

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

A QUANTUM LEAP IN INFORMAL BENCHMARKING

A thesis presented in partial fulfilment of the requirements for the degree of

Doctor of Philosophy
in
Organisational Excellence

At Massey University, Palmerston North, Manawatu
New Zealand

Alan Samuel
2017

Abstract

Despite the paucity of available literature on informal benchmarking and the consequential lack of its understanding, informal benchmarking has outranked established benchmarking (formal), placing 4th out of 20 of the most used business improvement tools, based on a 2008 Global Benchmarking Network (GBN) survey of 450 organisations worldwide. This paradox is exacerbated by the growing popularity of informal benchmarking, even though it is not correspondingly as effective as it is widely used. Therefore, two significant gaps need be filled: firstly, to develop a theoretical understanding of, and secondly, to investigate how to increase the effectiveness of informal benchmarking as an organisational improvement tool.

A pragmatic mixed method quantitative-qualitative sequential design using an abductive-deductive-inductive approach is adopted. The product of abduction is a preliminary conceptual model of informal benchmarking from the transdisciplinary academic review of benchmarking, informal learning, organisation learning and knowledge management, augmented by concepts on quantum thinking, innovation and positive deviance. The model informs the quantitative survey questionnaire, whose deductive results of 81 survey responses from 14 countries informs the in-depth semi-structured interviews of 16 informants from 7 countries, the resulting dataset being inductively coded into conceptually-driven dendrograms. The integrated findings refine the conceptual model of informal benchmarking, and develops a toolset-based application model (a pragmatic outcome of the conceptual model), a maturity assessment framework and an eco-system strategy. From here, an informal benchmarking roadmap is synthesised, representing a sustainable platform for informal benchmarking to be deployed as an effective organisational improvement initiative.

The research sets the stage for a leap in scholarly understanding of informal benchmarking in the wider context of business and organisational improvement, and offers organisational improvement practitioners an invaluable cost-effective solution in a time-scarce executive world. This pragmatic study of informal benchmarking has possibly unleashed a different epistemological stance within the benchmarking field, by advocating an organic approach to benchmarking, in contrast to the highly methodical approaches associated with conventional benchmarking.

Abbreviations

APQC	American Productivity and Quality Center
BPIR	Business Performance Improvement Resource
GBN	Global Benchmarking Network
IB	Informal Benchmarking
IL	Informal Learning
KM	Knowledge Management
LO	Learning Organisation
OECD	Organisation for Economic Co-operation and Development
OL	Organisational Learning
NSD	Non-social Dimension
SD	Social Dimension

Acknowledgements

I am extremely indebted to my chief supervisor Dr. Robin Mann for his continuous and timely support. His expertise, superb pragmatic advice and brilliant academic resources has helped me gain a strong footing in my study. His expertise and wealth of experience in benchmarking and organisational excellence has polished and added finesse to the practical deliverables of my thesis. Exposure to global benchmarking experts and opportunities to network has been invaluable.

I am extremely grateful to supervisor Professor Nigel Grigg for his strategic insight, and his incredible academic ability in building rigour into my thesis. His guidance throughout the process has been supremely enlightening, eye-opening and very enjoyable. The provision of solid resources and being part of his network has given me plenty of opportunities to learn from other disciplines, and to expand my network.

I would also like to thank the SEAT team for being so very helpful and efficient in the processing of trips and claims, and for making me feel at home when I first stepped into Massey University.

My gratitude goes to all informants in my research, without which this thesis would not have been possible.

The journey in New Zealand has been challenging and thrilling at the same time. Words cannot express my gratitude to my wife and 3 children for their immense support and understanding, to my mother for her care and support, and to my brother for being such an inspiration to me. Most of all I would like thank my Lord Jesus Christ for making all this possible.

Alan Samuel

Table of Contents

Abstract	ii
Abbreviations	iii
Acknowledgements	iv
Table of Contents	v
List of Tables	x
List of Figures	xiv
Chapter 1 Introduction	2
1.1 Chapter Overview.....	2
1.2 The Research Problem.....	2
1.3 Research Aims.....	5
1.4 Research Questions.....	5
1.5 Research Objectives.....	5
1.6 Significance of Research.....	6
1.7 Researcher's Role.....	7
1.8 Working Terms.....	7
1.9 Research Structure.....	8
1.10 Chapter Summary.....	10
Chapter 2 Literature Review	12
2.1 Chapter Overview.....	12
2.2 Informal Benchmarking.....	12
2.3 Transdisciplinary Approach.....	14
2.4 Discipline 1: Benchmarking.....	17
2.4.1 Definition, Purpose and Characteristics.....	19
2.4.2 Taxonomy of Benchmarking & Informal Benchmarking.....	20
2.4.3 Methodologies of Benchmarking.....	24
2.5 Discipline 2: Organisational Learning (OL).....	26
2.5.1 The Learning Organisation (LO).....	27
2.5.2 Holon Framework for Knowledge Elicitation and Learning Dynamics.....	28
2.6 Discipline 3: Informal Learning (IL).....	29

2.6.1 Distinction between Benchmarking & Learning	30
2.6.2 Characteristics of Informal Learning.....	30
2.7 Discipline 4: Knowledge Management (KM)	32
2.7.1 Elicitation of Tacit Knowledge	33
2.7.2 Assimilation of Knowledge - The Individual and the Collective Mind	34
2.8 Secondary Concepts	35
2.8.1 Quantum Thinking	35
2.8.2 Absorptive Capacity	36
2.8.3 Positive Deviance	37
2.9 Preliminary Conceptual Model of Informal Benchmarking.....	38
2.9.1 Working Definition.....	39
2.9.2 Purposes	39
2.9.3 Characteristics.....	40
2.9.4 Preliminary Taxonomy of Informal Benchmarking Typologies	42
2.9.5 Informal Benchmarking Toolscape.....	42
2.10 Chapter Summary	43
Chapter 3 Research Design & Method	45
3.1 Chapter Overview.....	45
3.2 Paradigms of Research.....	45
3.3 Pragmatic Mixed Methods.....	47
3.4 Research Design.....	51
3.4.1 Abductive-Deductive-Inductive Research Process.....	51
3.4.2 Sampling: sequential quantitative-qualitative design	53
3.5 Validation & Quality	55
3.6 Ethical Considerations.....	58
3.7 Chapter Summary	59
Chapter 4 Analysis of Quantitative Survey	61
4.1 Chapter Overview.....	61
4.2 Pilot Survey	61
4.2.1 Augmentation to Pilot Survey Design.....	62
4.3 Final Survey Questionnaire Design	63
4.3.1 Justification for Likert Scales as Interval Data.....	64
4.4 Survey Results	65

4.4.1 Demography of Respondents (Q1-4 & 22)	65
4.4.2 Effectiveness and Popularity of Tools (Q5-Q12)	67
4.4.3 Key Findings for Effectiveness & Popularity of Tools	83
4.4.4 Maturity Grid – Importance, Culture, Support & Impact (Q18-Q21)	89
4.4.5 Key Findings for Maturity in Organisations (Q18-21).....	92
4.4.6 Formal Benchmarking vs Informal Benchmarking (Q13-Q17)	94
4.4.7 Key Findings for Formal Benchmarking vs Informal Benchmarking.....	95
4.5 Summary of Findings	99
4.5.1 Useful Findings.....	100
4.5.2 Unexpected Findings	100
4.5.3 Regression Analysis not Appropriate	100
4.6 Recommendations for Future Research	101
4.7 Chapter Summary	101
Chapter 5 Analysis of Interviews	103
5.1 Chapter Overview.....	103
5.2 Interview Plan.....	103
5.2.1 Thematizing	103
5.2.2 Designing.....	104
5.2.3 Interviewing	105
5.2.4 Transcribing.....	105
5.2.5 Analysis	105
5.2.6 Reporting	107
5.3 Neo-positivism, Romanticism & Semi-Structured Approach	107
5.4 Interview Process.....	108
5.4.1 Interview Question mapped to Research Objectives.....	109
5.4.2 Techniques to Interpret Interviews	111
5.4.3 Data Saturation of Interviews	111
5.4.4 Phases of Interviews.....	112
5.5 Analysis by Meaning Condensation.....	115
5.5.1 Reflection.....	115
5.6 Analysis by Meaning Coding in NVIVO.....	116
5.6.1 Concept Driven Data.....	116
5.6.2 Five levels of Coding.....	117

5.7 Main Themes & Sub-Themes	122
5.7.1 Main Theme 1: Purpose.....	125
5.7.2 Main Theme 2: Execution	131
5.7.3 Main Theme 3: Benefits	136
5.7.4 Main Theme 4: Characteristics	139
5.7.5 Main Theme 5: Development Strategy	142
5.7.6 Main Theme 6: Measurement of Effectiveness	157
5.8 Description of Most Effective Tools	168
5.8.1 Exemplars of Top 10 Most Effective Tools in the Social Dimension	168
5.8.2 Exemplars of Top 5 Most Effective Tools in the Non-social Dimension	172
5.9 Chapter Summary	173
Chapter 6 Development of Informal Benchmarking QUANTUM Roadmap	175
6.1 Chapter overview	175
6.2 Conceptual Model of Informal Benchmarking	175
6.2.1 Concept of Informal Benchmarking	176
6.2.2 Taxonomy of Informal Benchmarking.....	180
6.2.3 Informal Benchmarking Toolset Descriptive Model	182
6.2.4 List of Informal Benchmarking Tools & Activities (Toolset).....	185
6.3 Application Model for Informal Benchmarking Toolset	188
6.3.1 Social Dimension (4 Tables)	189
6.3.2 Non-social Dimension (4 Tables)	191
6.4 The QUANTUM Maturity Assessment Framework.....	193
6.4.1 Organisational Maturity Self-Assessment.....	193
6.4.2 Evaluating Scores & Gap Analysis.....	200
6.4.3 Alignment with QUANTUM Strategy	204
6.5 The QUANTUM Strategy.....	204
6.5.1 Qualify the Vision & Readiness	205
6.5.2 Use & Commitment of Resources	206
6.5.3 Assess Competitiveness & Culture	208
6.5.4 Nullify Risk & Threats.....	208
6.5.5 Training & Facilitation	210
6.5.6 Useful Measures of Effectiveness	212
6.5.7 Momentum & Sustainable Impact	214

6.6 Chapter Summary	216
Chapter 7 Discussion	218
7.1 Chapter Overview.....	218
7.2 Review of the Research Objectives	218
7.3 Informal Benchmarking in the Context of Organisational Improvement.....	222
7.3.1 Conceptual Model & Toolset Application Model	223
7.3.2 QUANTUM Assessment Framework & Strategy	224
7.3.3 Interpretation of Unexpected Finding	241
7.3.4 Praxis & Reflexivity	242
7.4 Chapter Summary	246
Chapter 8 Conclusion	248
8.1 Chapter Overview.....	248
8.2. Theoretical Contributions.....	248
8.2.1 Theorising a Conceptual Model of Informal Benchmarking	248
8.2.2 New Epistemic View on Benchmarking	249
8.2.3 Pragmatism, Complemented by Praxis & Reflexivity.....	250
8.3 Practical Implications.....	251
8.3.1 Informal Benchmarking as a Strategic Initiative.....	251
8.3.2 Complement to Formal Benchmarking	253
8.4 Limitations	255
8.4.1 Limitations due to Literature.....	255
8.4.2 Limitations associated with Method.....	255
8.4.3 Limitations due to Outcomes & Findings	256
8.4.4 Researcher Reflexivity	257
8.5 Future Research Directions	258
8.5.1 Based On Limitations of the Research.....	258
8.5.2 Based on Limitations of the Conceptual Model	258
8.5.3 Based on Limitations of Toolset Application Model & QUANTUM Roadmap..	259
8.5.4 Based on Unexpected Finding	260
8.6 Concluding Statement	261
Bibliography	262
Appendices	277

List of Tables

Table 2-1: Types of Benchmarking According to APQC.....	14
Table 2-2: Classification Schemes and Types of Benchmarking	23
Table 2-3: Classification of Benchmarking	23
Table 2-4: Three Forms of Informal Learning.....	31
Table 2-5: Newtonian vs Quantum Thinking	35
Table 2-6: Inputs to Preliminary Conceptual Model.....	38
Table 2-7: Working Definition of Informal Benchmarking.....	39
Table 2-8: Purposes of Informal Benchmarking	39
Table 2-9: Preliminary Characteristics of Informal Benchmarking	41
Table 2-10: Preliminary Informal Benchmarking Toolscape	43
Table 3-1: Levels of Integration in Mixed Method Research.....	48
Table 3-2: General Characteristics of Pragmatism.....	50
Table 3-3: Research Stages	53
Table 3-4: Minimum Sample Sizes for Common Quantitative Research Designs	57
Table 4-1: Breakdown of Pilot Survey	61
Table 4-2: Breakdown of Final Survey	63
Table 4-3: Breakdown by Country.....	65
Table 4-4: Industry of Organisation.....	67
Table 4-5: Legend for 8 dimensions of Informal Benchmarking Tools.....	68
Table 4-6: Colour Code for Most & Least Effective and Popular Tools.....	68
Table 4-7: Descriptive Statistics of Social-Internal-Deliberate Toolset.....	69
Table 4-8: Legend for Social-Internal-Deliberate Toolset	69
Table 4-9: Top and Bottom Tools in SD1	70
Table 4-10: Descriptive Statistics of Social-External-Deliberate Toolset	71
Table 4-11: Legend for Social-External-Deliberate Toolset.....	72
Table 4-12: Top and Bottom Tools in SD2	73
Table 4-13: Descriptive statistics of social-internal-incidental Toolset	74
Table 4-14: Legend for Social-Internal-Incidental Toolset	74
Table 4-15: Top and Bottom Tools in SD3	75
Table 4-16: Descriptive Statistics of Social-External-Incidental Toolset	75
Table 4-17: Legend for Social-External-Incidental Toolset.....	76
Table 4-18: Top and Bottom Tools in SD4	76

Table 4-19: Descriptive statistics of non-social-internal-deliberate Toolset.....	77
Table 4-20: Legend for Non-Social-Internal-Deliberate Toolset.....	77
Table 4-21: Top and Bottom Tools in NSD1.....	78
Table 4-22: Descriptive Statistics of Non-Social-External-Deliberate Toolset.....	79
Table 4-23: Legend for Non-Social-External-Deliberate Toolset	79
Table 4-24: Top and Bottom Tools in NSD2.....	79
Table 4-25: Descriptive Statistics of Non-Social-Internal-Incidental Toolset.....	80
Table 4-26: Legend for Non-Social-Internal-Incidental Toolset.....	80
Table 4-27: Top and Bottom Tools in NSD3.....	81
Table 4-28: Descriptive Statistics of Non-Social-External-Incidental Toolset.....	82
Table 4-29: Legend for Non-Social-External-Incidental Toolset	82
Table 4-30: Top and Bottom Tools in NSD4.....	82
Table 4-31: Top 5 Most Effective & Popular Tools	83
Table 4-32: Top 30% Most Effective & Most Popular Tools in Social Dimension	84
Table 4-33: Top 30% Most Effective & Most Popular Tools in Non-Social Dimension.....	85
Table 4-34: Effectiveness & Popularity Means of Both Dimensions	86
Table 4-35: Ranking of 8 Categories of Informal Benchmarking	86
Table 4-36: Legend for 8 Categories of IB Tools.....	87
Table 4-37: Correlations between 8 Categories of Tools.....	89
Table 4-38: Informal Benchmarking Maturity Grid for Organisations	91
Table 4-39: Maturity of Informal Benchmarking in Organisations	92
Table 4-40: Correlation between Maturity Characteristics & IB Tools.....	93
Table 4-41: Level of Performance Benchmarking within Organisations.....	94
Table 4-42: Level of Formal Best Practice Benchmarking within Organisations	94
Table 4-43: Mean of Better Practices Learnt.....	95
Table 4-44: Mean of Better Practices Implemented	96
Table 4-45: Mean of Activities that Aid Formal Benchmarking	97
Table 4-46: Correlations between Items in Q13-Q17	97
Table 5-1: Interview Questions Mapped to Objectives of Research	110
Table 5-2: Template for Coding of Tools in NVIVO	118
Table 5-3: Level 2 Sub-category Example	120
Table 5-4: Level 3 Main Category Example	120
Table 5-5: Level 4 Sub-theme Example	121
Table 5-6: Main Themes Description	122

Table 5-7: Sub-themes from Meaning Coding & Meaning Condensation	124
Table 5-8: Work Practice Sharing Meta-tools and Techniques.....	128
Table 5-9: Sub-themes for Characteristics of Informal Benchmarking Tools	141
Table 5-10: Exemplars of Top 10 Most Effective Tools in the Social Dimension	171
Table 5-11: Exemplars of Top 10 Most Effective Tools in the Non-Social Dimension.....	173
Table 6-1: Definition of Informal Benchmarking	177
Table 6-2: Purposes of Informal Benchmarking	178
Table 6-3: Characteristics of Informal Benchmarking	179
Table 6-4: Taxonomy of Informal Benchmarking.....	180
Table 6-5: Description of Contents of Benchmarking	181
Table 6-6: Tools & Activities in Social Dimension.....	186
Table 6-7: Tools & Activities in Non-Social Dimension.....	187
Table 6-8: Social Dimension/Internal-Deliberate	189
Table 6-9: Social Dimension/External-Deliberate	190
Table 6-10: Social Dimension/Internal-Incidental	190
Table 6-11: Social Dimension/External-Incidental	191
Table 6-12: Non-Social Dimension/Internal-Deliberate	191
Table 6-13: Non-Social Dimension/External-Deliberate	192
Table 6-14: Non-social Dimension/Internal-Incidental	192
Table 6-15: Non-Social Dimension/External-Incidental	192
Table 6-16: Assessment Framework - Qualify the Vision & Readiness	194
Table 6-17: Assessment Framework - Use & Commitment of Resources	196
Table 6-18: Assessment Framework - Assess Competitive & Culture.....	196
Table 6-19: Assessment Framework - Nullify Risks & Threats	197
Table 6-20: Assessment Framework - Training & Facilitation.....	198
Table 6-21: Assessment Framework - Useful Measures of Effectiveness	199
Table 6-22: Assessment Framework - Momentum & Sustainable Impact	200
Table 6-23: Self-Assessment Score.....	201
Table 6-24: Maturity Assessment Levels	201
Table 6-25: Informal Benchmarking Maturity Assessment Grid.....	203
Table 6-26: QUANTUM Strategy - Qualify the Vision & Readiness	206
Table 6-27: QUANTUM Strategy - Use & Commitment of Resources	208
Table 6-28: QUANTUM Strategy - Assess Competitiveness & Culture, Nullify Risks & Threats	210

Table 6-29: QUANTUM Strategy – Training & Facilitation..... 211

Table 6-30: QUANTUM Strategy - Useful Measure of Effectiveness..... 214

Table 6-31: QUANTUM Strategy - Momentum & Sustainable Impact 216

Table 7-1: QUANTUM Components Linked to Sources 222

Table 7-2: An Integrative Framework for Strategy-making Processes..... 225

Table 7-3: Strategy-Making Process for Informal Benchmarking Eco-System..... 226

Table 7-4: Dimensions of Absorptive Capacity..... 239

List of Figures

Figure 2-1: Description of Informal Benchmarking	13
Figure 2-2: A Schema of informal Benchmarking	17
Figure 2-3: Genealogy of Benchmarking.....	18
Figure 2-4: 12-Phased, 54-Step Benchmarking Process.....	25
Figure 2-5: Peter Senge's Three-legged Stool	27
Figure 2-6: The Integral Cycle of Learning and Knowledge Development	29
Figure 2-7: Continuum of Formality.....	31
Figure 2-8: Nonaka's SECI Model.....	33
Figure 2-9: The Four Characteristics of "BA"	34
Figure 2-10: Model of Absorptive Capacity	36
Figure 2-11: Preliminary Taxonomy of Informal Benchmarking	42
Figure 3-1: Abductive-Deductive-Inductive Research Process.....	52
Figure 4-1: Position in Organisation	66
Figure 4-2: Size of Organisation	66
Figure 4-3: Mean Effectiveness of Social-Internal-Deliberate Toolset (SD1)	68
Figure 4-4: Mean Effectiveness of Social-External-Deliberate Toolset (SD2).....	71
Figure 4-5: Mean Effectiveness of Social-Internal-Incidental Toolset (SD3).....	74
Figure 4-6: Mean Effectiveness of Social-External-Incidental Toolset (SD4).....	75
Figure 4-7: Mean Effectiveness of Non-Social-Internal-Deliberate Toolset (NSD1).....	77
Figure 4-8: Mean Effectiveness of Non-Social-External-Deliberate Toolset (NSD2).....	78
Figure 4-9: Mean Effectiveness of Non-Social-Internal-Incidental Toolset (NSD3).....	80
Figure 4-10: Mean Effectiveness of Non-Social-External-Incidental Toolset (NSD4).....	81
Figure 4-11: Mean of Extent of Better Practices Learnt.....	95
Figure 4-12: Extent of Better Practices Implemented	96
Figure 4-13: Extent of Activities that Aid Formal Benchmarking	96
Figure 5-1: Interpretation of Interviews.....	111
Figure 5-2: Survey Data Informs Interview Sample	112
Figure 5-3: Phases of Interview & Data Saturation.....	114
Figure 5-4: Development of Main Themes via Meaning Coding	117
Figure 5-5: Level 1 Nodes & Sub-Nodes Example	119
Figure 5-6: Level 5 Main Theme Development	121
Figure 5-7: Main Themes & Sub-Themes	123

Figure 5-8: Purpose of Informal Benchmarking.....	125
Figure 5-9: Execution of Informal Benchmarking	131
Figure 5-10: Benefits of Informal Benchmarking	136
Figure 5-11: Characteristics of informal Benchmarking.....	139
Figure 5-12: Development Strategy Main Theme & Sub-Themes	142
Figure 5-13: Supporting Enablers & Overcoming Barriers Sub-Themes	146
Figure 5-14: Measurement of Effectiveness Main Theme	157
Figure 6-1: Final Conceptual Model of Informal Benchmarking.....	176
Figure 6-2: Concept of Informal Benchmarking.....	176
Figure 6-3: Toolset Descriptive Schema	182
Figure 6-4: Incidental-Deliberate Orientation.....	183
Figure 6-5: Spectrum of Informality.....	183
Figure 6-6: Informal Benchmarking Toolset Descriptive Model	184
Figure 6-7: Informal Benchmarking Toolset Application Model.....	188
Figure 6-8: QUANTUM Components	193
Figure 7-1: Research Summary.....	219
Figure 7-2: The integral Holon and Organisational Development	238
Figure 7-3: Praxis	243
Figure 7-4: Reflexivity	244
Figure 7-5: Praxis, Reflexivity & Sustainability of Informal Benchmarking	245
Figure 8-1: Top Business Tools in 2014.....	254

Part 1 - THE RESEARCH PROBLEM

PART 1 THE RESEARCH PROBLEM	Chapter 1 INTRODUCTION
	Chapter 2 LITERATURE REVIEW

PART 2 RESEARCH DESIGN & METHOD	Chapter 3 MIXED METHODS RESEARCH DESIGN, DATA SAMPLING, VALIDATION AND ETHICAL CONSIDERATIONS
---	--

PART 3 DATA COLLECTION & ANALYSIS	Chapter 4 ANALYSIS OF QUANTITATIVE SURVEY QUESTIONNAIRE
	Chapter 5 ANALYSIS OF QUALITATIVE INTERVIEWS

PART 4/ CHAPTER 6 DEVELOPMENT OF INFORMAL BENCHMARKING QUANTUM ROADMAP	CONCEPTUAL MODEL OF INFORMAL BENCHMARKING
	TOOLSET APPLICATION MODEL
	MATURITY ASSESSMENT FRAMEWORK
	INFORMAL BENCHMARKING ECO-SYSTEM STRATEGY

PART 5 DISCUSSION & CONCLUSION	Chapter 7 RESEARCH REVIEW BY OBJECTIVES & IN THE CONTEXT OF ORGANISATION IMPROVEMENT
	Chapter 8 IMPLICATIONS, LIMITATIONS & FUTURE RESEARCH