-22

Appendix Two
A2.01 Cover letter for Classification Task in Phase C A-25
A2.02 Instruction sheet for Classification Task in Phase C A-26
A2.03 Knowledge areas for Classification Task in Phase C A-27

Appendix Three
A3.01 Informant codes by region and trade area A-28
A3.02 Data coding scheme A-29
A3.03 Data file format and data coding system for Classification Task data A-30

Appendix Four
A4.01 Annotated example of a Dendrogram output A-46
A4.02 Main typologies, major clusters and subclusters of the sample Dendrogram of Figure A4.01 A-47
A4.03 Sample Agglomeration Schedule A-47
A4.04 Cluster analysis results: All respondents A-48
A4.05 Cluster analysis results: Industry setting A-48
A4.06 Cluster analysis results: Gender A-49
A4.07 Cluster analysis results: Trade area A-49
A4.08 Cluster analysis results: Industry experience A-53
A4.09 Cluster analysis results: Instructional experience A-54
A4.10 Cluster analysis results: Industry/Instructional experience A-55
A4.11 Cluster analysis results: Educational qualifications A-55