



City Research Online

City, University of London Institutional Repository

Citation: McDowall, A. (2005). A framework for employee development : a quantitative and qualitative study of individual differences and development outcomes. (Unpublished Doctoral thesis, City University London)

This is the accepted version of the paper.

This version of the publication may differ from the final published version.

Permanent repository link: <https://openaccess.city.ac.uk/id/eprint/8458/>

Link to published version:

Copyright: City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

Reuse: Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

HARD

A framework for employee development: a quantitative and qualitative study of individual differences and development outcomes

Almuth McDowall

Submitted for PhD, City University, School of Social Sciences, Psychology Department

September 2005

Table of Contents

- List of Tables..... 7
- List of Illustrations 8
- Acknowledgements..... 9
- Abstract 11
- Prologue - Glossary and Thesis structure 12
- Chapter 1: Training, learning and development activities and outcomes at four different levels 15
 - 1.1 Introduction..... 15
 - 1.2 The societal level 17
 - 1.3 The organizational level..... 19
 - 1.4 The group level..... 21
 - 1.5 The individual level 23
 - 1.6 Are training and development different? 24
- Chapter 2: Training revisited..... 29
 - 2.1 Introduction..... 29
 - 2.2 Learning and skill acquisition..... 29
 - 2.3 The training cycle 31
 - 2.4 Training evaluation 32
 - 2.5 Training motivation..... 34
 - 2.5.1 Need to achieve 35
 - 2.5.2 Self-efficacy 36
 - 2.5.3 Perceived learning climate..... 37
 - 2.5.4 Demographic characteristics..... 38
 - 2.5.4.1 Age 38
 - 2.5.4.2 Tenure..... 38
 - 2.5.4.3 Gender 39
 - 2.5.4.4 Other demographic factors 39
 - 2.6 Three models of training effectiveness 40
 - 2.7 Summary..... 44
- Chapter 3: Employee development – a review of theory and evidence..... 45
 - 3.1 Introduction..... 45
 - 3.2 Different types of development activities..... 46
 - 3.2.1 Appraisals and development centres in comparison..... 49
 - 3.2.1.1 Appraisals for development..... 49
 - 3.2.1.2 Development centres 52
 - 3.3 Researching development..... 57
 - 3.3.1 Challenges to research..... 57
 - 3.3.1.1 Inference of causality..... 57
 - 3.3.1.2 Access to data 58
 - 3.3.1.3. The political context 58

3.3.1.4. The absence of an overarching theoretical model.....	59
3.3.2 Models of development	59
3.3.2.1 Management development from the organizational perspective	60
3.3.2.2 Management development from the individual perspective	63
3.4 Summary.....	71
Chapter 4: Self-efficacy, need for achievement and demographic characteristics and their association with development outcomes	74
4.1 Introduction and study hypotheses	74
4.2 Organizational context and study settings.....	77
4.3 Methods	78
4.3.1 Sample statistics	78
4.3.2 Design.....	78
4.3.3 Procedure.....	78
4.3.4 Measures.....	79
4.3.4.1 Piloting	79
4.3.4.2 Summary of measures	80
4.3.4.3 Individual differences	80
4.3.4.4 Demographic variables	81
4.3.4.5 Development outcomes	81
4.3.4.6 Control variables	83
4.4 Findings.....	84
4.4.1 Bivariate analyses.....	84
4.4.2 Regression analyses.....	86
4.4 Discussion	89
4.4.1 Study limitations.....	90
4.4.2 Implications for Study B	92
Chapter 5: Changes in LC, DSE and nAch, following participation in staff appraisals, and their association with development outcomes	93
5.1 Introduction and study hypotheses	93
5.2 Organizational context and study setting	94
5.3 Methods	95
5.3.1 Sample statistics	95
5.3.2 Design.....	95
5.3.3 Procedure.....	95
5.3.3.1 Initial consultation	95
5.3.3.2 Questionnaire distribution and collection of data	96
5.3.4 Measures.....	96
5.3.4.1 Piloting	96
5.3.4.2 Summary of measures	97
5.3.4.3 Individual differences	99
5.3.4.4 Demographic variables	100
5.3.4.5 Outcomes	100
5.4 Findings.....	103
5.4.1 Comparison of means	103
5.4.2 Bivariate analyses	103
5.4.3 Regression analyses.....	106
5.5 Discussion	106
5.5.1 Study limitations.....	108
5.5.2 Implications for Study C	109

Chapter 6: Changes in DSE and nAch, and their association with development centre ratings and development outcomes	111
6.1 <i>Introduction and Study Hypotheses</i>	111
6.2 <i>Organizational context and study settings</i>	113
6.2.1 Sample One	113
6.2.2 Sample Two.....	114
6.2.3 Sample Three.....	114
6.2.4 Comparison of DC processes for O ₁ , O ₂ and O ₃	115
6.3 <i>Methods</i>	117
6.3.1 Sample statistics	117
6.3.2 Design.....	117
6.3.3 Procedure.....	117
6.3.3.1 Initial Consultation	117
6.3.3.2 Questionnaire distribution and collection of data	118
6.3.4 Measures.....	118
6.3.4.1 Survey piloting	118
6.3.4.2 Summary of measures	118
6.3.4.3 Individual differences	120
6.3.4.4 Demographic variables.....	120
6.3.4.5 Outcomes.....	120
6.3.4.6 Control variables	122
6.3.4.7 Additional information	122
6.4 <i>Findings</i>	122
6.4.1 Pair-wise comparisons.....	122
6.4.2 Bivariate analyses	123
6.4.3 Regression	125
6.5 <i>Discussion</i>	125
6.5.1 Study limitations.....	126
6.5.2 Conclusions and implications for Study D	127
Chapter 7: How do managers conceptualise development and training?	129
7.1 <i>Introduction</i>	129
7.2 <i>Methods</i>	132
7.2.1 Summary of analyses.....	132
7.2.2 Sample	132
7.2.3 Interview schedule.....	133
7.2.4 Template Analysis	135
7.2.5 Transcript notation.....	136
7.2.6 Development of the final Template	136
7.3 <i>Findings</i>	145
7.3.1 Definitions of training and development	145
7.3.2 Links between training and development	150
7.3.3 Differences between training and development.....	151
7.3.4 Decision criteria	153
7.3.5 Process of learning	155
7.3.6 Outcomes.....	157
7.3.7 Success factors	158
7.3.8 Potential barriers to effectiveness	159
7.4 <i>Study strengths and limitations</i>	160
7.5 <i>Conclusions and implications for future research</i>	160
Chapter 8: Drawing up a research agenda for employee development.....	165

8.1. Overview.....	165
8.2. The status quo of UK training, development and learning.....	165
8.2. The difference between training and development	166
8.2. Individual differences and employee development	170
8.3 The challenge of capturing development outcomes.....	175
8.4 Conceptualising employee development.....	178
8.5 Why research on employee development needs to be theory-driven	183
8.6 Final conclusion.....	185
References	187
Appendix A	196
1. Study A – Questionnaire for O ₁	196
2. Study A – Questionnaire for O ₂	199
Appendix B.....	202
1. Study B – Questionnaire for T ₁	202
2. Study B –T ₃	205
Appendix C	210
1. Study C – Questionnaire T ₁ (O ₁)	210
2. Study C – Questionnaire T ₃ (O ₁)	213
3. Study C – Questionnaire T ₄ (O ₁)	216
Appendix D	219
Classification of Development and training activities for Study C.....	219
Appendix E.....	220
Interview Schedule from Interview One, Study D.....	220
Appendix F.....	222
1. Paper presented at Psychology of Women Conference, Northampton, 2003.....	222
Organizational context.....	222
Method	222
Findings and Discussion.....	222
References	223
2. Poster Presented at British Psychological Society Annual Conference, Stratford-upon-Avon, January 2004.....	224
Introduction	224
Design.....	224
Measures.....	224
Sample	225
Findings	225
Discussion	225
References	226
3. Paper presented at BPS Division of Occupational Psychology Conference, Stratford-upon-Avon, January 2004.....	227

Design.....	228
Organisational Setting	228
Procedure.....	228
Measures.....	228
Interim Summary.....	228
References	229
<i>4. Paper presented at European Congress of Work and Organizational Psychology, Istanbul, May 12th -15th 2005</i>	<i>230</i>
<i>5. Paper Presented at British Psychological Society, Division of Occupational Psychology Annual Conference, Glasgow, 11th-13th January 2006</i>	<i>232</i>
Content	232
Methods.....	233
Results	235
Summary and Implications for Future Research	240
References	242

List of Tables

Table 1: Glossary.....	12
Table 2: Thesis Structure.....	13
Table 3: Training, Development and Learning at Four Levels.....	16
Table 4: Training and Development in Contrast	27
Table 5: Characteristics of Different Dimensions for Employee Development Activities (following Maurer &. Tarulli, 1994; Birdi et al, 1997; Warr & Birdi, 1998).....	48
Table 6: Levels of Maturity of Organizational Management Development after Burgoyne (1988)	61
Table 7 : Comparison Appraisal Systems O ₁ and O ₂	77
Table 8: Summary of Predictors and Outcomes Study A	80
Table 9: Summary of nAch and DSE items Study A	81
Table 10: Component loadings Development Utility Items Study A	82
Table 11: Inter-Correlations for Study A	85
Table 12: Summary of Regression Analyses Study A.....	87
Table 13: Summary of Measures, Response rates and n for Study B.....	98
Table 14: Component Matrix Learning Climate Study B.....	100
Table 15: Component Loadings Perceived Utility Study B	101
Table 16: Paired Samples t-Test for nAch and LC.....	103
Table 17: Intercorrelations Study B	105
Table 18: Summary of Regression Analyses Study B (n = 59).....	106
Table 19: Differences and Similarities DCs O ₁ , O ₂ and O ₃ for Study C.....	116
Table 20: Overview of Measures Study C.....	119
Table 21: Component Loadings for Perceived Utilty Items Study C	121
Table 22: Paired Samples T-Tests	123
Table 23: Intercorrelations Study C	124
Table 24: DC Rating Regressed to Age, Gender, T ₁ DSE and T ₁ nAch for Study D (n = 84).....	125
Table 25: Summary of Analyses	132
Table 26: Industries Represented in Sample Study D	133
Table 27: Transcript Notation	136
Table 28: Template 1 (Preliminary codes)	137
Table 29: Final Template	139
Table 30: Training and Development Activities Study D	148
Table 31: Differences between Training and Development	152
Table 32: Why Training may take Precedence over Development	154
Table 33: Summary of Hypotheses and Research Questions	168
Table 34: A Research Agenda for Employee Development.....	180
Table 35: Why Training May Take Precedence over Development.....	237

List of Illustrations

Figure 1: Fitt’s Three-stage Model 30

Figure 2: Simplified Training Cycle..... 32

Figure 3: Motivational and Attitudinal Influences on Training Effectiveness 41

Figure 4: The Effects of Training (adapted from Tannenbaum et al., 1991)..... 42

Figure 5: Influences on Training Effectiveness after Tracey et al. (1995) 43

Figure 6: Interpersonal Context of Performance Appraisal 51

Figure 7: The Management Development Process (Doyle, 1995)..... 62

This Thesis is dedicated to my children Rhiannon, Nimue and Roseanna McDowall.

Acknowledgements

I would like to thank my supervisor Professor John Rust. Expressed in the terms from my Thesis, John has been instrumental for my own development by continuing to be an inspiration for my professional and personal progress. It has made all the difference that John believes that I “can do”.

I am indebted to my family. In particular, my husband Ian’s unwavering love, support and patience made this undertaking possible. I am grateful to my daughter Rhiannon for teaching me that the gift of life is not for us to give yet is the greatest gift of all, and that there are always more important things in life than studying for a PhD (even if the process can take over one’s life!). I thank Nimue and Roseanna for their patience and welcome distraction when yet again I was glued to my PC for all too long; and for turning our study into a playroom just so that they could be with me.

A number of friends and colleagues, who have been generous with their time by giving me comments on earlier Chapters and study drafts and conference submissions, deserve heartfelt thanks. Stephen Walker read my entire Thesis in detail, and provided me with valuable feedback. Anna Koczwara and Mark Embleton, but also Helen Wilkin, Ian Florance and Sharon Loivette greatly helped my learning with their insightful comments.

It would be remiss of me not to thank my previous supervisors for their input at various stages. Professor Clive Fletcher was instrumental in getting me started, Professor Neil Anderson helped me greatly to pass my upgrade and Professor Jo Silvester took over supervision halfway through my progress, which I appreciate was not easy, and I remain thankful for her input at this difficult time. Jo helped to improve my writing and research skills considerably, and I will always remain grateful for that. I would also like to thank Goldsmiths College for awarding me a departmental bursary for three years.

I need to thank Stephen Walker, Gail Lincoln, Neil Scott, Karen Smith and Pearn Kandola for helping me to gain access to organisations. I would like to thank all my participants for giving up valuable time in order to complete my questionnaires and answer my interview questions.

Louisa Heidemann did a wonderful job of transcribing my interview data.

Last but not least, I would like to thank the senior academic colleagues whose measured and impartial advice encouraged me to persevere with my studies; in particular those colleagues who were incredibly generous with their time to help me get a foot on the ‘publishing ladder’ as well as allowing me to critically reflect on my research area in personal discussions. I hope that one day I can do for junior researchers what my senior colleagues did for me.

“I grant powers of discretion to the University Librarian to allow this Thesis to be copied in whole or in part without further reference to me. This permission covers only single copies made for study purposes, subject to normal conditions of acknowledgement”

Almuth McDowall, Tuesday, 06 June 2006

Abstract

This Thesis is concerned with a framework for the research of employee development. To start, the importance of training, development and learning at the societal, organizational, group and individual level is set out. A review of the research on training and development argues that a detailed comparison may further our understanding of the latter, by investigating training effectiveness models (e.g. Colquitt, 2000) in the context of development. Individual difference measures that may affect development are discussed. Different development activities are compared on different dimensions such as the degree of formality and frequency of occurrence, and implications for research are discussed.

Three quantitative studies [A, B, C] concentrate on staff appraisals and development centres, investigating how individual differences and demographic characteristics are associated with development outcomes. Results from Study A (N = 126) showed that age was correlated with participation in training and development; tenure was associated with participation in training; appraiser role was associated with participation in training and career movement, and predicted perceived utility and career movement. Study B (n = 63) showed that Learning Climate [LC] increased significantly following participation in appraisal ; changes in need to achieve [nAch] and tenure were associated with participation in development activities. Generally, nAch had stronger associations with development outcomes than development specific self-efficacy [DSE] in both studies. In Study C, nAch and DSE changed significantly following DC participation (n = 87), these gain scores, age and gender predicted DC ratings, but no significant associations with development outcomes were observed (n = 47).

Linking in with the observations from the literature review, the potential limitations of quantitative approaches were highlighted. Therefore the final study [D] took a qualitative approach using template analysis to elicit managers' definitions of training and development. The analysis showed that managers (N = 20) are able to differentiate training and development, and that decision-making processes and outcomes appear different for each type of activity. Development is seen as less measurable and quantifiable in terms of organizational benefits, and therefore can take second place to training.

The concluding Chapter argues that experimental approaches are perhaps limiting for the investigation of development due to its long-term and on-going nature. Although a whole array of individual differences (such as locus of control, learning styles or attitudinal variables) require further study we first need better methods for defining and measuring development motivation and development outcomes; an initially qualitative approach may be more conducive to further our understanding.

Prologue - Glossary and Thesis structure

A brief list of abbreviations that are used in this Thesis is set out in Table 2 below; each abbreviation is also explained in context in the relevant Chapter.

Table 1: Glossary

AC	Assessment Centre
Appraiser	Employee who is in charge of undertaking appraisals
Appraisee	Employee who has undergone appraisal
DC	Development Centre
DSE	Development specific self-efficacy (e.g. Maurer et al., 2003)
DfES	Department for Education and Skills
EDA	Employee Development and Assistance
FFM	Five Factor Model of Personality
FIT	Feedback Intervention Theory (Kluger & DeNisi, 1996)
HRD	Human Resource Development
IIP	Investors in People
IIP inspector	Independent consultant who formulates recommendations on IIP accreditation
ILA	Individual Learning Account
ISD	Instructional Systems Development
LC	Learning Climate (e.g. Colquitt et al., 2000)
IT	Information Technology
MNQ	Manifest Needs Questionnaire (Steers & Braunstein, 1975)
MSMR	Multi-source, multi-rater feedback; also called 360-degree feedback
nAch	Need to Achieve (e.g. McLelland, 1961)
O	Abbreviation for 'Organization'; Organization 1 is referred to as 'O ₁ ' etc.
Observer	Assessor in DC; either a trained member of the organization, or a psychologist
PCA	Principal Components Analysis
PDP	Personal Development Plan; this is usually formulated by appraiser and appraisee as part of the annual appraisal
Ratee	Individual receiving 360-degree feedback
Rater	Individual who give feedback as part of 360-degree feedback process
SE	Self-efficacy (e.g. Maurer & Tarulli, 1994)
SME	Small Medium Enterprise
T	Time-point in longitudinal study (e.g. T ₁ , T ₂)
TEC	Training and Enterprise Council
Trainee	Employee undergoing training
Transcriber	Person transcribing interview

The Thesis is structured as follows. The introduction and literature review is set out over three Chapters (2, 3, and 4). The next four Chapters (5, 6, 7, 8) report the studies conducted as part of this Thesis. Rather than adopting the traditional structure of offering data Chapters that are confined to results and a common discussion Chapter, each study is written up like an extended journal article. This provides a comprehensive overview of each study, and allows full consideration of the different methods employed and of any differences in design and measures. Each Chapter concludes with a discussion that leads into the next Chapter; the findings are drawn together in Chapter 8 which offers avenues for future research. Table 1 sets out the Thesis structure in overview.

Table 2: Thesis Structure

Chapter 1 - Training, Learning and Development Activities and Outcomes at Four Different Levels: This Chapter sets the scene for the Thesis by outlining the importance and pervasiveness of learning at the societal, organizational, group and individual level. Definitions for training are contrasted with definitions for development; the Chapter concludes with a framework for the critique of both concepts.

Chapter 2 - Training revisited: Research frameworks for training, such as training cycles, training evaluation and training effectiveness research are discussed. The latter strand of research has demonstrated that individual differences affect learning outcomes; nAch, DSE, LC and demographic characteristics are discussed. Three models of training effectiveness are summarized that have informed the quantitative studies reported in this Thesis.

Chapter 3 - Employee development: This Chapter distinguishes different types of development activities. Disparate theoretical approaches to research development, such as the HRD perspective, research on feedback effects and multi-source feedback and participation in development are discussed. Two specific activities, appraisal methods and development centres, are defined and their methodology explained, highlighting their respective advantages and disadvantages in the light of existing research. Methodological difficulties for the investigation of development are highlighted.

Chapter 4 - Self-efficacy, Need for achievement and Demographic Characteristics and their Association with Development Outcomes: A cross-sectional design is used to investigate self-efficacy and need to achieve and their association with development outcomes in an appraisal context.

Table 2 continued

Chapter 5 - Changes in perceived learning climate, development specific self-efficacy and need to achieve following participation in staff appraisals, and their association with development outcomes: a quasi-experimental study investigates the association of changes in individual differences with development outcomes.

Chapter 6 – Development centre participation, changes in individual differences and development outcomes. The third study investigates individual differences and development outcomes in a development centre context. More specifically, gender and changes in individual differences are considered as correlates of DC ratings and development outcomes.

Chapter 7 – Managers' definitions of training and development. The last study investigates managers' definitions of training and development using semi-structured interviews, which were transcribed and analysed with template analysis.

Chapter 8- Drawing up a research agenda for employee development. This Chapter draws together the findings from Studies A to D to highlight that we need to further our understanding of a) the individual differences influencing development, b) our definitions of development outcomes, and c) our methods for investigating development. The Chapter ends with a research agenda for development.

References

Appendices:The appendices contain the questionnaires utilised in the studies (Appendices A to C) and a list of conference papers derived from the Thesis material.

Chapter 1: Training, learning and development activities and outcomes at four different levels

1.1 Introduction

Training and development activities which result in learning and skill enhancement stand to benefit the employer and the employee (Warr, 2002) as well as society at large (Arnold, Silvester, Patterson, Robertson, Cooper & Burns, 2004). Training has a long history in the UK. It can be traced back to the industrial revolution when employers found it necessary to train their workforce to make production more effective and to enhance quality (Cannell, 2004). Training can take many forms, whether it is delivered on-or off the job, by distance learning, in formalised long-term courses or in ‘short bursts’. A recent report on training and learning prepared for the UK government (DfES, 2002) shows that at least seven out of ten employers offer training to their workforce. At the same time, there is an increased recognition of the importance of life-long learning which should transcend current jobs or careers (Rosow & Zager, 1988). Despite this pervasiveness, the provision of learning opportunities in the UK is not without criticism, as the national skill base does not always score highly in international comparisons.

This Chapter will demonstrate the importance of learning, training and development at the societal, organizational, group and individual level with particular reference to the UK context. It is acknowledged that the boundary between these concepts is often blurred in organizational reality and practitioner publications. In general, the practitioner literature and government reports refer to training as “instructor-led, content-based intervention” (Sloman, 2005, p. 3). Development and learning are often used interchangeably and refer to a “self-directed, work-based process” (Sloman, 2005, p.3). This distinction is adapted for the purpose of this Chapter. A more detailed discussion of any differences between learning and development will be addressed at the end of this Chapter and in Chapter 2 in relation to the relevant psychological research literature. A summary of the arguments presented at different levels is provided in Table 3 as a guide to the Chapter.

Table 3: Training, Development and Learning at Four Levels

Level	Projected outcomes	Examples	Barriers to Successful Implementation	Challenges to Research
Societal	Skilled and internationally competitive workforce	Nation-wide schemes such as: IIP	Not all organizations may believe in perceived benefit of programme	Difficulty of demonstrating causal link between national training and development schemes and outcomes at national, sector or organizational level, as many confounding variables could interfere
	National and regional retention of talent Improvement of management development Counteract 'brain drain'	Individual Learning Accounts Corporate Leadership Council Training and Enterprise Councils National Training Organizations Sector Skills Development Agency		
Organizational	Competitiveness Productivity Attraction and retention of talent Motivated and committed work-force	Organization-specific training and employee development programmes which involve the provision and monitoring of structured development activities (e.g. Ford's EDAP)	Development and training programmes can be costly, smaller organizations might lack the resources to implement Programmes often abandoned in 'lean' times	Difficulty of demonstrating causal link between training and development programmes and outcomes at organizational level (e.g. profitability, turnover), as many confounding variables could interfere Research methods often confined to telephone surveys, crude measures such as number of training days, turnover
Group	Team based activities Equally accessible training and development programmes resulting in equally distributed learning	Away days, team building using psychometrics Organizational barriers can be addressed with relevant activities, such as equal opportunities awareness training	Working with teams requires expert facilitator, teams often transitory Certain groups are offered less training than others Some individuals might not have access to certain programmes (e.g. those working part-time, as contract workers or working from home)	Project based teams may not be together for long enough to conduct thorough evaluation, individuals may form part of different teams at any one time Organizations might not want to admit 'between group differences' Difficult to access objective data Employees might exaggerate in self reports
Individual	High levels of motivation and commitment Acquisition of transferable skills Increased marketability in competitive market Facilitation of life-long learning	Participation in formal training courses, which can be mandatory or non-mandatory, take place on the job or off the job	Individual differences: individuals may benefit from participation depending on individual differences, such as motivation to learn, attitudes toward the training itself and toward the organization	Research often relies on self-reports, hence prone to measurement errors

1.2 The societal level

From a societal perspective, there has been much discussion about the national skills shortage in the UK, particularly in specific industries such as the Information Technology Sector [IT], which has been attributed to inefficient and insufficient training programmes (21st Century Skills, DfES, 2003). The inefficiency of British managers in comparison to their international counterparts has also been pointed out (Porter & Ketels, 2003). There is concern that this lack of training opportunities discourages talented individuals to contribute to the UK society as an increasing number of UK scientists and specialised practitioners migrate to the US (Skills: Getting On, DFES, 2005) resulting in a 'brain drain' which may have serious long-term consequences. Skills migration is also happening within the UK with graduates drawn to the most prosperous areas, leaving economically less advantaged regions, such as areas of the South West, struggling to retain talent (Fighting the brain drain, BBC, 2003).

The UK government has tried to address these issues through a number of sponsored schemes which are purported to encourage employers to implement structured, and government supported training initiatives. These include Investors in People [IIP], Individual Learning Accounts [ILA], Training and Enterprise Councils [TEC], National Training Organizations and the Sector Skills Development Agency. Such schemes aim to encourage organizations to provide learning opportunities for employees that should comprise, but ideally go beyond, the provision of formal training by encouraging employees to take charge of their own life-long learning (Rosow & Zager, 1988). However, their respective successes are open to debate and several have been abandoned. For example, the ILA scheme, initiated by the UK government in 2000, was open to everyone over the age of 19, with each person registered with the scheme being allocated up to £200 to put towards the cost of training and development. Unfortunately, the scheme was suspended at the end of 2001 amid allegations of widespread abuse which is estimated to have cost the UK government around 100 million pounds (Ministry blamed, BBC, 2003).

Other schemes continue to run. The IIP scheme was instigated in the early 1990s to provide a benchmark to help organizations build training and development

activities into their overall organizational strategy (IIP-UK, 1994). There is no pre-determined set of outcomes that lead to IIP accreditation, but rather each organization is inspected internally by a consultant [IIP inspector] and rated on a number of criteria (such as employees' awareness of their own development or organizational commitment). The IIP inspector evaluates the organization's training and development programme and related initiatives using these criteria. The result is a decision on IIP accreditation and a set of recommendations. Currently, participation in the scheme is primarily limited to large companies, as small to medium size enterprises tend to see the system as too cumbersome and its alleged benefits as unclear (Smith, Boocock & Loan-Clarke, 2002). As yet, there is no unambiguous evidence that the scheme is linked to positive outcomes on an organizational level, although the majority of participating organizations appear to report that they have achieved a number of anticipated benefits (Clayton, 2001) such as improved earnings, customer satisfaction or organizational performance. Most recent initiatives include the consultation of employers through Sector Skills Councils, and also the new National Employer Training Programme (The Future of Higher Education, DfES, 2005); with the government having committed £1.5 billion to reform the further education sector.

From the employers' perspective however, the effectiveness of traditional methods such as formal education has been questioned. For instance, it has been argued that employer-sponsored MBA courses might not be an useful vehicle for growing managerial talent, as attendees are more likely to go into consultancy rather than staying on to benefit the organization as hands on management (Kennedy, 2003). Thus, considerable collaboration is now taking place between individual organizations and government bodies such as the Department for Education and Skills [DfES], resulting in recent developments such as the inception and implementation of foundation degrees. These are nationally recognised vocational higher education qualifications that aim to integrate academic and work-based learning. The focus is on flexible learning, and they are employer-focused, as employers are encouraged to develop their own curricula. It is hoped that such initiatives may address the UK failure to grow its own senior management (The Future, DfES, 2003; Kennedy, 2003)

as UK main competitors are countries with greater penetration of higher education (Foundation Degrees, 2005).

In summary, successful training outcomes at the societal level include industries which are competitive at both a national and international level, as well as organization-specific outcomes. It remains however difficult to demonstrate a direct link between the implementation of a nation-wide scheme such as IIP, and outcomes at the organizational level, as a number of confounding factors (such as unexpected economic developments) may influence results.

1.3 The organizational level

From the organizational perspective, it is in any company's best interest to invest in their human resources as these are increasingly recognised as the greatest organizational asset (Cascio, 1998; Woodruffe, 1999). As a result, many organizations now offer programmes that include training and development as part of their organizational strategy by aligning learning at the individual level to corporate goals (Lee, 1998). Such programmes are used as a major selling point in the recruitment process; and may comprise the availability of structured in-house or external training, as well as opportunities for more personalized development plans. Training and development opportunities have become a key factor in attracting candidates to one job over another (Barbeite & Maurer, 2002). Once a candidate has entered an organization, opportunities to train and learn are central to the nurturing of talent and also as a motivating force. In today's flat or matrix structured organizations possibilities for promotion and for moving up the pay scale can be scarce. Thus, the opportunity to be sponsored by the employer to engage in learning, for instance by studying for an MBA or a vocational qualification or by study leave being available even for non-vocational activities, can be an alternative incentive to pay within an organization.

An effective training and development programme is not only a major selling point in recruitment in the short term and a vital motivating tool in the medium term,

but also crucial for the long-term retention of talented staff (Kaye & Jordan-Evans, 2000). Research has pointed to the “paradox of retention” (Horner & Jones, 2003) as the only way for employers to keep (young) workers is to equip them with the skills and experiences that will make them more attractive to other potential employers. The necessity to retain talent is crucial both in times of economic prosperity, when organizations fight hard over the best talent, but also in times of economic recession, when talented staff can be the key to an organization’s competitive advantage (Woodruffe, 1999). In addition, job-specific requirements are changing at an accelerating pace due to the influence of new technologies, a more global corporate market-place and a more diverse work-force (Patterson, 2001). Thus, in order to stay competitive and respond to their customers’ needs, organizations have had to become more adaptive and flexible. ‘Soft’ and customer focused skills have gained increasing importance, as the industry in the UK has shifted its focus from manufacturing to service based organizations (Patterson, 2001). These changes make cyclical training a necessity in order to keep organizations up-to-date with latest advances. Thus, many organizations now have formal employee programmes in place, that usually comprise training as a key element, but also offer other opportunities such as payment refund schemes for non-vocational study (Warr & Birdi, 1998). One example is Ford’s pioneering Employee Development and Assistance [EDAP] programme (Lee, 1998). This has the premise of being accessible to all employees encouraging them to take charge of their development by offering learning resources over the company’s intranet via a custom-made computer-based learning delivery system.

At the organizational level, outcomes have been investigated from an organizational and Human Resource Development [HRD] perspective. This is influenced by human capital theory (Davenport, 1999) which perceives employees as organizational assets whose value is based on their skills, knowledge and competence. As a result, investment into education and training should lead to increased productivity and is crucial to organizational effectiveness. One empirical study which surveyed just under 1,000 organizations in the US demonstrated that investment into development and training predicts higher productivity, lower turnover and improved financial performance (Huselid, 1995). Guzzo, Jette and Katzell (1985) used meta-analytic techniques to investigate the impact of ‘high performance work practices’,

such as training and instruction, feedback and appraisal and work rescheduling on outcomes such as output (e.g. productivity) and withdrawal (employees leaving the organization). Findings included that those workers who received training were .78 standard deviations more productive than other workers.

1.4 The group level

At the group level, one needs to describe briefly team based activities but also apparent inequalities between groups of employees as learning skill outcomes are not equally distributed in the workforce (Campbell, 2001). Thus, the group level refers to development, as team activities often transcend or compliment formal training, as well unequal distribution in access to formal training activities.

Team based development activities have become increasingly popular in organizations that have a team-based or project-based matrix structure. It is assumed, although research does not necessarily support, that people work more effectively in teams than they work alone (Allen & Hecht, 2004). Team activities are usually referred to as development, as they rely on feedback, for instance through psychometrics, and on mutual engagement rather than instructor-led structure. Evidence of the effectiveness of team based activities is sparse and contradictory. In 1991 a meta-analysis (Mullen, Johnson & Salas, 1991) showed that brainstorming, a popular team activity, performance of nominal groups (number of individuals working alone) exceeds performance of group members working together (interacting groups). West and colleagues have argued that team-work is “central to our species development” (West, Brodbeck & Richter, 2004), and cite several papers that corroborate that team working contributes to good patient care (Eggert, Zimmer, Hall, Friedmann & Hughes, 1992; Somers, Marton, Barbaccia & Randoph, 2000; as cited in West et al., 2004) and performance (Edmondson, 1996; as cited in West et al., 2004).

It is also widely assumed that the constellation of different personalities in teams is important, as too many or too few of particular personality types could hinder

a team's effective functioning. The use of psychometric profiling to help team members understand each others' behaviour, such as the Myers Briggs Type Indicator ® [MBTI] or the Belbin Team Roles (Belbin, 1981; Belbin, 1993) continue to be popular. However it has been questioned whether individuals occupy stable team roles over time (Furnham, Steele & Pendleton, 1993; Senior & Swailes, 1998). Research has criticized the psychometric properties of the Belbin Measure and also found that the Belbin Team Roles favour males, which may result in adverse impact (Anderson & Sleaf, 2004).

Another perspective on employee training and development is the consideration of inequalities in outcomes. Older workers, women, part-time workers, ethnic minorities and those with lower educational qualifications have been demonstrated to be less skilled in the UK and are less likely to engage in formal training (Campbell, 2001; 21st Century Skills, DfES 2005). Clearly then, learning outcomes are dependent on demographic characteristics. Such inequalities are partly due to a lack of availability for training and education in economically disadvantaged regions or cities in the UK (The Future, DfES, 2005).

However, it is likely that factors at the organizational or also individual level contribute, although we know very little from a psychological perspective about the reasons for such disparity. Although there is some evidence that, for instance, older workers learn differently to younger workers (e.g. Warr & Bunce, 1995), well-designed training programmes should minimise individual differences (Patrick, 1999) as all participants should be equally skilled on particular outcome measures following participation. Thus, differences in outcomes are likely also to be due to differences in opportunities to participate within organisations. The reason for inequalities in learning and training outcomes could be that managers believe that certain groups of employees, such as younger male workers, are more worthy of training, since they are more likely to benefit from participation, and hence allocate training opportunities according to their beliefs. There is evidence showing that older workers (Warr 1994; Getting On, DfES, 2005) are offered less training than younger workers and that women, in particular those who work part-time, are offered less training than men (Getting On, DfES, 2005; Labour-Force-Survey 1994; Olsen & Sexton, 1996, Kram

& Ohlott, 1995); and that development and training in general is becoming polarized (Tresgaskis & Brewster, 1998). Equally, it is tenable that circumstances prevent individuals from participation. For instance, it is feasible that women do not have the same opportunities as men because they are more likely to be part-time, which may mean that actual working hours and the juggling of additional home responsibilities make participation more difficult. In summary, evidence about demographic differences exists, we still know very little about the factors that contribute to such disparity.

1.5 The individual level

Lastly, taking an individual perspective, "transferable-skills" has become a buzzword in a progressively mobile job market. An increasing number of applicants prefer training and development opportunities over financial incentives as the acquisition of additional skills is a selling point to current and future employers (Horner & Jones, 2003). As alluded to earlier, there has been a shift from short-term acquisition of specific skills towards life-long learning, as taking charge of one's development has become a key to continuing, life-long, career success (Hall & Mirvis, 1995). Since it is now unusual for employees to stay with an employer for an extended period of time, the onus for learning has shifted to the employee, requiring continuous motivation to advance both professional and personal qualities (Hall, 1996). Participation in training and development activities is associated with a number of positive outcomes at the individual level, such as the acquisition of knowledge and skills, increased motivation, enhanced attitudes towards one's work and workplace and enhanced workplace performance (Kraiger, Ford & Salas, 1993; Mumford, 1997; Lee, 1998; Colquitt, LePine & Noe., 2000).

One cannot discuss outcomes without discussing 'inputs' at the individual level, since even the best designed training or development programme may affect some people more than others. Such individual differences have been addressed in the contemporary training literature. Studies over the last decade (Tannenbaum et al., 1991; Tharenou, 2001; Warr et al., 2001) as well as reviews and meta-analyses

(Colquitt et al., 2000) show that motivational characteristics such as self-efficacy, motivation to learn, need to achieve, locus of control as well as demographic characteristics impact on outcomes. Several complex models for the relationships between these variables exist (Tannenbaum & Yukl, 1991; Kraiger et al., 1993; Colquitt et al., 2000) which will be discussed in detail in subsequent Chapters. In brief, this discussion will show that extensive evidence for the interplay between individual differences and factors relating to the design and delivery of training exists. However, the effect of comparable variables on the success of development activities is less well understood.

In brief, it appears that the UK still has a long way to go in terms of effective work-based learning. Government sponsored initiatives to further training and development in the UK, such as IIP, explicitly aim to encourage learning through wide-ranging programmes which should comprise development as well as training. In organizational reality, there has been a shift away from formal class-room type training to more fluid activities that are part of overarching development programmes (Sloman, 2003). However, these programmes and activities have perhaps not had the desired impact. There is clear evidence that learning is not distributed equally between groups in the adult UK population and the reasons for this require further investigation. One potential reason for this is that the onus for learning is increasingly on the learner him or herself; so it remains to be investigated if individuals are actually encouraged to take charge of their own learning, and if so, what individual factors contribute to successful outcomes. Although learning is seen as crucial to organizational effectiveness, it is perhaps best investigated at the individual level. It appears somewhat vague how an organization can actually 'learn' and how any such outcomes could be measured, whereas sophisticated frameworks for the study at an individual level exist.

1.6 Are training and development different?

As evident from the analysis at different levels, there is an increased belief that investment in employee training, development and learning has benefits for the

organization and for its workforce (Sloman, 2003). Training and development appear to 'go hand in hand' in organizational terminology and are difficult to disentangle at a general and practical level. However, disparate theoretical perspectives have developed. Warr (2002, p.154) considers training and development as separate entities arguing that "job-specific training seeks to improve effectiveness in a current job role, whereas development activities take a longer-term perspective and may extend into career planning and reviews of personal progress". This distinction has been equally adopted in the US. Laird writes that "training on the one hand is the acquisition of the technology which permits employees to perform to a standard" (1985, p.11) and "development on the other hand refers to ongoing, long-term intervention to prepare people and groups for futures" (1985, p.13).

Undoubtedly, training and development have been treated as conceptually different. Learning from a) training activities and b) development activities is associated with different methods and outcomes as well as a different employee-employer relationship (Horner & Jones, 2003). Training is associated with the relational psychological contract (Rousseau, 1995), where the onus rests with the employer to train their workforce, resulting in linear career growth and specific acquisition of skills. Development is associated with the new psychological contract, where the working relationship is uncertain, flexible and liable to change, thus placing the onus the employee to take responsibility for developing multiple careers and engaging in life-long learning. As training is job-specific, it relates to the predictivist perspective which views jobs as a stable entity to which the most suitable candidate needs to be matched (Cook, 1993). The wider ranging objectives of development in contrast fit with a constructivist perspective, which is as concerned with person-organization fit and person-team fit, as with matching the person to the job (Herriot, 1989).

Training has long been considered a distinct and separate area of expertise within occupational and organizational psychology (e.g. Patrick, 1991; Goldstein, 1993). It is one of the most widely researched areas, as the instruction and acquisition of job-specific skills is seen as crucial to both organizational and individual effectiveness (Goldstein, 1993). As a result, a vast body of studies exists that have

employed precise methodology and therefore demonstrated the effectiveness of training at several levels. To illustrate, some studies have focused on the impact of training on the individual level, showing that training results in learning, increased motivation and enhanced attitudes (Tannenbaum, et al., 1991; Colquitt et al., 2000). Other studies have demonstrated that transfer of learning can only take place in a supportive environment (Rouiller & Goldstein, 1993; Tracey et al., 2001).

Increasingly, there is an emphasis on development which is seen as wider, broader, and more future-directed and career related than training. This has resulted in a growing body of research on employee and management development which has sprung from diverse theoretical orientations, such as organizational and individual competence, self-awareness, feedback effects and participation in development activities. However, such research has not yet fully demonstrated the validity of employee and management development (Latham & Seijts, 1998). It appears that we still know little about the effects of a diverse range of development activities, such as development centres, developmental appraisals, multi-source feedback or coaching and mentoring on individuals and organizations. This lack of evidence for the construct and predictive validity may be due to the split in theory and methodology between training and development, and the diverse approaches to the latter. The core differences between training and development are summarized in Table 4 which provides guidance for the following two Chapters. Chapter 2 will outline theoretical approaches to training and Chapter 3 to development, considering relevant studies and their implications for this Thesis.

Table 4: Training and Development in Contrast

Training		Development
Objectives	Job specific short-term orientation	Future directed, long-term, usually career related; can be aligned with organizational objectives
Focus	Performance of the task or specific job role	General individual progress, professionally and personally
Employee-employer relationship	Old contract; job for life, onus rests on employer to train their workforce	New contract; onus rests on employees to acquire transferable skills for multiple careers
Importance	Almost all organizations offer training. Training has been prevalent since the industrial revolution; peaked in 70s/80s/90s as globalisation and increasing changes in working environment made cyclical training a necessity	Increasing importance of 'learner-led' development, rather than 'organization-led' training; onus on employee to take development forward
Projected outcomes	Enhanced skills at the individual level, accessibility of learning at the group level, organizational effectiveness and equally distributed learning at the societal level (see Table 3)	Increased self-awareness and learning, growing impetus to take charge of personal and professional development, increased 'marketability' to current and future employer
Theoretical background	Rooted in learning theory and cognitive psychology, later models acknowledge the interplay between individual characteristics and organizational requirements (e.g. Goldstein, 1993) research on training evaluation ('did it work?') to contemporary research on training effectiveness ('for whom did it work, and why') (e.g. (Kraiger, Ford et al. 1993; Colquitt, LePine et al. 2000)	Diverse roots, from management development and organizational strategy (e.g. Burgoyne, 1988), competence (Prahalad & Rumel, 1990; Boyatzis, 1992), self awareness (e.g. Atwater & Yammarino, 1989); self-awareness and rating discrepancy (e.g. London & Smither, 1995); to social exchange models of participation in development activities (Maurer et al, 2002)
Format and Content	Training can vary greatly in length, style of delivery and content; traditionally often delivered as class-room type instruction Recent move away from job-specific skills to 'soft' skills	Diverse range of activities which can be formal or informal, take place on the job or off the job Formal development activities involve both formal ratings of past performance and setting of future development goals through feedback and feedback on these ratings; systems such as appraisal often modelled on company-specific competency framework
Learning	Learning through instruction and skill acquisition	Learning through feedback and self-reflection
Time span	Often 'stand alone' and 'one off	Should be one-going; even one off events such as development centres should be linked in with overall development strategy

Table 4 continued		Training	Development
Perspective		Predictivist: person-job fit	Constructivist: person-organization and person-team as well as person-job fit
Examples		Skills-based training (e.g. mastering new manufacturing tool), customer-service training, open learning	Formal activities, such as appraisal, multi-source feedback, development centres, and informal activities, such as 'walking the floor', research on the inter/intranet, informal discussions
Outcomes		Kirkpatrick's four-step model widely accepted; measuring a) reactions, b) learning, c) behaviour, d) results. In brief, successful training should result in measurable improvement in workplace performance measures	Diverse measures have been used such as promotions, number of training days engaged in, level of agreement between ratings, staff retention
Predictive Validity		Consistent evidence that well delivered training courses result in improvement on task performance	Equivocal evidence, as research frameworks and criteria vary between studies

Chapter 2: Training revisited

2.1 Introduction

There are diverse theoretical approaches to training. Learning theories are concerned with how the learner acquires new material, in other words ‘how do individuals learn’; and offer some clarity on how ‘learning’ can be distinguished from ‘development’. Training cycles offer a framework for how such learning can be achieved in practice through the implementation and continuous revision of cyclical processes. Typically, the cycle starts with the assessment of individual and organizational needs and the definition of clear aims and objectives which lead to the practical design and delivery of training to facilitate the acquisition and transfer of learning. The last stage of such training cycles, training evaluation, spans a vast area of research in training and attempts to determine whether training actually achieved the desired objectives. The next section discusses individual differences and demographic variables which have been demonstrated to affect training outcomes and thus may be relevant to the investigation of development. Particular consideration is given to two motivational constructs, need to achieve [nAch] and development specific self-efficacy [DSE], as well as to the perceived learning climate [LC] and demographic differences. Three models from training research that have drawn together such variables are discussed in terms of their relevance for the investigation of development outcomes.

2.2 Learning and skill acquisition

Warr (2002, p.154) states that “learning may be viewed as cognitive and physical activity giving rise to a relatively permanent change in knowledge, skill or attitude”. Several established theories explain such change processes. Fitt (1951) proposes a three stage model, which is depicted in Figure 1.

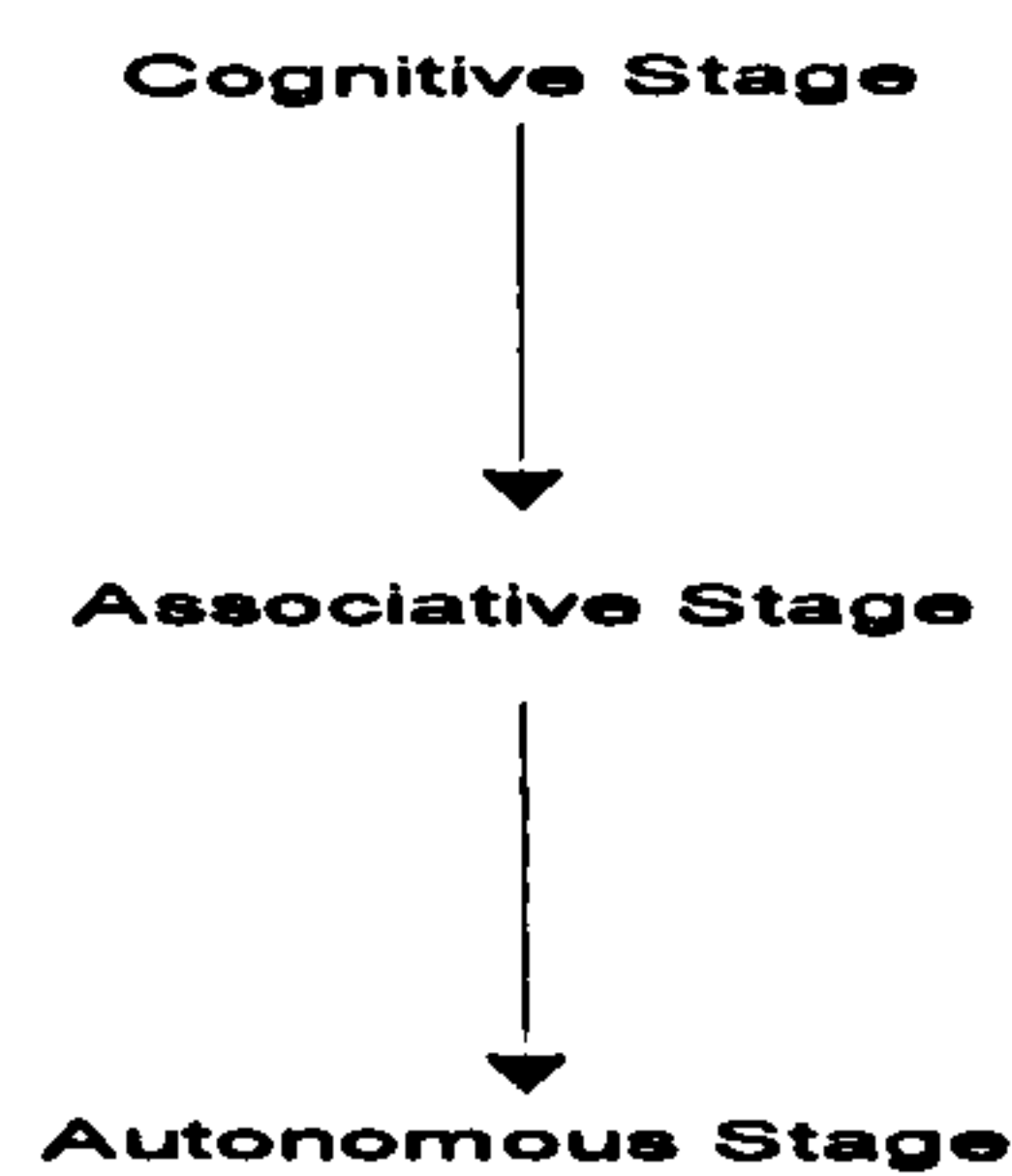


Figure 1: Fitt's Three-stage Model

First, the learner goes through the cognitive stage where newly learned material is acquired and requires constant attention. Next, the learner enters an associative stage where the newly acquired material is rehearsed, translated into cognitive or behavioural processes and associated with a number of cues. Once these behaviours have been rehearsed, they become independent strings of action and require limited conscious attention; the autonomous phase. A common distinction in learning is between declarative or explicit knowledge, which refers to factual information that we store and procedural, tacit or implicit knowledge, which refers to 'internal manuals' of how to do something. Anderson's theory (1993) suggests that some declarative knowledge or a cognitive phase, when information about a situation or fact is gained, is a precondition for subsequent learning or procedural knowledge.

Warr (2002) equates procedural knowledge to skill, arguing that skilled workplace behaviour implies that improved performance is a result of learning. Specific training courses increase procedural knowledge by rendering behaviour patterns more autonomous and freeing cognitive and physical resources up for other tasks. However, not all training affects participants solely in this manner, as some training is also aimed to change people's attitudes, beliefs or values. Kraiger et al (1993) classify learning outcomes threefold as:

- a) cognitive outcomes (verbal knowledge, knowledge organization, cognitive strategies),
- b) skill-based outcomes (proceduralization, composition, automaticity) and

c) affective outcomes (attitudinal, motivational disposition, self-efficacy, goal setting).

Each of these potential learning outcomes is measured in a different way.

Verbal or declarative knowledge is best measured shortly after training participation, for instance through multiple choice tests, so that knowledge gaps can be identified quickly. Variance in declarative knowledge should be greater earlier in training than near completion. The measurement of automaticity, as an example of a skill based outcome, requires sophisticated mechanisms. Participants are required to undergo primary and secondary tasks, and proficiency in the latter is taken as an indication of automaticity. The third learning outcome, affective outcomes, is rooted in Gagné's taxonomy of learning (Gagné 1985). Gagné argues that 'internal states' or attitudes need to be considered as a learning outcome, as they can enhance or reduce performance. Typically, such changes are measured by the administration of self-reports before and after training participation.

In summary then, learning is perhaps best defined in line with Warr (2002) who refers to a relatively permanent change in mental and physical skills, or affective states which may result from formal training, but could also result from other activities, such as obtaining feedback or team building days. Defined in this way, learning may be differentiated from development, where learning refers to changes in the individual, that may result from training or development activities. Development in contrast may be conceptualized as referring to activities that aim to instigate or promote self-led learning.

2.3 The training cycle

Although theories of skill acquisition stem from an individual cognitive perspective, more general models of the training process, especially Goldstein's (1993) work, have explicitly acknowledged that organization-level factors can also influence training success, as transfer of learning cannot take place without a supportive organizational environment. Such Instructional Systems Development [ISD] models depict training as a cyclical process and broadly consist of an initial needs assessment phase, training design, training delivery and training evaluation (Goldstein, 1993) as shown in Figure 2.

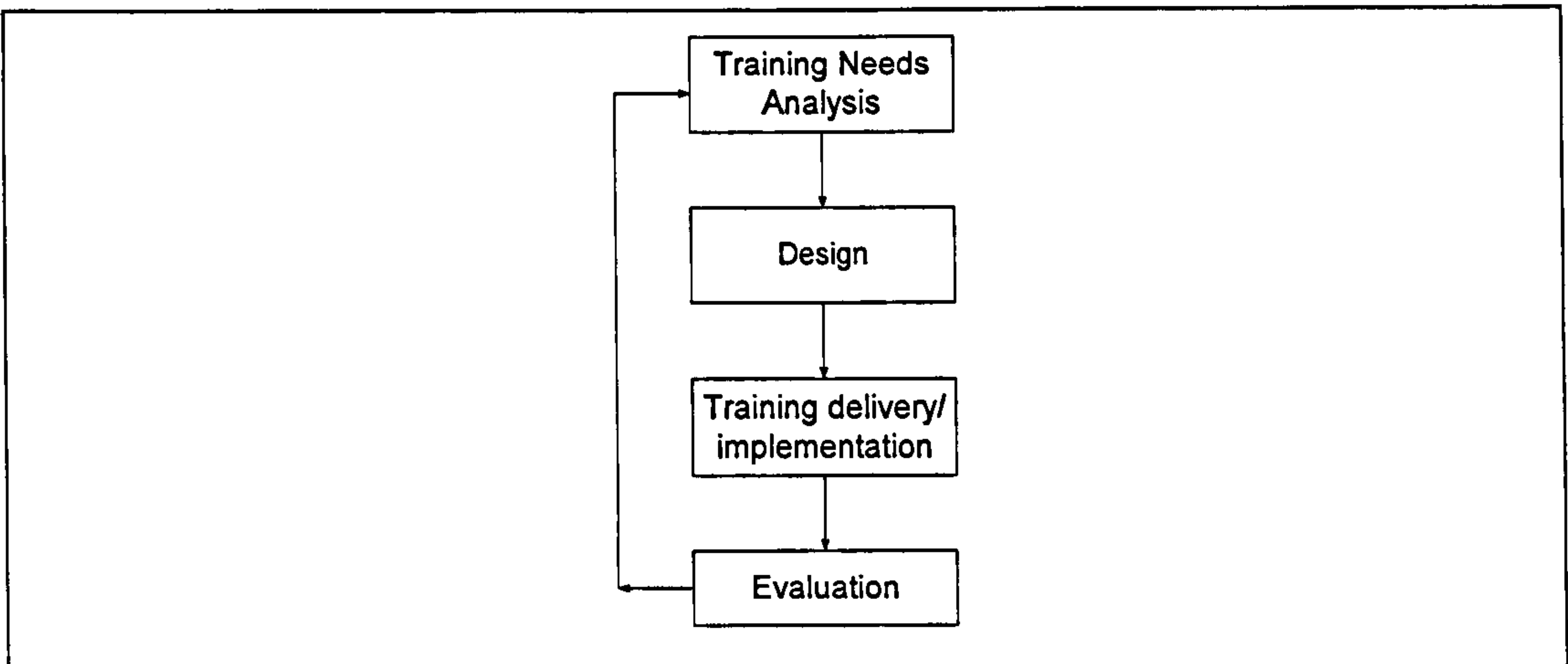


Figure 2: Simplified Training Cycle

Such training cycles assume that one stage follows on from the previous one. The first and crucial phase is the assessment of training needs, in terms of who needs training and what kind of training the organization requires in order to prepare employees for specific tasks. Clear aims and objectives should be formed at this stage. The next stage is training design, which comprises decisions such as the material that the training course needs to cover, how it is going to be delivered, the methods of instruction and the qualities required from the trainer. The next phase is the practical delivery of the training course, which can take place on or off the job. Traditionally, much research has concentrated on the second and third stages of the cycle, training design and delivery, as predictors of training effectiveness (Tannenbaum & Yukl, 1991). The last phase refers to training evaluation, which serves to determine whether, for whom and how the training course achieved the planned aims and objectives. The evaluation process should lead to a set of recommendations to improve the training course, which are then fed back into subsequent training cycles. Perhaps the largest body of research has concentrated on the last phase, evaluation, which is discussed in the following section.

2.4 Training evaluation

Kirkpatrick (1959) proposed arguably the most prevalent and influential model for training evaluation. Kirkpatrick considered evaluation in terms of a four-stage

process; where the unit of measurement is the individual for the first three levels, and the wider organization for Level 4:

a) Level 1 - Immediate *reactions* after training participation: this level refers to participants' immediate evaluation of the training received, for instance did trainees like the course. This is usually measured with brief questionnaire straight after training.

b) Level 2 –*Learning* as a result of training participation: this level refers to measurable changes in knowledge, skills or attitudes as a result of training. These could be measured through knowledge based tests or questionnaires or other exercises

c) Level 3 - Changes in *behaviour* in the workplace following training: this level refers to the transfer of learned material into the workplace and resulting improvement of individual performance. This could be measured through work-related measures of performance, such as managers' ratings

d) Level 4 - Organizational level *results*: this level refers to outcomes at the organizational level, such as increased productivity or performance; any improvements could be measured through the tracking of relevant company data before and after the implementation of training programmes

Kirkpatrick's (1954) four-stage model has been criticised for being too simplistic and meta-analytic techniques have shown that the four levels do not necessarily follow on from one another in a linear manner. However, it should not be assumed that training is always designed to effect change at all four levels, or that each level is necessarily caused by, or correlated with, the previous level (Alliger & Janak, 1989).

It has been the subject of considerable criticism that evaluations tend to stop at the reactions level in practice, as there is little evidence that liking a training course will result in positive workplace behaviour changes and long-term transfer of learning. Critiques of reaction measures have pointed to their limited validity due to minimal correlations with objective test scores and ratings by others due to the leniency of self-ratings (Mabe & West, 1982) and the mean correlation between reactions and immediate learning is only about .07 (Alliger & Janak, 1989). However, it has been demonstrated that more precise reaction measures (which differentiate between perceived usefulness, difficulty and enjoyment) predict performance measures and that these are moderated by individual differences. For example, Alliger et al. (1997) demonstrated that the average correlation between enjoyment reactions and utility

reactions is .34 and that utility reactions are correlated with measures of immediate learning. Thus, reaction measures can constitute a useful tool for gathering information on the key characteristics of trainees and other mediating factors that may influence outcomes at subsequent levels. This is illustrated by Warr et al.'s research (2001) which utilised finer grained measures of trainee reactions (surveying 163 technicians of a motor-vehicle dealership) and incorporated a measure of the organizational transfer climate. The authors found that both immediate and delayed learning was predicted by trainees' motivation, whereas changes in job behaviour were independently predicted by the transfer climate and learning confidence. It was concluded that reaction measures which are taken straight after the activity has finished can be an effective vehicle if they are read in conjunction with measures that take into account individual differences, such as self-efficacy and motivation, which influence the acquisition of new knowledge or skills (Kraiger et al., 1993; Warr & Allan, 1998)

2.5 Training motivation

There is agreement that training motivation has three distinguishing features which have been defined as the “*direction, intensity and persistence* of learning directed behaviours” (Colquitt et al., 2000, p. 678, italics added). However, there seems to be some disagreement whether training motivation is an attitude (Tannenbaum et al., 1991), which refers to both cognitive and emotional processes, or an affect (Kraiger et al., 1993), which primarily refers to emotional processes. In addition, motivation to train has been said to consist of both stable aspects such as locus of control and malleable aspects such as motivation to learn (Noe, 1986; Colquitt et al., 2000). Regardless of such theoretical consideration, motivation to train is an integral part of several theoretical models. Desirable training outcomes include manifest behavioural changes in the working environment. These can only be achieved if participants collaborate, in other words have the motivation to learn and therefore to benefit from a training programme.

Evidently, training motivation is not a unitary construct, but dependent on a number of variables at the individual level. Interestingly, Colquitt et al. (2000, p.679) state that “training motivation is a function of variables related to one's job and career”. This is a wide definition which seems applicable not only to motivation for formal

training interventions, but also applicable to motivation for development activities. Clearly, it needs to be investigated further whether motivation to learn follows similar mechanisms in development as in training. The literature has not always clearly distinguished between ‘motivation to train’ or ‘motivation to participate’ and ‘motivation to learn’ or to transfer outcomes to the workplace. Nevertheless, there are several constructs which have been demonstrated to influence participants’ training motivation. Of these, need to achieve and self-efficacy are now discussed in turn.

2.5.1 Need to achieve

One motivational construct that has been researched extensively in organizational psychology in general, but perhaps to a lesser extent in the context of learning or training, is need to achieve [nAch]. Researchers have observed over the years that some people appear ambitious whereas others are not so concerned about their achievement(s). This phenomenon prompted David McClelland and colleagues at Harvard University to conduct extensive, mainly laboratory based research. They proposed nAch as a distinct human motive that can be clearly distinguished from other needs (McClelland, 1967): nAch refers to individuals’ motivation to achieve or exceed a recognised external standard which implies two conditions. First, individuals have internalised an external standard which they accept as representing personal achievement or fulfilment. Secondly, individuals strive to achieve this fulfilment. Individuals high in need to achieve are thought to behave differently (if they have control over the outcome) by setting themselves difficult but achievable goals, and by preferring to work on a problem, rather than leaving the outcome to chance.

In the domain of training authors have treated nAch as a stable personality trait (Colquitt, et al., 2000). However, research from other areas has shown that levels of nAch change as a result of psychological interventions. To illustrate, in a selection and assessment context unsuccessful candidates from a promotional assessment centre exhibited a significant drop in nAch immediately after centre participation (Fletcher, 1991). It is tenable that levels of nAch are also liable to the influence of psychological interventions or indeed other psychological variables in the context of training or development research.

One study on training effectiveness demonstrated that levels of nAch interact with other variables as those high in nAch are more motivated to learn (Mathieu, Martineau & Tannenbaum, 1993). Similarly Steers (1975) found a positive correlation

between the amount of feedback received and performance for those high in nAch when researching feedback effects. nAch is relevant for the prediction of training but may also be associated with development outcomes, as it implies a concern for personal achievement rather than for extrinsic rewards (such as praise, promotions or salary increases).

2.5.2 Self-efficacy

In the domain of training and development it is “widely accepted that learning and transfer will occur only when trainees have both the ability (“can do”) and volition (“will do”) to acquire and apply new skills“ (Tannenbaum & Yukl, 1992, p. 414). However, volition is dependent on whether or not people think they can actually learn and develop. Thus, it is pertinent here to outline the relevant construct of self-efficacy [SE]. SE is a dynamic motivational construct (Gist & Mitchell, 1992) and a key tenet of social-cognitive theory which holds that individual behaviours and cognitions and the environment influence each other in a reciprocal and dynamic fashion (Bandura, 1977; Bandura, 1986). SE arises from the gradual acquisition of complex cognitive, social, linguistic or physical skills (Bandura, 1977) and refers to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given levels of attainments” (Bandura, 1998, p. 624). Thus, SE is concerned with the perceived control over one’s actions, rather than the control of any outcomes associated with these actions. In other words, SE is best defined simply as the ‘belief that an individual can do’ a given task.

Considering the measurement of SE in the workplace, general and task- or state-specific SE have been demonstrated to be distinct constructs. General SE refers to an individuals’ overriding belief in their capabilities, whereas specific SE is confined to a particular domain; for example Tannenbaum et al. (1991) differentiated between training SE and physical SE (1991) and Maurer et al. (2003) distinguished between general and development specific SE. Specific SE has been found to be significantly related to performance and to attitudinal constructs such as job satisfaction (Ellis, 1983; Stajkovic & Luthans 1998; Judge & Bono, 2001) and is also linked to coping with difficult career-related tasks (Stumpf, Brief & Hartmann, 1987) and career choice (Lent, Brown & Larkin, 1987). Specifically in the context of training, it has been found that SE is influenced (positively) by participation in a training programme (Tannenbaum et al., 1991) and is positively associated with learning outcomes (Warr & Bunce, 1995).

There also seems to be some support for a possible reverse causal direction. Ford et al. (1992) found that, following attendance of a training course, individuals high in SE were more likely to perform more of the tasks they had been trained for and to perform more complex and difficult tasks.

2.5.3 Perceived learning climate

During the 1990s, researchers turned increasingly to variables that tap into the perceived environment in training research, such as the perceived organizational climate, or managerial and peer support (e.g. Tracey et al., 1995), as factors that facilitates or inhibits transfer of learning into the working environment. Arguably, the perceived learning climate [LC] can be framed as an individual rather than a situational variable as this may vary greatly between individuals. Indeed, it has been argued that it is not the environment itself, but the perception of it, that shapes individual behaviour (Brown & Leigh, 1996). According to the meta-analysis conducted by Colquitt et al. (2000) LC is a key to training motivation, as a positively LC will facilitate the transfer of learning from a training course into the work environment. Measures are administered via self-reports, and usually consist of scales such as managerial, peer and/or organizational support respectively (Tracey et al., 1995; Birdi et al. 1997; Tracey et al., 2001).

Research has shown that LC is an independent predictor of training outcomes. Warr et al. (2001) found that transfer climate independently predicted changes in job behaviour. This study built on earlier work by Tracey et al. (1995) who evaluated the influence of the work environment on the transfer of newly trained supervisory skills in a retail environment. It was established that two self-report survey measures, a measure of transfer of learning and a measure of continuous learning climate, were directly related to post training behaviours. Given that LC is important for training success, it is equally tenable that it will be associated with development outcomes; this will be discussed in more detail in Chapter 3 in the section on participation in development activities. Arguably, transfer of learning from any structured activity into the working environment is as crucial for development outcomes, as it is for training. Research from the training domain (Tannenbaum et al., 1995) has demonstrated clearly that such transfer is more likely to take place in a climate that is perceived to be supportive of learning by the employees.

2.5.4 Demographic characteristics

Demographic characteristics refer to variables which are either innate (such as gender), which individuals have achieved (such as rank) or which have been ascribed to individuals (such as belonging to a particular social spectrum). Although variables such as age and gender have been researched extensively in experimental studies, in training research they have usually only been included as control variables, rather than being the focus of relevant studies. In the following, the available evidence on age, tenure and gender will be reviewed briefly due to the limited evidence, but demographic variables will be returned to again in the section on participation in development activities in Chapter 3.

2.5.4.1 Age

A consistent negative relationship between age and training and learning outcomes has been demonstrated (Gist, Rosen et al., 1988; Warr & Bunce, 1995). Warr et al. (2001) found a positive association between age and the perceived difficulty of training, and also help-seeking as a learning strategy, as well as negative associations between age, reported competence immediately after training and at the time of the follow up, and perceived knowledge immediately after training participation. Tannenbaum et al.'s (1991) findings suggest a negative association between age and reactions to training and fulfilment and a positive association between age and test performance, although the age range of the sample was (average age just under 20 years, SD = 2.43) atypical. A negative relationship between age and learning in general might be due to people's perceptions, the prevailing belief being that employees' ability to learn and benefit from training decreases with age, and hence make them less likely to participate and be offered appropriate training (Sterns & Doverspike, 1978; in Colquitt et al., 2000; Warr, 1994).

2.5.4.2 Tenure

It is appropriate to consider tenure briefly (how long employees have been with an organization) which tends to be highly and positively correlated with age. In a large scale study across organizations Tharenou (2001) established a negative correlation between motivation to learn (both pre- and post- training intervention) as well as perceived barriers to training and development and tenure. Thus, it seems possible that

employees become less interested in training and development as they are more disillusioned with the opportunities open to them.

2.5.4.3 Gender

There are few studies that have considered gender in a training context. Inconsistent effects prevail as some studies have found women to learn less effectively (Feinberg & Halperin 1978) whereas other studies have not (Webster & Martocchio 1995). Tharenou (2001) found gender positively related to motivation to learn, indicating in this instance that women were more motivated. Tannenbaum et al. (1991) found training motivation and fulfilment negatively correlated with gender, indicating that both variables had higher scores for women, whereas men performed better in the overall test following the training intervention.

In addition research has shown that women, in particular if they work part-time, (Gibbins 1994; Olsen & Sexton 1996; Skills: Getting on, DfES 2005) are offered less training than men. The reasons for this have not yet been fully explored, but it has been argued that part-time workers are usually given fewer opportunities compared to their full-time counterparts. This has been explained in terms of human capital theory, as employers perceive a lower return on their investment for certain groups of workers (e.g. Blackwell, 2001). In the UK women also hold on average fewer vocational qualifications than men (Campbell 2001; Skills: Getting on, DfES, 2005), however the causality for this observation has not yet been established. There is one study from a US context, which indicates that women may be discriminated against in two different ways in training. First, women may be given fewer opportunities as they be perceived as less worth of investment, due to inevitable career breaks during maternity leave. Secondly, the actual training content may be more suited to typical male capabilities, thus preventing women from capitalizing on their strengths which would promote effective transfer of learning into the work place (Kram & Ohlott, 1995).

2.5.4.4 Other demographic factors

Of course, it has to be acknowledged that there are other demographic variables that may merit attention. Rank or the level of managerial responsibility may be correlated with other demographic characteristics such as gender and age and associated

with more opportunities to develop and therefore different reactions. In addition, studies to date have almost exclusively concentrated on full-time permanent employees. For parsimony's sake, the studies conducted within the realm of this Thesis will do likewise, although it is acknowledged that part-time and/ or non-permanent workers face barriers to the access to training and to the development of their careers. A recent study (Virtanen & Kivimaeki, 2003) found that contingent employees (those not on a permanent contract) participated less in occupational training and career planning than full-time employees, this difference remained significant even after six years of employment. There is further growing evidence that ethnicity is related to unequal skill development, with employees from ethnic minorities being on average less trained than white UK employees (Skills: Getting on, DfES, 2005; Ogbonna, 1998), but any causality is unclear.

In all, little research on demographic characteristics and training or development has been conducted since the mid-1990s; which is surprising, given that they continue to be associated with manifest skill outcomes.

2.6 Three models of training effectiveness

Having considered individual-level variables in some detail, it is now demonstrated how they are operationalised in three different models of training effectiveness. Noe (1986) put forward one of the first models (depicted in Figure 3) which draws together different trainee attributes and attitudes as predictors of training effectiveness. Summing up the model briefly, motivation to learn is proposed to be moderated by a) self-efficacy and expectancies, b) reactions to feedback given during the training process and c) career and job attitudes, all of which are postulated to be moderated by locus of control. Motivation to learn and reactions to training are further hypothesized to be independent predictors of learning.

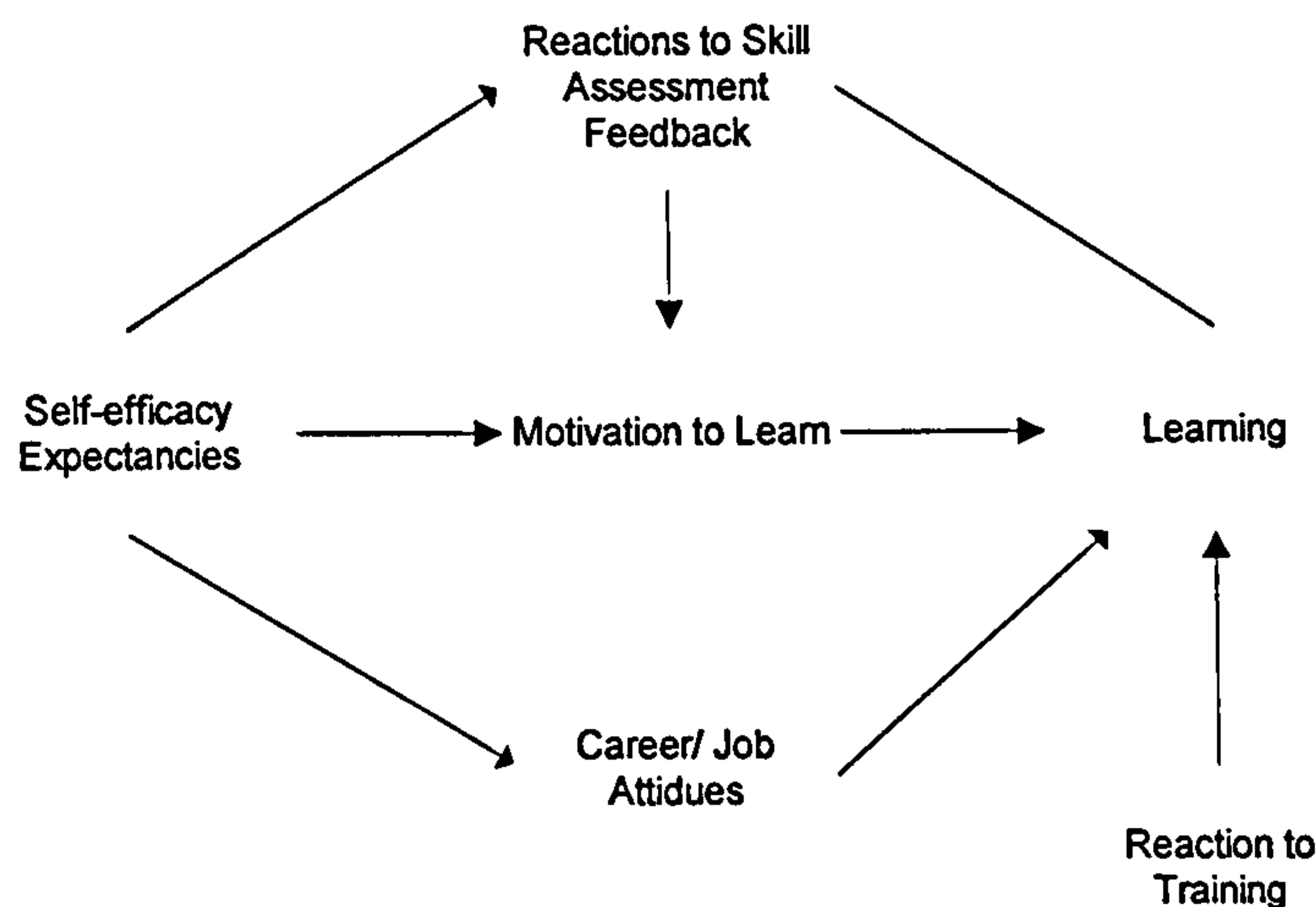


Figure 3: Motivational and Attitudinal Influences on Training Effectiveness

Noe postulates that four conditions (C) are necessary for high motivation to learn. Firstly, employees should feel that the diagnostic process that assessed their strengths and weaknesses (prior to participation in the actual training programme) is accurate (C₁). Secondly, employees need to believe that they can master the programme content (C₂). Thirdly, employees need to value their job and their career (C₃). Lastly, employees need to feel that they are supported by the environment (C₄).

Clearly, the model and in particular the required conditions may have implications for the research of development as well as for the research of training. Several activities, such as appraisal and development centres combine a diagnostic aspect or an assessment of strengths and weaknesses with developmental feedback on this assessment. Clearly then, participants' reactions to this process need to be investigated as, according to this model, they will have a direct influence on learning. Further, people's SE beliefs are purported to moderate people's motivation to learn. There is not yet any coherent theory of individual 'motivation to develop', but it is equally tenable that factors such as SE will influence motivation to develop. Research has also demonstrated that the perception of a facilitative work environment is crucial to the transfer of learning (Tracey et al., 1995; Tracey et al., 2001; Warr et al., 2001), and it requires investigation whether the same holds true for the research of development activities.

Later models of training effectiveness differ from Noe’s (1986) by also considering change in individual differences and demographic characteristics. Tannenbaum et al. (1991) considered the influence of training fulfilment (the extent to which training meets or fulfils trainees’ expectations and desires) on the development of organizational commitment, SE and motivation, collecting data from 666 military trainees, see Figure 4. Measures were taking immediately before training commenced, and immediately after; the arrows marked ‘H1’, ‘H2’, and ‘H3’ show the pathways for the experimental hypotheses.

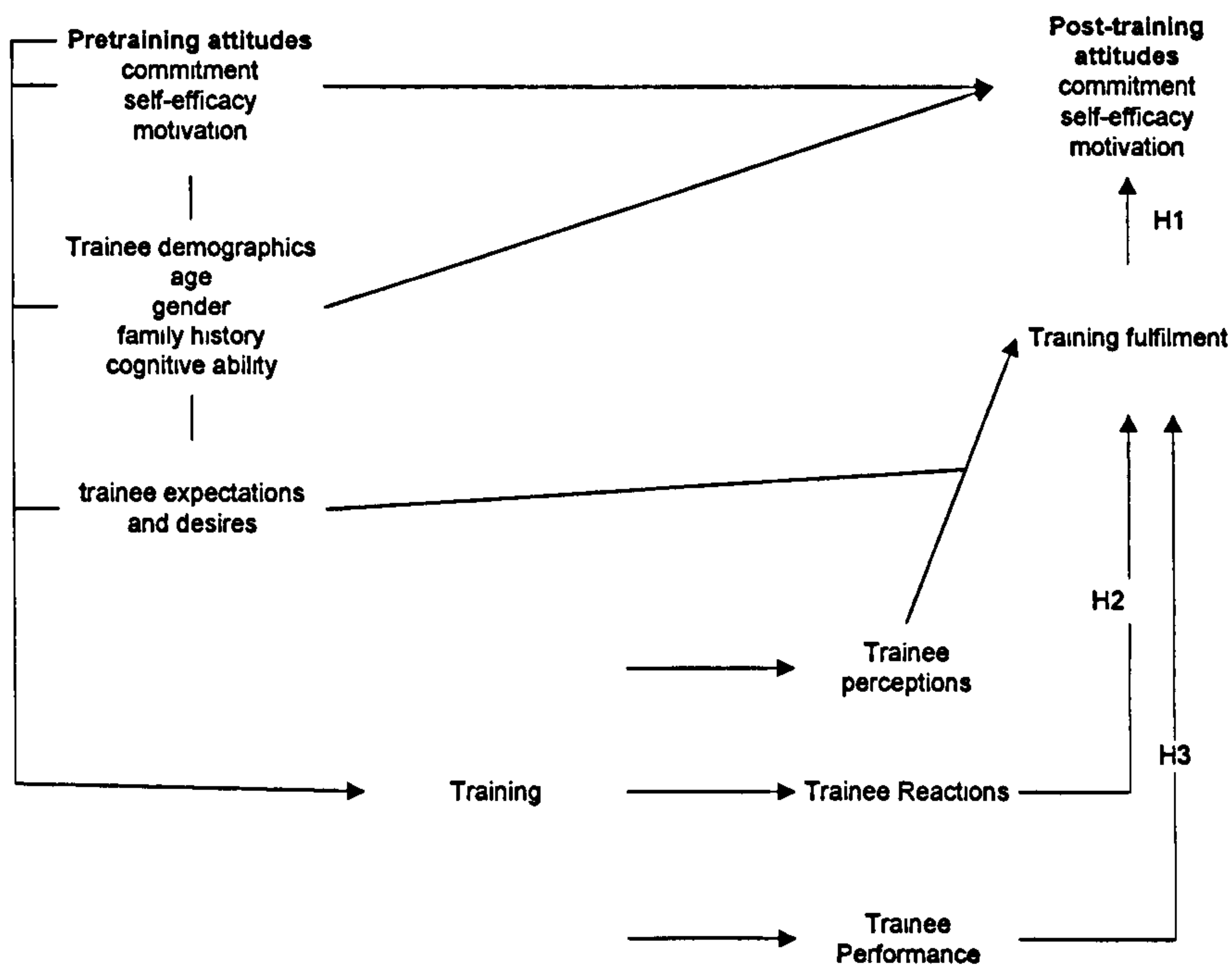


Figure 4: The Effects of Training (adapted from Tannenbaum et al., 1991)

Findings were that training fulfilment (defined here as “the extent to which training met trainees’ expectations and desires”, p. 763), was found to be related positively to post-training organizational commitment, SE (physical and academic) and training motivation, even after pre-training attitudes had been controlled for. Trainee reactions (whether or not trainees liked the training) were positively related to post-training commitment and motivation. Similar patterns of findings should hold true for the impact of developmental (as opposed to specific training) activities, as participation should measurably affect individual differences if learning occurs. Reaction measures are important, as research on particular development activities such as appraisal has

shown that negative attitudes towards a process hinder its effectiveness (Cleveland & Murphy, 1992).

These findings were followed up later by Tracey et al. (2001) using a sample of 420 hotel chain managers as seen in Figure 5. The authors set out to determine factors affecting pre-training SE, such as organizational commitment, as feelings of worth and value to the organization were hypothesized to go hand in hand with positive self-evaluations. In brief, the associations considered were:

- The influence of job involvement, organizational commitment, and work environment on pre-training SE
- The link between pre-training SE and motivation
- The influence of pre-training motivation on two levels of training reactions and learning
- And finally hierarchical relationships among the levels of training reactions and learning.

Significant relationships between the work environment measure and pre-training self efficacy and pre-training motivation measures were established, hence lending support to the notion that the (perceived) environment has an influence on training effectiveness. It was further established that reactions affect learning.

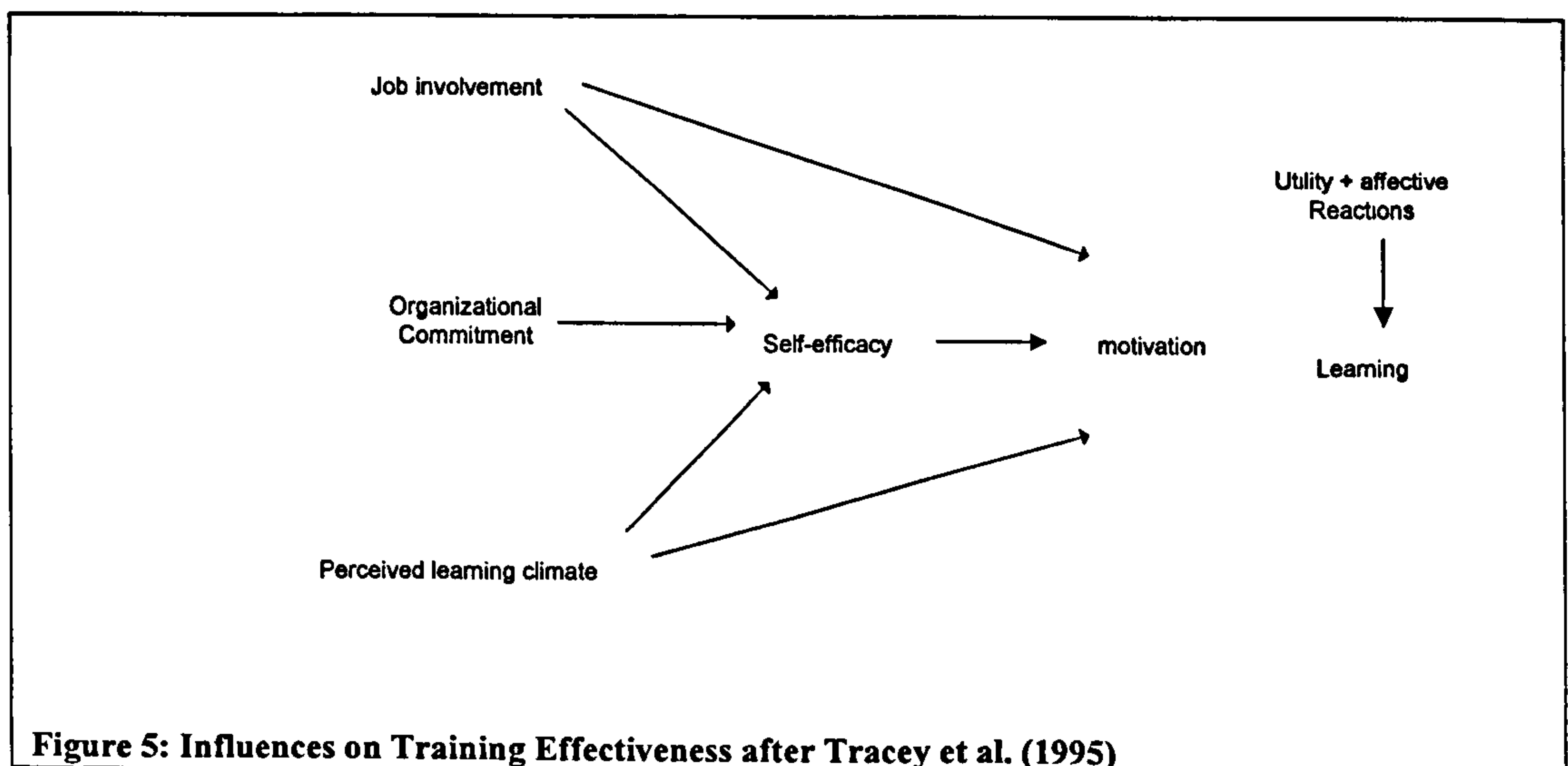


Figure 5: Influences on Training Effectiveness after Tracey et al. (1995)

This study design had some limitations due to its very specific population of young managers with on average a very short tenure from one organization.

Nevertheless the findings emphasized clearly the importance of considering the perceived environment in relation to learning outcomes.

2.7 Summary

The training literature purports that individuals learn in an organised fashion, and that structured training activities can be evaluated in a structured manner. If this is true, then such an approach can potentially be applied to development by applying aspects of the above models in this domain. The above review has shown that the following questions merit consideration:

- The literature shows that SE, nAch and demographic variables affect training outcomes. Does this also hold true for development?
- The training literature further shows that training participation affects such individual differences, in particular SE and motivational characteristics. Does this also hold true for development?
- Reactions have been considered as both an outcome, and a mediating variable. Are reactions a valid outcome or process variable for the investigation of development activities?

The following Chapter will continue by considering the different theoretical orientations for employee development, and the implications for the studies reported in this Thesis.

Chapter 3: Employee development – a review of theory and evidence

3.1 Introduction

Compared to the vast body of research on training, there has been far less research that has concerned itself with employee development (Maurer, Weiss & Barbeite, 2003). This is somewhat surprising, given that development refers purportedly to a broader range of activities than formal training. Development activities can be formal, such as appraisals, 360-degree feedback and development centres, or informal, such as career discussions, mentoring or job shadowing. Like training, development can take place either on or off the job. By and large, development activities have in common that they relate to long-term, future-directed and usually career related aims (Birdi et al., 1997). Usually, it is implied that development is not only about professional growth, but also about growth on a personal level. Irving and Williams (Irving & Williams, 2001) write that “development carries the idea of improving, building upon or of gradual evolution” (p.3) and argue that development is about “learning how to learn”. It has further been emphasized that employees are now responsible for taking charge of their own development and their careers, rather than the employer having sole responsibility for training their workforce (Senge 1990; Hall & Mirvis 1995; Davenport & Prusak 1997).

Development entails learning through self reflection, either by analysing one’s mistakes (Kolb, 1984), or by analysing one’s theories about effectiveness by reflecting what needs to be done different; and why (Argyris & Schön, 1978). It has been argued that, in order for such self-reflection to take place, people have to have insight into their respective strengths and weaknesses and see themselves in the same way as others do. Such ‘self-awareness’ is key to contemporary concepts such as emotional intelligence (Goleman, 1998) and has been demonstrated to predict performance (Atwater & Yammarino, 1992).

3.2 Different types of development activities

Some authors (Maurer & Tarulli, 1994; Birdi et al., 1997; Mumford, 1997; Warr & Birdi, 1998) have distinguished activities by their degree of formality, referring to training and vocational or academic education as formal activities, in contrast to informal activities, such as discussions with the line manager, 'walking the floor' or temporary secondments. Implications for research are that more informal development activities might be more difficult to assess in terms of their impact, as they might not be salient to participants, and might also not be linked to clear objectives. Development activities can be mandatory (such as the participation in organization-wide programmes) or voluntary, such as non-vocational learning (Birdi et al., 1997; Maurer et al., 2003). Arguably, individual differences may impact more on the effects of the latter category as they are entirely self-led; whereas mandatory programmes are implemented and led by the organization, and very often comprise formal training. In other words, some authors conceptualise training as a formal sub-category of development activity. Development activities can take place during work time or during employees' leisure; it has been argued that different individual-level beliefs and values are associated with effort to develop during leisure time or during (paid) work time (Maurer & Tarulli, 1994; Birdi et al., 1997)

Development activities also differ in whether they involve formal ratings and set future directed objectives. To illustrate, appraisals, 360-degree feedback and development centres all involve a formal rating of observed performance on a priori agreed dimensions, but also the setting of objectives for a future specified time period which are recorded in appraisal records, personal development plans or 360-degree feedback reports respectively. Birdi et al. (1997) referred to such activities which involve both an assessment of current performance combined with the setting of objectives for the future as 'career planning activities'. In essence, a number of development activities have a 'hybrid' function (Fletcher, 1997; Carrick & Williams, 1998) as they are firstly a diagnostic tool which assesses respective strengths and weaknesses (on which reward and promotion decisions could be based) and secondly a development tool through the formulation of future-directed development plans and objectives. This latter, future-directed, function is heavily dependent on the purported learning value of feedback and its capacity to impact on workplace behaviour. Not all development activities rely on learning through feedback. Some activities, such as distance or open learning, rely on learning through instruction rather than direct

feedback, and other activities, such as shadowing or ‘walking the floor’ rely on learning through observation. Feedback-based activities differ in the way any feedback is administered. Appraisals rely on one-to-one communication and feedback, either with the immediate line manager or a trained HR professional. 360 - degree feedback involves feedback ratings from different sources and a feedback session with a trained professional. Development centres involve feedback from several sources (from the observers during the actual process and from the line manager when discussing the subsequent development plan) and also involve the observation of candidate performance on multiple exercises.

Another way of distinguishing development activities is by their degree of simulation. To illustrate, developmental appraisals are very close to the actual job as they are based on agreed performance standards and are conducted by the line manager. Multi-source feedback involves feedback from people the recipient works with on a day to day basis. This entails a degree of simulation as an artificial ‘feedback round’ is created which would not naturally occur in day to day organizational life. DCs heavily rely on simulation, as they are based on the learning value of simulated albeit realistic exercises, and involve feedback from trained observers which tend to have no connection to the participants’ immediate working environment.

Activities also differ in the frequency of participation. Development centres should in theory form part of an overarching development programmes (Vloeberghs & Berghman, 2003), but in organizational reality they tend to be one-off discrete events which are rarely followed up. Participation in 360-degree feedback could be a stand-alone one-off event, could be part of another activity (such as development centres) or repeated on a cyclical basis. Appraisals are repeated at regular intervals, usually bi-annually or annually.

Different types of development activities are summarised in Table 5.

Table 5: Characteristics of Different Dimensions for Employee Development Activities (following Maurer &. Tarulli, 1994; Birdi et al, 1997; Warr & Birdi, 1998)

Dimension	Example
Formal to informal	Formal: training and education Informal: 'walking the floor'
Mandatory to voluntary	Mandatory: Participation in appraisal scheme Voluntary: tuition-fee refund scheme
Work-time ('on the job') to non-work time ('off the job')	Work-time: participation in 360-degree feedback Non-work time: non-vocational education
Assessment of current performance and future-focus (Career-related activity)	Career-related: participation in Development centre Non-career related: participation in non-vocational education
Feedback based activity versus learning through observation or instruction	Feedback-based: 360-degree feedback Observation based: shadowing Instruction based: open learning
Degree of similarity: close to the job or simulated	Close to the job: appraisals Simulated: development centres
One-off event or regular occurrence	One-off: development centre Regular activity: appraisals

These similarities and differences have implications for the design of any research. Formal activities lend themselves better to controlled research studies than informal activities, as they are distinct events that relate to clearly defined outcome criteria, whereas informal activities can be difficult to frame in terms of discrete predictors and outcome measures. Appraisals for instance occur regularly and are close to the working environment. Thus, they might not always be salient to participants and difficult to evaluate retrospectively. Therefore, research often relies on cross-sectional designs (Lefkowitz, 2000). On the other end of the spectrum, development centres are discrete events, which stand out both in terms of their format and their one off nature, and hence perhaps better suited to more rigorous evaluation. Moreover, the table above shows that training has been classified as a subcategory of development activities by certain authors, as an activity that is formal and structured. This links back to the observation made in Chapter 1, that training and development cannot always be clearly distinguished, particularly in the context of organization-wide programmes.

3.2.1 Appraisals and development centres in comparison

Three different studies reported in this Thesis will take a quantitative approach to investigating appraisal participation and development centres for the following reasons. Appraisals are one of the most commonly used performance management systems (Fletcher, 1997; Mumford, 1997), but research on their effectiveness with particular reference to development is sparse. Development centres are used by a much smaller number of organizations as they are costly to set up and run. However, due to their one-off discrete nature they are better suited to rigorous evaluation using controlled designs. The available literature on a) appraisals, with particular focus on their application as a development activity, and b) development centres is summarised in the following.

3.2.1.1 Appraisals for development

Appraisal is defined as a system whereby an individual's performance is assigned a performance score, including systematic evaluations via face-to-face feedback, some type of goal setting and a reinforcing reward system (DeNisi, 2000). In other words, appraisal refers to a judgment of past performance, but also aims to facilitate career advancement and personal progress. Both purposes of appraisal should be associated with the availability of incentives such as promotions or pay rises and are dependent on the two-way interaction with the manager (DeNisi, 2000).

Appraisals or reviews are extremely common in the UK, as the large majority of organizations have some form of staff appraisal system in place (Bevan & Thomson, 1992). 'Appraisal' appears to be the more commonly employed term in the UK occupational psychology literature, whereas the term 'review' is used broadly in US literature. In the following, the term 'appraisal' will be used, unless specific research models specify the term 'review'.

Appraisal systems comprise a priori agreed indicators of job-related abilities and occasionally specify targets or objectives. Specific forms are used to record employees' ratings and future targets for the next appraisal period. In some but by no means all organizations appraisals are also linked to pay (Fletcher, 1997). Appraisal interviews or discussions are conducted by the immediate line manager or a designated HR professional on an annual or bi-annual basis. Usually, a formal rating sheet of past performance and a personal development plan are derived from the process, which are

countersigned by both the appraiser and the appraisee and held centrally in the organization's HR department.

The majority of research studies on appraisal to date have tended to focus on performance ratings which is said to be one of the most researched topics in personnel psychology research (Arvey & Murphy, 1998). Much less has been written with regard to the developmental purpose. This is somewhat surprising, given that this aspect has come to the forefront in human resource practice, as organizations concentrate their efforts on attracting and retaining capable staff (Fletcher, 2001). Indeed, it has been argued that it is best to confine appraisal to developmental purposes, as the usefulness of formal performance ratings remains limited due to potential bias and rating errors (Fletcher, 1997). Such future oriented assessment and nurturing of potential is not an easy task, and doubts have been raised as to whether appraisal methods really have long-term impact (Mohrmann & Resnick-West, 1989). Another criticism of research in the domain is that it has largely concentrated on "white-collar administrative and managerial groups" (Fletcher, 2001, p.483).

It has been noted that there is relatively little theoretical basis for the use of appraisal for development other than in terms of objective setting (Fletcher, 2001; Fletcher & Perry, 2001). Different parties involved also tend to have different expectations. Managers tend to be more interested in the assessment of workplace performance, whereas employees want their appraisal to be concerned with developmental and motivational issues (Fletcher, 1997). As a result many schemes appear unsuccessful and have a tendency to contribute to controversy and discontent in organizations (Meyer, 1991). Thus, it is appropriate to examine appraisals in terms of their purpose as well as the social context and individual attitudes of those who are involved in the process (Fletcher, 2001). A small selection of papers and reviews has taken this approach including a study by Nathan, Mohrmann and Milliman (1991). The authors evaluated appraisal reactions, taking a longitudinal and controlled approach, for around 300 supervisor/ subordinate dyads, testing a hypothesized model as illustrated in Figure 6.

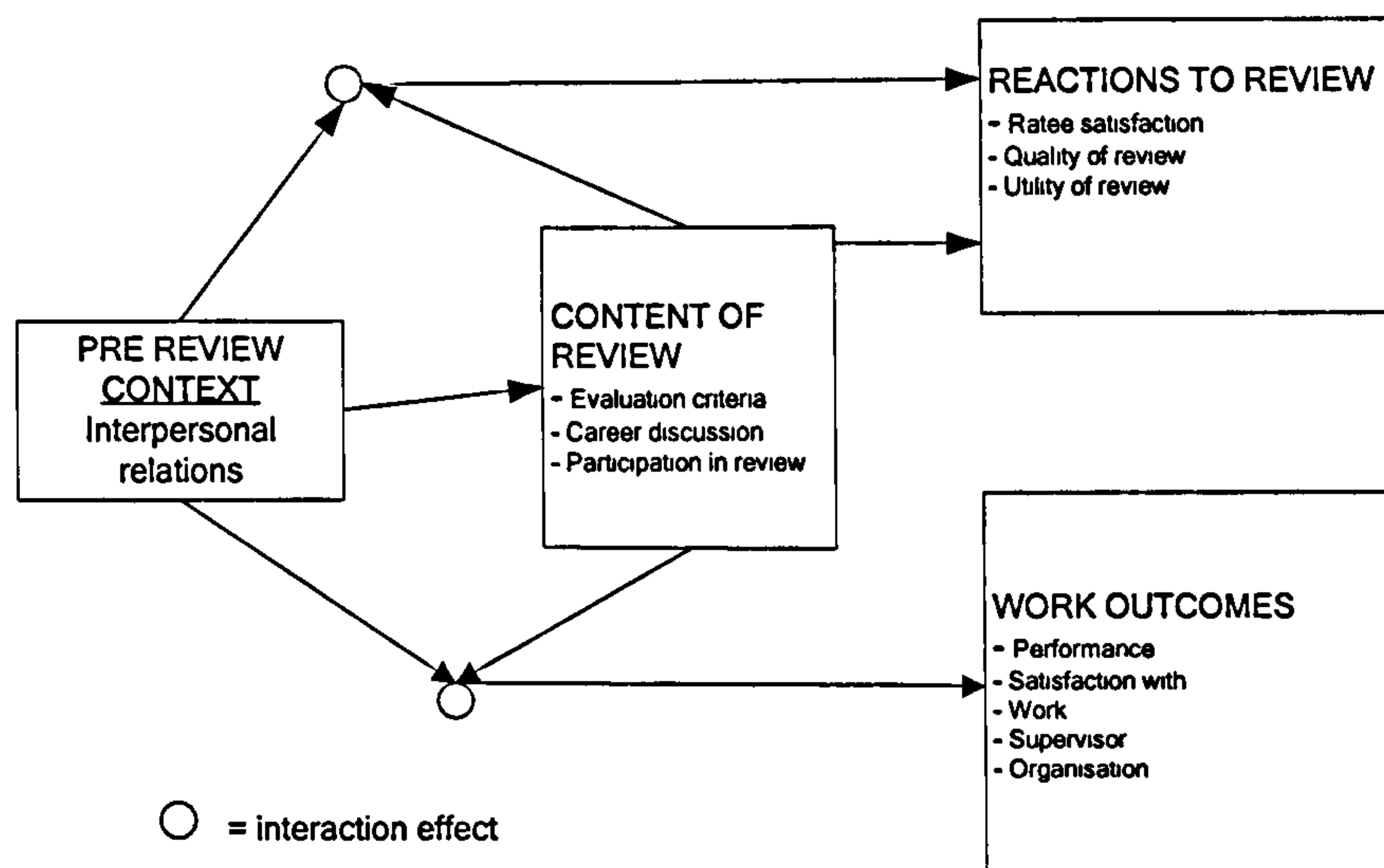


Figure 6: Interpersonal Context of Performance Appraisal

Findings include that the review content was independently related to both review reactions and work outcomes. Other factors examined are whether or not reviews were based on behavioural indicators, whether appraisees had the opportunity to participate and the degree to which careers were mentioned, in other words the presence of a developmental as opposed to performance-rating aspect. No significant interaction effects were established with regard to the perceived quality and utility of the reviews. In addition, the study found small but significant changes in both supervisors' ratings of performance and in participants' attitudinal measures following review procedures, the former often being an elusive finding. In summary, changes both in performance ratings and individual satisfaction were observed here, with review reactions being differentially related to various aspects of the review context.

This model is discussed again in Study A as it provides a partially significant model for the evaluation of appraisal methods. It is argued that the model may be incomplete, as it a) does not account for the influence of individual differences on either reactions or outcomes, and b) does not account for a link between reactions and outcomes, which is contrary to the ample body of research on training reactions as discussed in the previous Chapter.

Greller (1998) examined data from 137 employees on the level of performance during appraisal reviews, found that participation in a review (the intent to which employees engaged in the discussion) was influenced most by which manager

conducted the review (more than by the specific circumstances of the review) and also that reactions to reviews were moderated by subordinate experience and prior feedback. These findings underscore the importance of understanding the context in which reviews occur, as well as the crucial role of the feedback received and the limited degree to which managers may alter their own behaviour in review interviews.

A literature review by Lefkowitz (2000) also acknowledged that research on appraisal should take a broader approach than just studying ratings by concerning itself with the role of 'liking' in the performance rating aspect of appraisal and causal relationships in the supervisor-subordinate relationship. Lefkowitz (2000) highlighted methodological difficulties in the evaluation of appraisal methods, as studies often have to rely on cross-sectional data rather than longitudinal designs and hence run the threat of common method variance. This is compounded by the lack of trust in appraisal in organizations, as appraisals rarely satisfy all stakeholders involved, and the lack of ecological validity of laboratory based studies. Nonetheless, variables such as liking or affect can scarcely be manipulated in an experimental design and are hard to control in a real life setting (Fletcher, 2001). Also, participants in any research might be reluctant to admit that they do not get on with their manager, for fear of recriminations. Thus, it is perhaps most fruitful to confine research to the participants' perspective by considering their reactions, when examining the impact of appraisals on individual development.

In essence then, appraisal appears to be a complex process for assessing, rewarding and developing employees, which cannot be assessed in isolation from its respective organizational setting. Further research must ascertain under which conditions and for whom appraisal is effective for development. Finally, the possible limitations of one-to-one techniques have become evident, not least in terms of stakeholders' adverse reactions, which have prompted many organizations to adopt multi-source feedback techniques which are reviewed in a later part of this Chapter.

3.2.1.2 Development centres

Development Centres, or DC for short, (as they are commonly called in the UK) or Developmental Assessment Centres (as they are commonly called in the US) are another development activity reliant on the supposed value and impact of interpersonal feedback for professional and personal development. A growing number of companies are embracing the technique. A survey of over sixty large UK companies found that development centres were being used by 50 % of the sample population (Vincent &

Oliver, 2000) and similar trends have been observed in the US (Spsychalski, Quinones, Gaugler & Pohley, 1997).

3.2.1.2.1 DC Format

Development centres are derived from assessment centre [AC] methodology, as their learning potential was identified through candidates' positive reactions. Centres for either purpose entail the multi-rater assessment of multiple inputs, typically consisting of a variety of specifically designed job simulation exercises as well as tests and interviews. Ratings are made usually after each exercise and pooled at the end of the centre. Feedback is given either at the end of the centre, or even after each exercise, which is assumed to enhance participants' motivation to participate in further development and training activities. The actual format of the exercises and centre set up is dependent on the purpose. Many DCs are not solely developmental, a 'third generation' development centre (Goodge, 1994), but are also used to as a diagnostic tool for identifying potential within the organization. Thus, they can contain a strong assessment component, which is reflected in the name 'developmental assessment centre' as used across the Atlantic. This widespread 'hybrid' function may largely be due to the high cost of setting up and running development centres, necessitating the full use of the time spent and the information available (Carrick & Williams, 1999).

3.2.1.2.2 DC Construct validity

The lack of construct validity of AC methods has often been highlighted as different assessment centre dimensions are less predictive of future performance than performance on the exercises (Klimoski & Strickland, 1977; Klimowski & Brickner, 1987). In other words, correlations of different performance dimensions within exercises typically tend to be stronger than correlations of performance dimensions across exercises, which is also referred to as the 'exercise effect' (e.g. Woodruffe, 1993; Carrick & Williams, 1998). Nevertheless, overall AC ratings have consistently been shown to have good predictive validity with regards to future workplace performance (Lievens & Klimoski, 2001). However, as the purported value of DCs lies with the learning process through feedback and not with any diagnostic outcome, it is crucial to delineate whether and *why* the method works in order to determine their influence on development outcomes. In other words, the fundamental assumption that DC participation will increase individual motivation to develop one's skills and career and impacts on participants' career and engagement in follow up activities needs to be

critically evaluated (Carrick & Williams, 1998). To date, there is conflicting and sparse evidence with regards to the criterion-related validity of development centres.

3.2.1.2.3 Research findings on DC participation and their impact on work-place behaviour

Francis-Smythe and Smith (1997) explored the immediate psychological impact of development centres with a sample of 32 participants utilising retrospective pre-tests (asking participants about their experiences of the centre in comparison to what they had expected beforehand), elicited through questionnaires and interviews. It was hypothesized that beliefs about the adequacy of the process and its perceived career impact would mediate the effect of the outcome decision on candidates' self-esteem, organizational commitment, job involvement and career planning, and that the perceived quality of the feedback from the observers, the extent of the perceived managerial support and the current career position will moderate the relationship between the outcome decision and self-esteem, organizational commitment, job involvement and career planning. DC ratings were found to have a psychological impact on post centre attitudes and psychological states, mediated by candidates' perception of the centre's career impact. In other words, the perceived usefulness of the centre mediated changes in individual differences. There was also a significant difference in managerial support between outcome groups as participants who have good managerial support were more likely to do well at the DC. It needs to be noted that the study had several shortcomings, such as the small sample and the use of retrospective tests, rather than a pre-/post-intervention design. Therefore the findings need to be replicated using more rigorous research methods, employing pre- and post intervention measures.

Halman and Fletcher (2000) also considered immediate behavioural changes by investigating how self-assessments changed as a result of DC participation; and factors that might inhibit or facilitate such self-assessment, such as gender, self-esteem and trait self-awareness. Results indicated that rating congruence between self- and observer-ratings increased significantly, as did self-esteem; females rated themselves more accurately and younger participants exhibited less congruence. Although the present research is not concerned with self- and other-ratings, these results are informative in so far, as they show that demographic variables may have a bearing on development centre participation. It could be inferred from the results that older DC participants might tend to do better in development centres, as they have a more accurate self-image and better knowledge of their respective strengths and weaknesses.

Engelbrecht and Fischer (1995) considered medium term changes by evaluating the transfer of learning as measured by performance on DC dimensions of developmental assessment centres with a sample of 76 managers at supervisory level, notably employing a control group. A significant difference for six performance dimensions, as well as for the total managerial performance score was established for DC participants in comparison to the control group. Thus, the study established the centre participation has short term impact on employees' workplace behaviour but the long-term impact of development centre participation on subsequent development activities needs to be investigated.

Fleenor (1996) undertook a cross-validation and found a lack of criterion-related validity for a DC, as centre ratings bore no relation to a measure of managerial performance (the averaged ratings from a multi-dimensional 360-degree feedback tool). The construct validity was questioned since an exercise effect was demonstrated using the multi-trait/ multi-method and factor analysis. Hence, this study offers little evidence that managerial weakness as identified by developmental assessment centres actually needs to be improved on the job and it cautioned that therefore developmental feedback might be misleading and detrimental. With regards to individual-psychological variables, results indicated that career motivation (which was defined in terms of desire for career advancement, commitment to the organization, having career goals, acceptance of responsibility for career development) was associated with taking development action and advancement. In contrast more traditionally knowledge- and skill-based development centre dimensions were not found to be predictive. It was also established that developmental recommendations only tended to be followed if rating feedback sent a positive message about future advancement. The implications of the findings are as follows. Firstly, individual 'inputs' into development activities in terms of individuals' motivation need to be considered. It could be expected that only those who are highly motivated to develop anyway will actually engage in development activities and it needs to be established whether development centre participation actually enhances motivation to take one's development forward. Secondly, the importance of placing DCs within a broader facilitative environment and not regarding them as one-off events is enforced.

This study questions at first glance the accuracy of DC ratings when considering their relationship with other measures of workplace performance. In the same vain, a UK study (Naish & Birdi, 2001) found little match between ratings derived from a 360 -

degree feedback process and development centre ratings. However, this lack of association is perhaps not surprising, as either set of ratings is derived from a different context as discussed above. Development centres give candidates the opportunity to display workplace behaviour 'live' and to interact with other candidates, whereas 360-degree feedback ratings are based on what raters remember about past behaviour. Implications for further research are such that rather than concentrating on the rating aspect of development activities and their relationship to measures of performance, it is perhaps most fruitful to consider individual differences and a measure of development outcomes.

Few studies have considered long-term outcomes. An early DC study (Noe & Steffy, 1987) found that positive centre evaluation, internal locus of control, career strategy and attitudes towards the assessment process influence job involvement and career exploration behaviour. Those who received a more favourable recommendation engaged in more systematic activities. Contrarily those who received the overall most negative evaluations were less likely to experiment with managerial skills, suggesting a negative effect following demotivating feedback. In short then, subsequent development activity seemed to be dependent on the content of the feedback message. The authors were aware of study limitations, as outcome measure were limited to self reports, whereas managers' and peers' ratings and personnel records may have provided more objective data. Another study (Jones & Whitmore, 1995) assessed development centre participants' career outcomes with respect to centre ratings, developmental activity and acceptance of feedback, in comparison to a naturally occurring control group. The authors did not establish significant differences in career advancement and promotion. This could be due to limitations of the study criteria, as developmental outcomes may manifest themselves in many different ways, such as lateral career movements, increased or decreased development activity including the uptake of formal or informal training, conferences, academic or professional study, or indeed exit from the organization.

Overall, it seems that the impact of development centre participation is constrained by a number of factors. Although some would argue that there is evidence developmentally oriented assessment centres predict managerial success in terms of job performance and advancement criteria (Klimoski & Strickland, 1977), it could equally be argued that these findings are due to a restriction of range, and also due to a 'crown prince' effect, as those who attend the centre have already been singled out. As Carrick

and Williams (1999) pointed out, one is faced with a possible paradox following development centre implementation and participation. Those who perform well at a DC are likely to stay motivated to drive their own development following positive feedback. In contrast those who do not perform so well might become de-motivated following negative feedback, starting a vicious circle, which is unlikely to meet their (greater) development needs. In summary, DC research evidence is at present equivocal, both in terms of the convergence of ratings or management development and in terms of subsequent career activity.

3.3 Researching development

Having offered a classification of different types of activities and a review of two examples (appraisals and DCs) the literature on theoretical approaches to the research of development will now be reviewed. It has been asserted that practice is generally ahead of research in the domain of employee development (Latham & Seijts, 1998; Thomson, Mabey & Storey, 1998). This is evident, for instance, from the widespread implementation of 360-degree feedback systems way before research on its effects (Fletcher & Baldry, 1999) or from the exponential growth of coaching psychology (Whybrow & Palmer, 2003) where research is still striving to catch up.

3.3.1 Challenges to research

It has to be acknowledged that employee development research is faced with a number of challenges. Organizations change at an accelerating pace; which renders any controlled experimental research and in particular long-term evaluation of any activity very difficult (Fletcher, 1988). For instance, research participants or even managers who commissioned the research might leave an organization half-way through a programme or an intervention and it is not always possible to incorporate control groups to demonstrate treatment effects. In addition, any development programme under investigation may become redundant half-way as organizational targets and strategy are revised.

3.3.1.1 Inference of causality

There appears to be a general problem with conducting experimental research in the field of employee development. This is rooted in the difficulty of dividing up

pervasive, overlapping and on-going activities which are potentially very complex into discrete predictors and outcomes (Warr, 2002). In addition, it is not an easy task to define objective measures. The notion that development should be self-led implies that it is a personal issue and what constitutes successful development for one person might not mean success for another. For instance, some employees might be very happy to stay in their existing job and find satisfaction through the enhancement of their job specific skills, whereas others define successful development as progression up the organizational hierarchy and pay-scale. Thus, prevalent outcomes measures have been general and posited at the organizational level such as the number of training days attended by managers (Thomson et al., 1998), promotions (Jones & Whitmore, 1995) or staff retention (Naish & Birdi, 2001). These methodological difficulties may be the reason why much research has concentrated on formal training, which is better suited to the formulation of discrete outcome criteria.

3.3.1.2 Access to data

There are also practical difficulties which researchers face as information regarding employees' development can be difficult to access. For instance, data from 360-degree feedback or development centres is often solely owned by the candidate as it is not used for any reward or promotion decisions and treated as strictly confidential. Company records with regard to any follow up development activities are often haphazard, as records of development plans are not always updated. Thus, candidates themselves are often the only reliable source of information. Furthermore, organizations might also be reluctant to commission research into development. In economically prosperous times, development initiatives are often pushed through as a 'bonus' to retain and attract staff. Any evaluation is, if at all, done after the implementation, which can be problematic if desired outcome criteria have not been made explicit from the outset. In economically less prosperous times in contrast, development activities are often abandoned or re-prioritised, as managers become too busy keeping the company commercially viable to collaborate in research on what becomes a 'fringe benefit'.

3.3.1.3. The political context

This leads onto the wider issue of the organizational context for in general. Although the choice of development activities should be governed by evidence for their effectiveness, there are also political considerations at play. Many activities have a developmental, as well as an assessment, element and thus comprise some form of rating. However, it is a long recognised problem that ratings may not reflect true

performance but are influenced by what has been termed ‘political’ considerations (e.g. Tziner, 1996). To start, employees may change their behaviour, if activities such as development centres or 360-degree feedback have both a developmental as well as an assessment element, and be more likely to guess and exhibit preferred ways of behaviour (e.g. Carrick & Williams, 1998; Fletcher & Baldry, 1999). It also has to be noted that employees may distort their behaviour in other activities such as appraisals, due to political considerations. In the same vein, raters may also adjust their ratings, as managers may not want to promote good people out of their team (and therefore provide lower ratings), or provide high ratings for underperforming employees in order to cover any potential shortcomings (see Tziner, 1996; and Arvey & Murphy, 1998, for a full discussion of distortion and political considerations in performance ratings).

3.3.1.4. The absence of an overarching theoretical model

As alluded to above, it is difficult to compare the impact of different development activities with each other in terms of their effectiveness as there is no overarching model, such as the models prevalent in training. A coherent model applied to employee development is however prerequisite to the formulation of concrete hypotheses. As early as 1998 (p. 269), Latham and Sejts urged researchers in the field of management development that “it is time for organizational psychologists to move from exhortations of the effectiveness of management development to determining if, how, and under what conditions, management development truly develops managers in enduring ways” by conducting thorough studies in the field, rather than just relying on the observation of (possible) behavioural changes. However, this call for the development and application of a coherent model has remained largely unanswered, with few exceptions such as the rigorous studies that have considered ratings in 360-degree feedback.

3.3.2 Models of development

Several models of development are outlined in the following to demonstrate the diversity of orientations in the field. Like training, development has been researched both from an organizational and individual perspective. Organization-level research has attempted to determine whether and how external factors (such as industry sector, Human Resource Management commitment to development as well as policy and strategy) influence development outcomes. The individual level perspective has concentrated on diverse angles compared to the training literature. In contrast to

training, which relies on learning through instruction, many development activities (such as multi-source feedback) are reliant on the assumption that a) other people can observe and rate others' behaviour and b) feedback will give people greater insight into their strengths and weaknesses and hence change their behaviour. Thus, research in the area has been informed by the literature on feedback effects and literature on (performance) ratings, as well as by the literature on competency-based frameworks, which underpin many feedback-based activities such as bespoke 360-degree feedback systems. There is also a distinct, albeit small, body of research on participation in development activities which serves to determine which individual and situational variables influence employees' choices. No parallel strand of research exists for training, which is perhaps due to the fact that participation can be mandatory or required, rather than entirely voluntary.

3.3.2.1 Management development from the organizational perspective

One stream of research has concentrated on management development by researching factors which influence the advancement of employees in upper ranks in organizations (Latham & Seijts, 1998). The development of excellent leadership is often seen as crucial to organizational effectiveness and survival (Bennis 1989; Bennis 1993), and its failure deemed more costly than ineffective development lower down the ranks. Several models for management development exist, primarily at the organizational level. Burgoyne's (1988) framework is referred to widely, which postulates six stages of management development 'maturity', as summarized in Table 6.

Table 6: Levels of Maturity of Organizational Management Development after Burgoyne (1988)

Level 1: No systematic management development	No systematic or deliberate management development in structures or developmental sense, total reliance on natural, laissez-faire un-contrived processes of management development.
Level 2: Isolated tactical management development	There are isolated and ad hoc tactical management development activities, of either structural or developmental kinds, or both, in response to local problems, crises or sporadically identified general problems.
Level 3: Integrated and co-ordinated structural and development practice	The specific management development tactics that impinge directly on the individual manager, of career structure management, and of assisting learning, are integrated and coordinated.
Level 4: A management development strategy to implement corporate policy	A management development strategy plays its part in implementing corporate policies through managerial human resource planning, and providing a strategic framework and direction for the tactics of career structure management and of learning, education and training.
Level 5: Management development strategy input into corporate policy formation	Management development processes feed information into corporate policy decision-making processes on the organization's managerial assets, strengths, weaknesses and potential, and contribute to the forecasting and analysis of the manageability of proposed projects, ventures, changes.
Level 6: Strategic development of the management of corporate policy	Management Development processes enhance the nature and quality of corporate policy-forming processes, which they also inform and help implement.

Burgoyne's framework is primarily concerned with organizational-level factors and decision making, arguing that the more management development is aligned with corporate policy and strategy, the better it will be. According to Burgoyne, effective management development takes place from level three onwards, with levels five and six representing corporate ideals that are rarely achieved in reality.

Other models have concentrated more on actual development processes, rather than corporate policy. For instance, one UK model (Doyle, 1995), which has clearly influenced later research into management development (Thomson et al., 1998), attempts to demonstrate the link between inputs (both corporate resources and existing skills), transforming (which refers to the respective activity or activities) and a range of

outputs (both at the individual and organizational level), as seen in Figure 7. Here, training is posited as one of the ‘transforming’ activities that lead to management development, rather than as a separate activity in its own right. This is in contrast to Warr (2002) who clearly demarcates the differences between the two activities, but in line with Birdi et al. (1997) who classify training as a formal type of development activity. Visually, the model appears very similar to established models of the training cycle, but does not allow the formation of specific predictions. It has little to say about how different types of activities will transform managers and the organization and how individual differences might influence the effectiveness of management development processes.

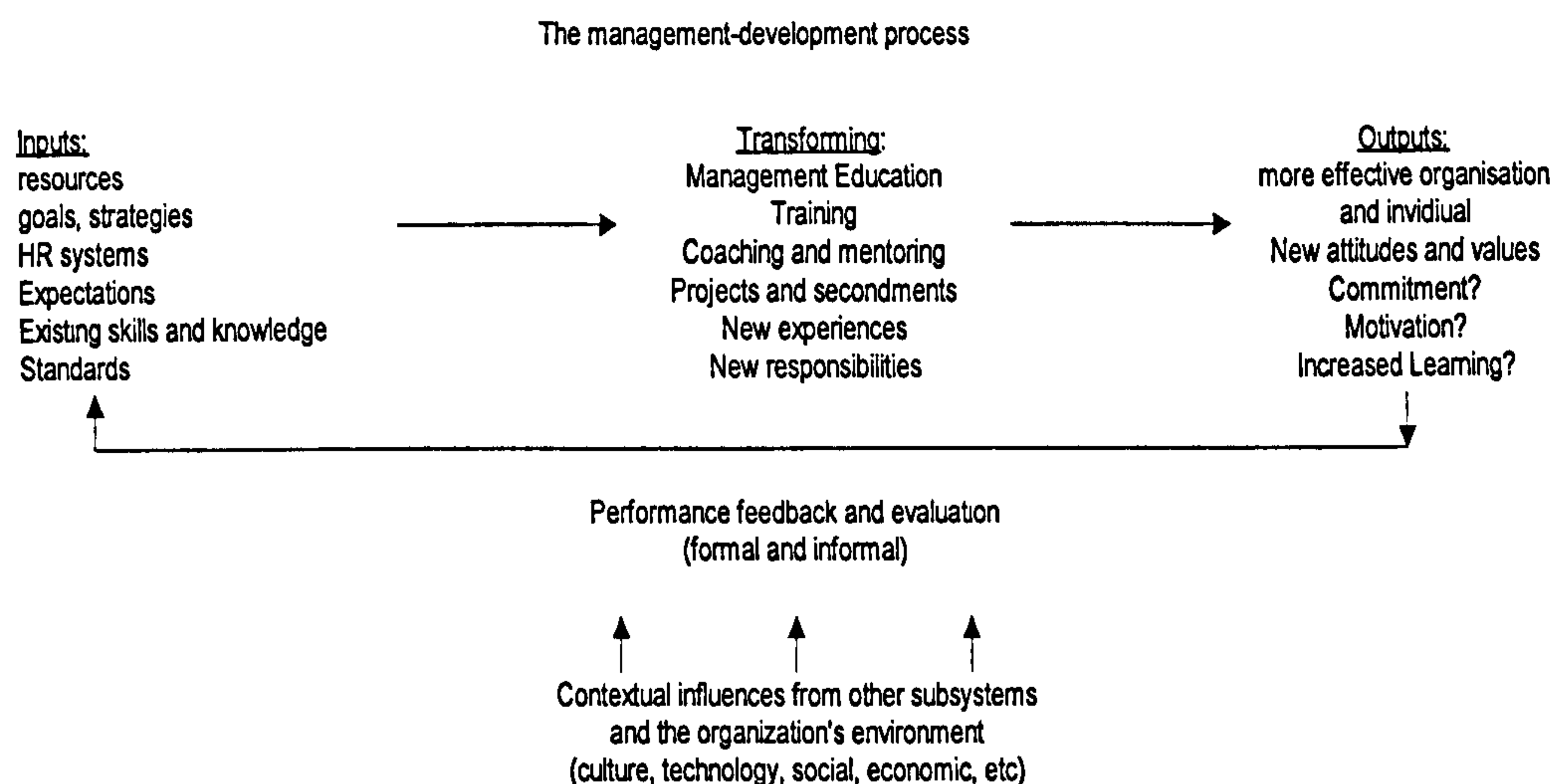


Figure 7: The Management Development Process (Doyle, 1995)

Later models have built on this and Doyle’s revised model (which took a systems rather than a linear perspective) by investigating the factors influencing management development in the UK from an organizational perspective. Thomson et al. (1998) evaluated the external context (e.g. industry sector) and the internal context (e.g. strategic commitment to human resource development) as predictors of management outputs (e.g. amount of training managers’ engage in) and outcomes (e.g. managers’ qualitative evaluation) by taking a human-resource-management focused approach. Broadly speaking, findings indicate that internal (‘within the organization’) factors are more important than external factors (‘outside the organization’) in predicting management development.

3.3.2.2 Management development from the individual perspective

Rather than taking an organizational perspective, management development has also been researched at the individual level by drawing together research on competence and feedback effects to consider the effects of competence ratings (from one or multiple sources) on workplace behaviour. Many different definitions exist for the concept of competence. Here, competence is primarily referred to in Boyatzis' terminology (1982) who considers competence as skills, knowledge, attitudes or qualifications at the individual level. Such competence results in observable behaviours which can be measured and classified through techniques such as job analysis or card sorting tasks and subsequently used as the backbone for human resource strategies and specific development activities such as 360-degree feedback programmes. 360-degree or multi source feedback is based on the premises that a) competencies are an accurate reflection of people's behaviour and b) that that learning from discrepant feedback should result in behavioural changes which manifest in higher and more congruent ratings (Fletcher & Baldry, 1999). The level of agreement between different sources is purported to contain important diagnostic information, and several models for the evaluation of feedback, self-evaluations and performance exist.

Thus, 360-degree feedback programmes have offered a unique opportunity for comparing the effects of feedback from different sources on changes in ratings. Evidence suggests that those individuals who are more self aware (have more congruent self and other ratings) are better performers (e.g. Bass & Yammarino, 1991; Yammarino & Atwater, 1993) and that self awareness is associated with individual differences such as cognitive reasoning skills (Fletcher & Baldry, 2000). It has also been demonstrated that feedback from different sources is attended to differently depending on factors such as the credibility and rank of the feedback source (Bailey & Fletcher, 2002; Gregura, Ford & Brutus, 2003). This strand of research is arguably more accurate and more tightly controlled than generic studies investigating trends in management development. Notably, more contemporary studies have employed a longitudinal design allowing the tracing of rating effects over time (Bailey & Fletcher, 2002; Maurer et al., 2002). As feedback is crucial to participants' learning from all three development activities, it is pertinent to continue this Chapter with a broad overview of the literature on feedback effects, before moving on to specific research on 360-degree feedback.

3.3.2.2.1 Feedback effects

The basic assumption for any activity relying on feedback is that feedback has the capacity to positively impact on workplace behaviour. However, research evidence with regard to this claim is equivocal. Early research on feedback interventions emphasises the sign of the feedback, in other words whether the content is predominantly positive or negative. Positive feedback has been demonstrated to be recalled more accurately (Snyder & Cowles, 1979) and to increase motivation (Deci, 1972). Negative feedback is associated with negative outcomes such as decreased organizational commitment (Pearce & Porter, 1986) but also with positive outcomes, as criticism conveyed in appraisals can have positive results (Fletcher & Williams, 1996).

The value of feedback as a motivating tool regardless of its sign had been observed in an earlier review, which put forward a “process-oriented concern for how feedback affects the behaviour of individuals in organizations” (Ilgen et al., 1979, p. 350). A model was proposed to facilitate the study of feedback, which integrated the feedback stimulus, the feedback source, individual differences, feedback acceptance, goal setting, situational variables and individual differences characteristics of the recipient.

Such individual differences merit further attention. Steers (1975) found a positive correlation between the amount of feedback received (given by another individual) and performance, for those individuals high in need for achievement. In other words, those who believe in striving for improvement actually performed better if they had a lot of feedback. Shrauger and Rosenberg (1970) found that subjects high in self-esteem raised self-competence evaluations more after success and less after failure than those low in self-esteem. In other words, individuals high in self-esteem seem to have a more positive self-image, regardless of the feedback they receive. Thus, individual differences appear to moderate the impact of feedback.

The feedback source and content interact. To illustrate, a field study surveying employees of a manufacturing organization demonstrated that negative expressions from supervisors and organizational sources were associated with poor performance, whereas positive expressions were associated with higher performance (Becker & Klimoski, 1989). Neither feedback from the self nor from peers was found to have any effect. This is consistent with more recent findings that demonstrated peer feedback as a poor predictor of development as measured by self- and other ratings (Bailey & Fletcher, 2002).

Ilgen et al.'s review (1979) further draws the attention to the issue of measurement, as feedback is not a unitary stimulus but is rather subjectively perceived by its recipient. In other words, the same feedback message might mean completely different things to different people, and have a different result every time. This is not accounted for in most motivational theories, although Ilgen et al. cite Locke's (1967, 1968) seminal work on goal setting as one exception. For instance, the finding that praise may not always be effective in eliciting positive behavioural changes (Balcazar, Hopkins & Suarez, 1985) might be explicable in the light of goal setting theory. This postulates that feedback itself is only data information, hence any measurable impact is dependent on the context of the feedback. The setting of specific as well as difficult goals is purported to lead to greater improvements in performance (Locke & Latham, 1990) as these are understood easily and thus impact on individuals' performance and workplace attitudes. In other words, feedback that is not explained well and does not relate to future-orientated targets might not have lasting impact, even if it is positive.

Testing this assertion in practice, Renn and Fedor (2001) examined the relationships between feedback, self-efficacy and goal setting with work performance using a sample of 136 sales and customer-service representatives. As hypothesized, feedback seeking and self efficacy related positively to two dimensions of work performance (work quantity and work quality) through feedback-based goals. The findings underscore the importance of specific work-related improvement goals when investigating the relationship between feedback and work performance, but also the importance of individual differences such as self-efficacy as predictors of workplace performance.

A seminal meta-analysis and review by Kluger and DeNisi (1996) serves to draw together a large number of studies by evaluating general effects of feedback interventions on performance by comparing 607 effect sizes and 23,663 observations. The paper is cited widely throughout the literature on appraisals and multi-source feedback methods, although by no means all of the included studies had been conducted in an occupational psychology context, and few were from a field setting. Findings include that feedback on average improves performance ($d = .41$) but one third of studies points to deleterious effects. One of the authors' main conclusions is that feedback desirability is often confused with feedback usefulness. In other words, people like to receive comments on their actions but will not necessarily act on these.

Following on from their findings, Kluger and DeNisi (1996) outline a feedback intervention theory (FIT) which draws together hypothetical relationships between a number of variables, such as individual differences pertaining to the feedback giver and feedback recipient, as well as factors relating to the feedback message itself and their mediating influence on the impact of a feedback intervention. The full model is highly complex and hence perhaps difficult to validate in a field setting, where a variety of confounding variables might interfere. Nevertheless, several aspects of the FIT model are testable, such as how and whether changes in individuals' motivation following a feedback intervention predict individual performance.

Testing the influence of feedback on motivation, one study considered self-ratings of career motivation, public self-consciousness and feelings of empowerment in relation to others' ratings of workplace performance (London, Larsen & Nellen, 1999). The findings show that those employees who perceive receiving more positive reinforcement and non-threatening feedback and report high levels of empowerment get higher performance ratings, although career motivation was not found to be a significant predictor of performance (in terms of achieving workplace related career goals).

3.3.2.2.2 360-degree feedback

Multi-source-multi-rater (MSMR) or 360-degree feedback entails the comparison of ratings from the supervisor, subordinates, peers and also occasionally internal and external customers along certain behavioural dimensions or competencies, often focusing on interpersonal aspects. These ratings are then relayed to the feedback recipient and are usually compared to a self-assessment. Multi-source feedback is purported to provide more balanced and less biased ratings than one-to-one techniques and to hold greater intrinsic learning value through the discrepancy of feedback from different sources (Fletcher & Baldry, 1999).

360-degree feedback tools can either be bought 'off the shelf' (akin to a psychometric test) or are developed as a bespoke tool that is usually based on the organization's competency based framework. Practice seems to have been ahead of research in this context, as the use of 360-degree feedback systems has mushroomed during the last decade. As early as 1995, surveys indicated that nearly all Fortune 500 companies in the US were using 360-degree feedback for development and increasingly for also for reward and promotion decisions (London & Smither, 1995). A similar trend

has been observed in the UK (Oliver & Vincent, 2000), where this technique has traditionally been confined to developmental purposes. In fact several writers have argued that 360-degree systems should never be used for the allocation of promotional or financial rewards (e.g. Fletcher & Baldry, 1999) as this may introduce unacceptable bias.

Considering the research evidence available since the late 1990s, it cannot be assumed that merely implementing multi-source feedback is a solution to problems associated with more traditional methods. It has been demonstrated that 360-degree feedback instruments need to be scrutinised and tested just like any other psychometric tool (Fletcher, Baldry & Cunningham-Snell, 1998), otherwise they may lack reliability and validity. General issues revolving around the sensible administration of 360 - degree feedback have also been stressed, such as the importance of subsequent evaluation and follow ups via personal development plans [PDP] and other tools that enable employees to transfer learning to the workplace (Wimer & Nowack, 1998).

Several models for the research of multi-source feedback exist. One of the most widely tested models (London & Smither, 1995) serves to bring variables such as the accomplishment of workplace related goals, self-evaluations (in contrast to ratings from other sources) and work-place related performance outcomes. The model proposed a number of concrete hypotheses, such as that ratings from different sources would have different effects, that the magnitude of the discrepancy between self-and other ratings will affect workplace behaviour and that the specificity of performance standards would affect ratees' expectations about future workplace behaviour, and that changes in self-awareness would be positive predictors of workplace behaviour. Thus, studies in the field have both considered the development of competence in terms of the divergence and convergence of self- and other ratings, as well as the development activities managers engage in following the feedback process.

Hazucha et al. (1993) found that congruence between self and other ratings increased following participation in 360-degree feedback, and that this was related to career advancement. The results demonstrated that those who perceived more support from the supervisors put more effort into their development and engaged in more development activities. Also, different types of development activity (such as receiving coaching or feedback) were related differently to skill development as measured by the 360-degree feedback instrument. This particular study is widely cited in the organizational psychology literature as one of the few that considers participation in a

development activity as well as follow up activities despite the small sample ($n = 48$) for the complex analyses employed.

Another longitudinal study (Maurer et al., 2002) found few relationships between 360-degree feedback ratings and subsequent involvement in development activities and employee attitudes toward the feedback system, when a sample of 150 managers was followed up ten months after initial ratings had been collated. Significant findings included two predictors of positive system ratings; which were a) a work context, which includes people who are supportive of skill development, and b) beliefs held by feedback recipients that it is possible for people to improve their skills and themselves. Implications of the findings are twofold. Firstly, the findings underline that the mere implementation of 360-degree feedback is not enough and that it only becomes of value as part of an overall development programme. Secondly, the findings underline that system ratings were related to participants' belief that they could improve themselves. This might be interpreted as nothing other than a measure of self-efficacy with regard to workplace performance and it needs to be tested whether participation in multi-source feedback (or indeed another development activity) is associated with development as measured by follow up development activities.

Bailey and Fletcher (2002) studied the long-term impact of 360-degree feedback on management competency ratings for 104 target managers. Significant increases in managers' competence were perceived by both the managers' themselves and by their subordinates, their development needs were seen to reduce and self- and co-workers ratings appeared to become more congruent. Peer feedback at the time of the baseline measure was not predictive of self-assessments at the time of the follow up. This seems to indicate that ratees were not adjusting their behaviour as a result of co-workers ratings (especially given that more changes occurred in co-workers' ratings than in self-assessments), thus casting some doubt on the usefulness of peer ratings. The study design is exceptional in so far, as all target managers were followed up over a two-year period. It is rare in occupational settings to achieve a complete data set over an extended time period; thus the participant number achieved provided comprehensive evidence for behavioural changes following participation in 360-degree feedback. Nevertheless, it should be cautioned that the observed behavioural changes could be an artefact based on regression to the mean (where ratings become more congruent as the treatment is administered for the second time, regardless of observed work behaviours).

As evident from previously discussed models on appraisal methods and feedback interventions, it is necessary to consider the actual content of feedback received as well as the feedback source when researching multi-source feedback systems. It has been postulated that negative and unexpected multi-source feedback could have detrimental consequences (Antonioni, 1996), as such feedback may be difficult to accept and candidates' reactions may range from confusion to defensiveness. In contrast, positive feedback (whether expected or unexpected) might not prompt employees to change their workplace behaviour, even if it has come from a number of sources. One way of evaluating the impact of feedback is by asking candidates about their reaction. Few studies have considered the user perspective. Mabey (2001) demonstrated that managers who had experienced multi-rater feedback appraised any development undertaken more favourably in comparison to a naturally existing control group, by evaluating pre-existing data from an employee attitude survey and conducting qualitative analyses. However, it needs to be ascertained whether such reactions to the utility of the process have validity for predicting long-term development outcomes.

3.3.2.2.3 Participation in development activities

A further stream of research has considered participation in training and development activities and, in particular, individual characteristics as predictors of participation (Maurer & Tarulli, 1994; Birdi et al., 1997; Maurer et al., 2002) to explain why certain groups of people participate in particular types of activities. Findings from this domain have indicated that, regardless of how well designed a training and development programme may be, individual differences, such as motivation, self efficacy and the perceived support from the organization impact on the degree to which employees engage in development activities. Maurer and Tarulli (1994) postulated that SE and LC as well as demographic variables need to be taken into consideration for the success of development activities. The authors conducted a post-hoc evaluation of an organization's development programme. They found that development-specific SE predicted development outcomes (participation in in-house and external development activities) and that those aspects of the perceived work environment, such as supervisor support, were related differently to different intentions to participate in development activities. Older workers placed more emphasis on social support and having access to a career counsellor. Thus, there might be a gulf in HR practice between what older

workers expect (more support) and what they are actually being offered, if the prevailing belief is that it is not worth training or developing an older workforce.

Linking to the latter finding, Birdi et al. (1997) found a negative relationship between age and participation in three types of learning and development activities as well as learning motivation and learning confidence, and for tenure a significant negative relationship with career planning. These findings indicate that older people in general partake less in development but also that employees who have been with an organization for longer have a lessened interest or fewer opportunities to develop. In the same study, gender was negatively related to job grade, which in turn was significantly associated with career planning activities, learning motivation and learning confidence, as well as managerial support. Such gender effects hint to the possibility of a glass ceiling, or to the fact that women are more likely to work part-time, and thus are less exposed to development and promotion opportunities.

A specific model for evaluating participation in development activities has been put forward recently in the US (Maurer et al., 2002), taking a three-dimensional social exchange perspective based on Blau (1964). It is postulated that employees' engagement in development activities (during work time or in their own time) is mediated by beliefs about three perceived beneficiaries; a) the individual, b) the supervisor, and c) the organization. For instance, the model implies that employees are more likely to engage in development activities in their own time if they think it will benefit their own interests. As the model takes an expectancy – instrumentality - valence perspective (Vroom, 1964), it makes four assumptions. First, individuals calculate their decision making process carefully in terms of the ratio of inputs and perceived outcomes. Secondly, it assumes that enough information is available to make these decisions; thirdly, that respective development choices are possible within the respective organizational setting and lastly that the three perceived beneficiaries are always distinct entities. It remains to be established whether individuals in reality act in such a calculating manner, as decisions might often be much more haphazard. Moreover, the model considers feedback solely in terms of the characteristics of the source (credibility) and not in terms of the actual feedback activity and individuals' reactions to it.

3.4 Summary

In summary, development activities can be classified in different ways. They can be distinguished by whether they entail learning through feedback and the presence of a rating aspect, the feedback source, the frequency of occurrence and the degree of simulation. Relatively few studies have concentrated on the relationship between participation in a development activity and subsequent measures of further workplace development, in terms of changes to people's careers, participation in further learning or external ratings of improvements in workplace performance. Generally, the jury is still out as to whether such development activities have a true impact, as findings have been mixed, for instance with regard to one-to-one appraisal (e.g. Nathan et al., 1991) and with regard to development centres (Jones & Whitmore, 1995; Fleenor, 1996).

Inexorably, this is linked to the issue of appropriate measures (Baldwin and Padgett 1993). Traditionally, development or management development outcomes have been measured either through patterns of promotion or the amount of training. Variables at the individual-psychological level have perhaps been neglected. As the usefulness of actual ratings in appraisals or DCs seems limited, it would appear that the usefulness of these techniques is perhaps best confined to participants' learning through feedback. This is dependent on two conditions. First, the respective development activity must be well designed and well received by the participants. Research has shown that those who consider training useful also benefit more from it (Alliger al., 1997) and that perceived usefulness mediates development centre outcomes (Francis Smythe & Fischer, 1997). It is possible that the same could hold for other development activities. Secondly, the value of these techniques appears to depend on the characteristics that the individual brings to the activity (Steers, 1975; London et al., 1999; Renn & Fedor, 2000). Since sophisticated methodology has been applied in training research, future research on development could potentially benefit from application of such knowledge for three reasons.

First, models of training effectiveness (e.g. Colquitt et al., 2001; Tannenbaum et al., 1991) consider individual differences. This is important, as the success of even a well-designed activity depends on the characteristics that participants bring to any programme, such as individual beliefs that participants can benefit from it and whether they are motivated to transfer learning to their day to day work. To some extent, this has

been recognised in the participation literature, which employs very similar measures to the effectiveness literature, but methodologically takes a correlational, rather than an experimental approach.

Secondly, these models consider participants' reactions which is also valuable as in particular the perceived utility of training interventions has been established as a reliable indicator of subsequent behaviour changes (Alliger et al., 1997). Thirdly, these models consider outcomes at different levels taking into account changes in individual differences, such as beliefs about the self or attitudes toward the organization, as well as performance criteria or satisfaction with the actual programme. Clearly, these models have explicitly referred to formal training and for this reason have to be adapted to the evaluation of development activities. Research from the organizational perspective has highlighted the necessity to consider both development 'outputs', such as the number of training days attended, and development 'outcomes', such as any qualitative evaluation or 'reactions' (Thomson et al., 1998; Mabey & Thomson, 2000).

In summary, there is ample evidence that training success is predicted by a number of variables such as people's belief in their capabilities, their motivation to learn and benefit from the training course, workplace attitudes and demographic characteristics (Colquitt et al., 2000). It is reasonable to assume that individual differences will also affect development outcomes for the following reason. Both training and development rely on the assumption that individuals learn and therefore change their behaviour and attitudes following participation. In order to achieve this effect it is a prerequisite that individuals are actually motivated to learn.

The previous Chapter reviewed the training literature and concluded with a number of research questions for the investigation of development. However, this presupposes that development can actually be investigated in the same way as training. The above review shows that we still have a poor understanding of development outcomes, and that there are methodological difficulties associated with research in the domain. For these reasons, there is still little evidence with regard to the predictive validity of various development activities. One root cause for this may be the lack of what could be termed 'bottom up' research. Although researchers have distinguished training and development (see Chapter 2) and a wealth of studies exist that have informed effective training implementation, there is a need to draw up cohesive research frameworks for development. Given that practice is often ahead of research, a

qualitative approach with people in organizations may be needed to supplement the aforementioned quantitative approaches, which is addressed in Study D.

Thus, this Chapter adds a different perspective and the following questions:

- Can we quantify development outcomes?
- If so, are they associated with individual differences?
- What are the potential limitations of investigating development with quantitative methods?
- How do managers and employees define development, and what are effective activities?

Chapter 4: Self-efficacy, need for achievement and demographic characteristics and their association with development outcomes

4.1 Introduction and study hypotheses

As discussed in Chapters 1 and 3, there has been little research on development activities which serves to determine whether, and if so, how, participation has an impact on development outcomes, and whether any such effects depend on individual differences. Models of training effectiveness (e.g. Noe, 1986; Tannenbaum et al., 1991; Kraiger et al., 1993; Tracey et al., 1995; Colquitt et al., 2000) which are based on training evaluation (Kirkpatrick, 1959; Warr & Bunce, 1995) can potentially be used as a guidance tool for the investigation of employee development. Such models vary in the choice of their respective predictors and the hypothesized associations (see Chapter 2 for a full discussion of Noe's [1986], Tannenbaum et al.'s [1991] and Tracey et al.'s [1995] model). In addition they hold the common advantage of combining individual differences (such as motivational characteristics and self-efficacy) with reactions to the actual process (such as the perceived enjoyment or the perceived utility) to predict outcomes on different levels (such as immediate learning, behaviour in the workplace and attitudinal changes).

This study [Study A] applied such variables to the investigation of participation in appraisal and related development activities. As discussed in Chapter 3, Nathan et al.'s (1991) model of the social context of appraisal predicts that the pre-review context (e.g. the relationship between the manager and subordinate) and the content of the review (e.g. how much career related matters are discussed) interact to predict a) reactions to the review and b) work outcomes (e.g. satisfaction with organization) separately. If models of training effectiveness and training evaluation hold true for the investigation of development, this model may need to be expanded as it does not consider the possible influence of individual differences.

Two such differences were considered in Study A, following on from the review of individual differences in training in Chapter 2. Development specific self-efficacy [DSE] does not yet appear to have been tested empirically in relation to participation in appraisal and subsequent development activities and was therefore included in the current study. As people's belief in their capacity to benefit from any activity (such as

appraisal) appears a necessary prerequisite for engagement in follow up activities, it was predicted that (high) DSE will be associated positively with development outcomes. Need to achieve [nAch], refers to people's need to measure against and achieve a recognised standard of performance. Although nAch has achieved far less attention in the training literature than SE (see Chapter 2 for a full discussion) it may be relevant to the investigation of development outcomes, as it implies a more future-directed and long-term focus than DSE. Thus, it was predicted that high levels of nAch will be associated with (positive) development outcomes.

As discussed in Chapter 2, there is no coherent research model which serves to explain why demographic characteristics should influence learning; evidence from the training literature has been inconsistent (Colquitt et al., 2000). However a small number of studies have demonstrated that variables such as educational level (Birdi et al., 1997), age (Warr & Birdi, 1998), tenure and rank (Birdi et al., 1997) influence participation in development activities; for instance age and tenure were associated with less participation. Demographic variables have also been found to predict pre-training individual differences (see Chapter 2 for a full discussion) such as SE (Colquitt et al., 2000); for instance older employees generally displaying lower levels of SE.

Thus, age, tenure, and gender were included as exploratory measures. In addition, employees who are in charge of conducting appraisals (as well as receiving them) were compared with employees at the 'receiving end', following on from Birdi et al. (1997) who found that team supervisors had greater involvement in development activities than their charges. In a similar vein, it could be expected that those who are managing the appraisal system benefit more from it, as they have greater involvement and a greater belief in it than appraisees. Thus, an additional exploratory hypothesis predicted that demographic characteristics will be associated with positive development outcomes and with individual differences.

It is necessary to re-visit at this point an appropriate working definition of development outcomes, as these are different from those used in training research and considerable variations are reported in the literature. Some authors have measured development outcomes through differences in competency ratings (Bailey & Fletcher, 2002; Maurer et al., 2002), whereas others have considered 'outputs' such as the number of training days managers engage in per year (Pettigrew et al., 1988; Thomson et al., 1998) or 'outcomes' such as managers' qualitative evaluation of any development they had experienced (Thomson et al., 1998). Studies on specific activities such as

development centres have considered more concise measures, either at the organizational level (e.g. staff turnover, (Naish & Birdi, 2001) or at the individual level by considering either 'hard data' such as promotions (Jones & Whitmore, 1995) or 'soft measures' such as changes in workplace attitudes (Noe & Steffy, 1987; Jones & Whitmore, 1995).

Therefore, three different outcome measures were used:

1) Candidates may stand to benefit more from development activities (such as an appraisal interview with their manager) if they find them useful. Study A considered participants' reactions to the utility of appraisals for development [perceived utility], similar to a measures previously applied by Warr and Bunce (1995) and Warr et al. (2001) in the context of training.

2) Chapter 1 discussed that training and development are potentially distinct entities. As a result, participation in a) training and b) development activities were considered as separate outcomes measures. In line with the literature on participation, training was defined as participation in formal course that are provided either internally or and externally. Participation in development activity comprised a broader spectrum which included a range of formal and informal activities such as mentoring, coaching, on-the-job development, attendance of conferences and seminars, multi-source feedback. Again, this is broadly in line with the classification of activities in the participation literature (e.g. Birdi et al., 1997; Maurer & Tarulli, 1004; Maurer et al, 2003), but care was taken here to also include feedback based activities and also research from the domain of 360-degree feedback (Hazucha et al, 1993).

3) A measure of 'career movement' was included which considered both job changes (such as moving laterally across departments) as well as vertically up the organizational promotion scale.

In summary, the hypotheses were:

H₁: (High) DSE (H_{1a}) and (high) nAch (H_{1b}) will be associated with perceived utility, participation in a) development activities, b) training activities and c) career movement.

H₂: Demographic characteristics (age, gender, tenure, appraiser role) will be associated with perceived utility, participation in a) development activities, b) training activities, c) career movement and d) with nAch and DSE.

4.2 Organizational context and study settings

Two UK organizations participated in the research. Sample One [O₁] was drawn from a UK public sector organization which operated the appraisal system common to the entire UK Civil Service. Sample Two [O₂] was drawn from a UK outlet (a publishing house) of a multinational advertising group which operated an appraisal system which was designed and implemented by the organization's local HR function. Both appraisal systems entailed ratings of past performance of which records were kept centrally by HR, but also a personal development plan (PDP) which was kept as an open document by the employee. In both organizations appraisals took place yearly on a rolling basis (depending on when individuals had joined, rather during a yearly appraisal round). Respective line managers led formal appraisal meetings during which the performance ratings were discussed and signed, a PDP was formed and signed in consultation with the employee. The appraisal methods differed only in their respective performance rating scales which did not affect Study A as this measure was not included. The similarities of both appraisal systems are summarized in Table 7. Each organization used the data as an in-house attitude survey.

Table 7 : Comparison Appraisal Systems O₁ and O₂

Administrative Similarities	Similarities with regard to Developmental Use	Differences regarding the Rating Process
Appraisals conducted on a yearly basis	Personal development plan [PDP] formed in appraisal interview	O ₁ : formal ratings scale on the organization's competency framework
Appraisals conducted by line manager	PDP open document	O ₂ : ratings were derived from self-assessments and two peer assessments
Appraisal records kept centrally by HR		

4.3 Methods

4.3.1 Sample statistics

Participants in O₁ were asked to skip the items relating to perceived utility (see 4.3.4.5) if they had not yet experienced an appraisal; and those participants who had not responded to these items (n = 55) were omitted from the final sample. In O₂, all employees had undergone the appraisal system, as an initial appraisal was part of the induction procedure. Thus, the response rate across both organizations was 54 % (total N = 127; for O₁ 77 of 172 employees on duty replied, equalling a 44 % response rate; 50 of 80 full-time employees, equalling a response rate of 63%, replied in O₂). The average age of the total sample was 37 years (SD = 9.6) and average tenure just over 7 years (SD = 8). The gender ratio was 55.1 % male, 44.1 % female (0.8 % missing). In each organization, respondents covered the full spectrum of job roles, and each department was represented. To illustrate, O₁ respondents included both uniformed and non-uniformed staff, ranging from officer support grades to senior management, with uniformed officers making up the greatest proportion of the total respondents (as representative of the organization). For O₂, respondents also spanned all job roles and units as all functions in the organization from creative, administrative, editorial to technical staff were represented. The only group of employees that was slightly under-represented was the technical team (response rate of app. 40 %, compared to 63 % for the overall sample). 30 % (n = 36) were in charge of administering appraisals and 66 % (n = 80) were not (4 % missing).

4.3.2 Design

The study had a cross-sectional related design where associations between self reports of individual difference measures, demographic variables and development outcomes were analysed.

4.3.3 Procedure

Following consultation with both organizations involving interviews and discussions with respective HR departments, a questionnaire was customised to the respective organizational context, which was pen-and-paper for O₁ and web-based for O₂. The measure of participation in development and training activities was collected in a slightly different format in each organization; please refer to Section 4.3.4.5 where it is discussed fully how activities were assigned to either training or development. Data

on career movement was only available for O₁. O₂ had a very flat structure and was too small to allow for a significant number of employees to be promoted in any one time period and job roles were too specialist to allow cross-over between departments.

Participation was entirely voluntary and respondents were assured in the survey instructions that no individual data was identifiable from the results. For O₁, the survey was held open for a week only in order to elicit an opportunity sample which allowed a comparison between appraisers and non-appraisers. The survey was held open for such a short time period as the organization operates a shift system for non-managerial staff, but not for the majority of managerial staff; this sampling strategy resulted in an opportunistic comparison of a roughly equal number of appraisers and appraisees. The survey was publicised via the in-house magazine, on staff notice boards and in management meetings. Responses were collected in sealed envelopes (addressed to the external researcher) via a sealed box in the organization's head office.

In O₂, the survey was announced with an email to all employees of the subsidiary, explaining the purpose of the survey and that no individual data was going to be disclosed to the organization. Responses were collected on-line via a custom-made survey form and directed to a secure server to which only the external researcher had access. The survey was held open for three weeks to give all employees an opportunity to participate, with a reminder sent out after two weeks. A comparison between appraisers and appraisees was not feasible in O₂ as the number of appraisers was overall too small, restricting this aspect of the study to participants from O₁.

4.3.4 Measures

Please see Appendix A for the questionnaires used in O₁ and O₂.

4.3.4.1 Piloting

The pen and paper survey instrument was piloted with thirteen individuals for O₁ (including human resource managers and an occupational psychologist), and with three human resource managers, an occupational psychology researcher and two technology experts (to ensure safe on-line data collection) for O₂. All pilot participants were invited to comment on language, ease of instructions and layout. The survey instructions were slightly reworded for both instruments; for O₂ the word 'organization' was replaced with the name of the actual organization in order to increase face validity for several items. In order to fit with in-house terminology, in O₁ the word 'review' was used for the reaction items, and in O₂ the word 'appraisal'.

4.3.4.2 Summary of measures

Following a literature review of individual differences primarily drawing from relevant training literature (Tannenbaum & Yukl, 1991; Kraiger et al., 1993; Colquitt et al. 2000) as well as literature on participation in development activities (Maurer & Tarulli, 1994) and feedback effects (Ilgen et al., 1979; Kluger & DeNisi, 1996), appropriate measures were selected which are summarized in Table 8 and described below.

Table 8: Summary of Predictors and Outcomes Study A

Predictors	Outcomes
1) Individual Differences: nAch development specific SE	1) Reactions: perceived utility 2) Participation in a) training and b) development activities
2) Demographic variables: Age Tenure Gender Appraiser Role	3) Career Movement (O ₁ only)
3) Control variables: Managerial Rank, Job role, Department, Organization	

As for studies B and C, scale items were intermixed in the final questionnaires, which were rated on a 7-point response scale which ranged from one (“I strongly disagree”) to seven (“I strongly agree”). The items for each scale were averaged to create an overall measure (see Table 10 for all means and SD).

4.3.4.3 Individual differences

a) nAch

nAch was measured by a four item sub-scale of the nAch dimension of the Manifest Needs Questionnaire (MNQ) (Steers and Braunstein 1975). Observed coefficient alpha was .53, the items are listed in Table 9.

b) DSE

DSE was measured by two items (see Table 9) which had previously been used to research the factors influencing participation in development activities (Maurer and Tarulli 1994). Observed coefficient alpha was .57.

Table 9: Summary of nAch and DSE items Study A

nAch	M	SD
I try very hard to improve on my past performance at work	5.63	1.33
I do my best work when job assignments are fairly difficult	5.37	1.42
I take moderate risks and stick my neck out to get ahead at work	4.2	1.61
I try to perform better than my co-workers	5.00	1.57
DSE		
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else	5.55	1.00
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants	5.37	1.18

Item descriptives (inspecting response frequencies and bar charts) revealed that neither development specific SE nor nAch were normally distributed; both measures were transformed with a logarithmic transformation using the SPSS log function in order to fulfil the assumptions for the statistical analysis.

4.3.4.4 Demographic variables

Demographic variables were age (years and months), gender (men were coded as 1, women as 2), tenure (years and months) and appraiser responsibility (coding ‘no responsibility for administering appraisals’ as 1 and ‘responsibility for administering appraisals’ as 2).

4.3.4.5 Development outcomes

a) Reactions: perceived utility

Participants’ reactions to the appraisal process and their development were recorded using five items measuring perceived utility of the appraisal and development process, adapted from Mabey (2001); these items are marked with ‘*’ in Appendix A. Observed coefficient alpha was .89, see Table 10 for all items. A Principal Components Analysis, extracting Eigenvalues greater than 1 and asking for a rotated solution using Varimax rotation, was run in order to ensure that all items tapped into the same

construct. It needs to be acknowledged that the sample size ($n = 105$) was small for factor-reduction techniques (Tabachnik & Fidell, 1996). A rotated solution could not be extracted, as the items loaded clearly onto one component.

Table 10: Component loadings Development Utility Items Study A

Component 1: Eigenvalue [EV] = 3.14, 62% Variance accounted for			
Items	M	SD	Component Loading
Appraisals/ Reviews have helped my career development	3.67	2.00	.90
Appraisals/Reviews give me a clear idea where I can benefit from training and other development activities	4.08	1.82	.86
I receive recognition for developing my skills [at ...]	4.14	2.15	.85
I get sufficient direction and feedback from the person I report to	4.07	2.95	.84
I have considerable say in the way my career develops	3.65	2.02	.77

b) Participation in development and training activities

Employees were asked to list the types of development and training activities they had engaged in during the preceding year, such as participation in internal and external training courses, academic qualification, vocational courses, conferences, seminars, coaching, mentoring or 360-degree feedback. A prior study had employed similar measures (Birdi et al., 1997) and demonstrated that employees can remember participation in past activities reliably, if the measure is confined to a restricted time period. For O₁, participants were asked to indicate which activities they had participated in from a list of activities.

In O₁, this comprised a simple ‘tick list’ that asked participants to indicate the activities they had taken part in during the last year (“Have you taken part in any of the following training/development activities during the last year?”). The list itself had been derived from discussions with the internal HR department and with several line managers, who confirmed the type of activities typically open to employees.

For O₂, participants were asked to list the number and type of activities they partook in during the last year using an open-ended item, as there was no information

available from the HR department or line managers as to which kind of activities employees typically engaged in.

From participants' responses, participation in a) types of training activities and b) types of development activities were coded separately. Formal internal and external courses were coded as training (e.g. externally provided course on health and safety, internal training on editing skills). Feedback based activities (e.g. 360-degree), informal on the job learning and other activities, such as self study using videos or other resources were coded as development.

The lists of activities were first transformed into an ordinal scale (where 'no activities' were coded as 0, 'one activity' as 1 and so on) which were used for the bivariate analysis; and then collapsed into a categorical measure for a) development and b) training; where 1 was coded for 'has not participated' and 2 for 'has participated'. 15 % had taken part in no development activities, 26.8 % in one activity, 18.1 % in two activities, 22 % in three activities, 12.6 % in four activities 3.1 % in five activities and 2.4 % in more than five activities. 41 % had participated in training.

c) Career movement

A measure of career movement was derived from two questionnaire items for O_1 , where 'no career movement' was coded as '1', a job change/ lateral move across departments as '2', promotion as '3' and 'lateral movement and promotion' as '4'. A third of participants, 34%, had neither a job change nor promotion, 22 % had been promoted, 2 % had moved across departments (but not been promoted) and 19 % had been both promoted and moved across departments.

4.3.4.6 Control variables

Participants' job role and department were recorded to ensure that employees were represented proportionally in the final sample. A dummy variable was created to control for managerial responsibility from participants' job roles, as this could have confounded the variable for appraiser role (1 was coded for 'no management responsibility' and 2 for 'management responsibility'). Dummy variables can be entered into statistical analysis in order to control for the variance accounted for by any particular variables (Hardy, 1993).

4.3.4.7 Additional information

Participants' open comments were invited at the end of each questionnaire; a summary of the comments was used to illustrate the feedback reports to the organizations. Missing data were replaced with the item mean for DSE, nAch, age and tenure but for the other variables missing data was treated as such. All comparisons were conducted pair-wise.

4.4 Findings

4.4.1 Bivariate analyses

The correlation matrix was computed with the Pearson Product moment coefficient (two-tailed); see Table 11 for a summary of the observations. First, the possibly confounding influence of managerial rank was investigated. Although correlated with age, gender, and appraiser role, managerial rank was not correlated with any of the outcome variables, or with DSE and nAch. Age was associated with participation in training ($r = .24, p < .01, n = 126$) and participation in development activities ($r = .25, p < .05, n = 126$). Tenure was associated with participation in training ($r = .20, p < .05, n = 127$) and career movement ($r = .23, p < .05, n = 127$). Gender was not associated with any of the outcome variables, although women were more likely to take part in development activities ($r = .15, ns$).

There was no support for H_{1a} and H_{1b} as neither DSE nor nAch were correlated with the outcome measures although employees higher in nAch were more likely to participate in development activities ($r = .12, ns$).

The correlation matrix was further used to test the second part of H_2 (that demographic variables will be associated with nAch and DSE). There were no significant correlations observed for nAch; DSE was positively associated with age ($r = .22, p < .05, n = 126$) and negatively with tenure ($r = -.22, p < .05, n = 126$).

Table 11: Inter-Correlations for Study A

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
<u>Control Variable (Av n =121, range 105-127)</u>													
1. Managerial Rank			-	.18*	.30**	-.06	.72**	.01	-.11	-.02	.15	.10	.31**
<u>Demographics (Av n =121, range 106-127)</u>													
2. Age	37.44	9.65		-	.61**	-.26**	.35**	.05	.22*	-.16	.24**	.25*	.22
3. Tenure	7.18	8.04			-	-.35**	.35**	-.07	-.22*	-.10	.20*	.15	.23*
4. Gender						-	-.20*	-.06	.17	-.03	-.10	-.13	-.06
5. Appraiser role							-	.14	-.08	.07	.16	.21*	.53**
<u>Individual Differences (Av n = 120, range 104-127)</u>													
6. nAch	4.75	1.09						(.53)	.28**	.10	.05	.12	.19
7. DSE	5.17	.90							(.57)	.10	-.01	-.04	-.04
<u>Outcomes (Av n [8,9,10]=124, range 104-127)</u>													
8. Perceived Utility	3.84	1.61								(.89)	.05	.19*	-.17
9. Participation in Training Activities											-	.30**	.14
10. Participation in Development Activities												-	.03
11. Career movement (AV n = 75)													

*Correlation is significant at the .05 level (two-tailed). ** Correlation is significant at the .01 level (two-tailed). Figures in () denote coefficient alpha

4.4.2 Regression analyses

In order to test H_2 , two linear and two binary logistic regression analyses were run which are summarised in Table 12 (neither DSE or nAch were included as predictors as the correlations showed no support for H_1).

The first linear regression analyses tested whether demographic variables (age, tenure, appraiser role) were associated with perceived utility, controlling for managerial rank in the first step (although not significant in the bivariate analysis, age, tenure and appraiser role are likely to have been significant with a slightly larger sample, however gender was not included due to its lack of association with this outcome variable). Appraiser role was the only significant predictor (standardised beta coefficient = .31; adjusted R square [model 2] = .07, $n = 122$; age just missed statistical significance [$p = .06$]).

In the second binary logistic regression analysis (as the criterion did not fulfil the stipulation for a linear regression), participation in development activities was regressed to managerial rank in the first step and simultaneously to age and appraiser role in the second step (gender and tenure were omitted after inspection of the correlation matrix); age was a significant independent predictor (Step 2 Wald = 4.00, Chi-square [2] = 8.13, $p < .05$).

In the third binary logistic regression analysis, participation in training activity was regressed to managerial rank in the first step and simultaneously to age and tenure and in the second step (appraiser role and gender were omitted again due to their lack of association with participation in training); neither age nor tenure were a statistically significant independent predictors.

In the fourth linear regression, career movement was regressed to managerial rank in the first step, and simultaneously to tenure and appraiser role in the second step; appraiser role was the sole independent predictor (standardised beta coefficient = .50, $p < .01$, adjusted R square for model 2 = .33, $n = 70$).

Table 12: Summary of Regression Analyses Study A

a) Linear regression analysis for variables predicting perceived utility in Study A (n = 122)			
Variable	B	SE B	β
Step 1			
Managerial Rank	-.12	.37	-.03
Step 2			
Managerial Rank	-.72	.55	-.19
Age	-.04	.02	.24 (p=.06)
Tenure	-.02	.03	-.01
Appraiser Role	1.10	.54	.30*
B) Binary regression for variables predicting participation in development activities in Study A (n = 122)			
Variable	B	SE B	Wald
Step 1			
Managerial Rank	.53	.43	-.03
Step 2			
Managerial Rank	-.27	.68	.16
Age	.04	.03	4.00*
Appraiser Role	.84	.66	1.62

Table 12 continued.

C) Binary regression for variables predicting participation in training in Study A (n = 122)				
Variable	B	SE B	Wald	
Step 1				
Managerial Rank	.05	.65	2.77	
Step 2				
Managerial Rank	.62	.91	.47	
Age	.04	.03	1.6	
Tenure	.04	.05	.71	
D) Linear regression for variables predicting career movement in training in Study A (n = 77)				
Variable	B	SE B	β	
Step 1				
Managerial Rank	.38	.14	.31	
Step 2				
Tenure	.03	.01	.04	
Appraiser Role	.11	.16	.54*	

*p<.05

4.4 Discussion

There was no support for H_1 , as neither nAch nor DSE were associated with the outcome measures. The results indicated partial support for H_2 ; as age was correlated with participation in training and participation in development, tenure was associated with participation in training, appraiser role was associated with participation in development and career movement. Regression analyses were run to further test H_2 , controlling for Managerial Rank in the first step. Appraiser role was associated with perceived utility and career movement, whereas age was associated with participation in development activities.

In this instance then, the results indicate that nAch and DSE are not necessarily associated with development outcomes, although the reasons for the lack of association are less clear. As SE is a well-established positive predictor of training outcomes (Colquitt, LePine et al. 2000) the lack of association observed here is surprising, given also that the correlation coefficients for DSE and outcome measures (apart from perceived utility) were negative. The coefficients were also much smaller than for nAch (e.g. the association between DSE and participation in development activities was $-.04$ and for nAch $.12$). Thus, it could tentatively be inferred that nAch, which is very future-directed, may be more important than DSE for the investigation of development outcomes, but clearly follow up research is needed.

It fits with previous research (Birdi, Allen et al. 1997) (which established that a supervisory role is associated with positive development outcomes) that appraiser role was associated with both perceived utility and career movement in the regression analysis, and was associated furthermore with participation in development activities and training in the correlation matrix. This should not merely be due to the fact that appraisers are more likely to hold a managerial role, as this was controlled for statistically in the regression. One possible explanation is that being in charge of appraisals may make employees more likely to 'buy into' the appraisal process and hence to perceive appraisals as more useful and use them to one's own advantage. But the possibility of reversed causality still has to be acknowledged, as more career movement may make employees more likely to be in an appraising role, for instance.

Age was associated with participation in development activities and participation in training (the association for career movement $p = .06$) in the bivariate

analysis; and predicted participation in development activities. Since the measure of participation was confined to the 12 months prior to data collection, these observations should not only be due to the fact that employees are more likely to be exposed to opportunities the longer they are with the organization or the older they are.

Age was positively associated with DSE, and tenure negatively associated with DSE (although these correlations were not expected in advance). A possible explanation is that older people have more confidence in their capacity to develop, as they have more experience. The negative association with tenure might indicate a 'left on the shelf effect' or indeed a 'saturation effect', where those who have been with the organization for longer either feel that they have developed within the organization as far as possible, or are offered fewer opportunities because they have been around longer. However, tenure was associated with participation in training and career movement; although not a significant predictor in any of the regression equation which controlled for managerial rank.

The negative association of gender with participation in development activities only marginally missed significance at the .05 level. In the absence of more concrete data, that would allow the inference of likely causes, two speculative explanations for this observation are possible. Either, women may be offered fewer opportunities than men, or women perhaps take less advantage of any opportunities, due to the fact that women often have to juggle home and work commitments more than men do.

4.4.1 Study limitations

The limitations of a cross-sectional design need to be acknowledged, as cause and effect cannot be inferred, and also poses the threat of common method variance (Campbell & Fiske, 1959) which is

'systematic error variance that is related to the measurement approach rather than to the constructs of interest' ...'Common method bias is the magnitude of the discrepancies between the observed and the true relationships between constructs that results from common methods variance' (Doty & Glick, 1998. p. 374-375).

Common methods variance thus distorts the estimates of the true relationship between two psychological constructs (Campbell & Fiske, 1959). In order to assess common methods bias, it is necessary to divide the observed variance into trait, method and random variance. If, as in Study A in the present research, all constructs are measured using a Likert-type scale, methods variance cannot be partitioned out and it thus cannot be discounted that any observed relationships are inflated (Gupta & Beehr, 1982; Mitchell, 1985). One meta-analysis (Doty & Glick, 1998) suggests that on average correlations in cross-sectional research are inflated by approximately 26 percent. If the appropriate correction was applied, not all observed associations would retain significant at the .05 level. Therefore Studies B and C avoided some of the concerns associated with common method variance by taking study measures at different time points, which is one of the recommended strategies to avoid common method bias in organizational research (Podsakoff & Organ, 1986).

Clearly, more rigorously designed research is needed to follow up these findings, which employs a longitudinal design. Here, a measure of a) participation in development activities and b) training activities was derived from participants' self-reports. This approach also relies on the assumption that people will accurately recall what they have done. It cannot be discounted that either people might exaggerate what they had done or that they may underreport what they had done as they could not remember; a more objective measure should be derived from personnel records. However, as Noe and Wilk (1993) have argued, many development activities happen on the job and are not formally recorded and managers may not be fully aware of all activities that are going on at any one time. Thus, employees are the most reliable source of information.

Another study limitation is a general concern about social desirability bias leading to inflated self-ratings as participants strive to present themselves in the best possible light (Furnham 1986; Rust & Golombok, 1999). Here, the average ratings for both nAch and DSE were positively skewed and an appropriate correction has to be applied.

The internal observed consistency indices for nAch (.53) and DSE (.57) were far lower than the coefficients observed in the original papers (.72 for nAch, Steers & Braunstein, 1975; .77 for DSE, Maurer & Tarulli, 1994). Although there is no accepted minimum value for alphas, general convention in psychological research

demands alpha values between .7 and .9. However, these values commonly refer to much longer tests as internal consistency measures are directly affected by the number of items (Cook, 2004). The measures employed here were extremely short, and it would perhaps be unwarranted to expect much larger consistency values.

A post hoc qualitative analysis of the items for both the nAch and DSE scale was undertaken. Although there did not appear to be any reasons for concern in the nAch items, the items for DSE were very long (e.g. “If I were to participate in a development activity [workshop, course, etc.], my success in that activity would be at least comparable to most other participants”). According to Oppenheim (1992) long items, which he considers to be sentences of more than twenty words, are difficult for any participant and may not prompt thoughtful responses; this may account for a certain lack of consistency in the obtained responses. Due to the longitudinal design of studies B and C, results from this study were not available before commencement, otherwise more consistent measures could have been selected.

Nevertheless, any results relating to these scales need to be interpreted with some caution; the discussion of Chapters 6 and will return to this issue by also addressing test-retest reliability.

4.4.2 Implications for Study B

In summary, nAch and DSE did not have the hypothesized association with development outcomes. It is possible that other factors, such as the perceived environment, are more important for the investigation of appraisals which needs to be investigated in follow up studies. Due to the correlational design of the study, it is difficult to back-track the reason for the lack of any association, and future studies will need to utilise a design that spans across several time-points, thus allowing the research of development over time. Here, it appeared that demographic characteristics are more strongly related to development outcomes, as for instance appraiser role was associated with perceived utility, and age and tenure were related to participation. It needs to be verified whether this pattern holds true in other organizational environments.

Chapter 5: Changes in LC, DSE and nAch, following participation in staff appraisals, and their association with development outcomes

5.1 Introduction and study hypotheses

Study B investigated individual differences and their association with development outcomes using a longitudinal design, building on the results of Study A to formulate further hypotheses. One possible interpretation of the results of Study A was that factors other than motivational characteristics have a bearing on development outcomes, as the results indicated that demographic variables, in particular appraiser role, were a stronger predictor than individual differences; and nAch appeared more important in a development context than DSE.

As discussed in Chapter 3, the perceived learning climate [LC], which as the name implies refers to employees' perceptions of their environment (rather than the environment itself), has been demonstrated to be associated favourably with training outcomes (Tracey, Tannenbaum et al. 1995; Tharenou 2001; Tracey et al., 2001; Warr et al., 2001) as well as with participation in development activities (Maurer & Tarulli, 1994; Maurer et al., 2002; Maurer et al., 2003).

Therefore, individual difference measures for Study B included the perceived learning climate as well as nAch and DSE. Assuming that participation in (developmental) appraisals is effective for individuals' development, then a measurable positive impact on a number of measures such as people's belief in their capabilities, their need to improve their performance and the perceived learning climate should be observed. Any such changes should be associated with development outcomes, such as reactions to the appraisal process and participation in further development activities.

A three-time point design was used for Study B; baseline measures were taken before the introduction of a formalised appraisal system [T₁], at Time 2 [T₂] a formalised appraisal system which particularly aimed to facilitate employees' development needs was introduced. Follow up measures were taken 18 months after the system's introduction at Time 3 [T₃] to allow time for the system to be embedded

and for each employee to have partaken in an appraisal interview. The first aim of Study B was to investigate whether individual difference measures will change over time (T_1 to T_3); it was expected that positive changes will be observed:

H₁: that individual differences (nAch, DSE and LC) will change positively following participation in developmental appraisals.

Secondly, it was predicted that such changes will be associated with development outcomes and the second hypothesis was:

H₂: that significant changes in nAch, DSE and LC will be associated positively with development outcomes, as measured by a) perceived utility, participation in b) training activities, c) development activities and d) career movement.

As findings from Study A demonstrated that demographic variables were associated both with individual difference measures and development outcomes, the third study hypothesis explored this in the present sample (it was not possible to conduct a comparison between employees and appraisers as in the first study, as numbers for the latter were not sufficient for a statistical comparison). The third hypothesis was:

H₃: that demographic characteristics (age, gender, tenure) will be associated with gain scores for difference measures (DSE, nAch, LC) and with development outcomes (perceived utility, participation in development activities, participation in training activities and career movement).

5.2 Organizational context and study setting

The participating organization was the housing department of a London Local Authority which had strived to obtain Investors in People [IIP] accreditation (see Chapter 2 for a discussion of the IIP model). Following their first inspection (which did not grant IIP accreditation, but recommended an improvement plan), the organization had recently introduced an appraisal system [appraisal toolkit] which aimed to focus on the facilitation of individuals' development, rather than the

assessment of performance. The data was used as an in-house monitoring of the system's effectiveness; and formed part of the formal report to the IIP inspector.

5.3 Methods

5.3.1 Sample statistics

At T_1 128 (out of 180) employees responded, a 74 % response rate, and at T_3 102 (out of 178) employees responded, a 57 % response rate. Only participants who had responded at both time points ($n = 63$) were included (see Table 12), this automatically excluded newcomers since T_1 (who may not have experienced the appraisal system at the time of the survey). 44.4 % were male and 49.2 % were female (6.4 % missing). The average age was 40 years ($SD = 9.4$) and the average tenure was eight years ($SD = 6.67$). All four areas of service (Housing advice centre, care-taking service, strategic management and housing management) were represented and all job roles were represented, for instance 18 out of 30 caretakers were included in the final sample.

5.3.2 Design

Study B had a quasi-experimental design across three time-points was employed, which compared two within participant conditions: measurements taken before and after the introduction of a formalised appraisal system. Data were collected using employee surveys.

5.3.3 Procedure

Pen and paper questionnaires were used to solicit employees' self-reports at two different time points.

5.3.3.1 Initial consultation

Following extensive consultation with the respective HR department and an external consultant who had been involved in the design of the new appraisal system, two questionnaires were designed which were customised to the organizational context.

5.3.3.2 Questionnaire distribution and collection of data

The baseline measure was collected prior to the introduction of a formalised appraisal system [T₁]. At T₂ the new appraisal system was introduced and implemented across the organization, meaning that all full-time employees who had also participated in the first stage of the survey had undergone an appraisal. Thus, follow up data were collected 18 months after the initial introduction of the appraisal system [T₃]. Participation in the survey was entirely voluntary and participants were assured of confidentiality, as all completed surveys were collected in sealed envelopes and forwarded directly to the external researcher.

Participants were asked to create an identity code which consisted of the first initials of their mothers' maiden name (e.g. 'AB', the digits for their birth day (e.g. '0101') and the first initials of their secondary school (e.g. 'XY') so that survey responses could be tracked anonymously over time. At T₁ questionnaires were administered following in-house workshops introducing the new appraisal system and henceforth used as the baseline measure. At T₃, questionnaires were administered following another series of in-house talks and workshops, which briefed participants on outcomes of the recent IIP inspection.

5.3.4 Measures

Please see Appendix B for the two questionnaires used.

5.3.4.1 Piloting

The survey instrument was piloted with four managers from the organization and the occupational psychologist who had acted as a consultant for the implementation of the new appraisal toolkit. All pilot participants were invited to comment on language, ease of instructions and layout. The survey instructions were amended to take into account the possible number of employees who had joined the organization since T₁ (the organization had experienced unanticipated levels of turnover) who were not familiar with the purpose of the survey. Five survey items were slightly reworded in order to reduce ambiguity.

5.3.4.2 Summary of measures

Study B employed the same individual level measures as Study A, except that a measure of the perceived organizational learning climate [LC] (Tracey et al., 2001) was added to the individual difference measures, as discussed in the introduction to this study. The measures are summarized in Table 13 and discussed below.

Table 13: Summary of Measures, Response rates and n for Study B

	T ₁	T ₂	T ₃
N and response rate	n = 128; 74 % response rate (out of 180 employees)	Introduction of new appraisal system, all full-time employees undergo appraisal	n = 102 (out of 180 employees), 57 % response rate; complete data sets for T1/T3 data available for 63 employees
Measures	Individual Differences: nAch DSE LC		Individual Differences: nAch DSE LC
	Demographic Measures: Age Tenure Gender		Outcomes: Perceived utility Participation in: Training activities Development activities Career movement
	Control variables: Job title Department		
	Participation in activities: Open-ended measure of participation in development/ training activities to allow construction of measure for T ₃		

5.3.4.3 Individual differences

a) nAch and DSE

In order to allow a comparison of the findings with those obtained in Study A, the same measures for a) DSE (Maurer & Tarulli, 1994), observed coefficient alpha at T_1 was .69 and at T_3 was .85, and b) nAch (Steers & Braunstein, 1975), observed coefficient alpha at T_1 was .44 and at T_3 .52, were used. Test-retest reliability for DSE was $r = .34$, $p < .01$ and for nAch $r = .15$, ns). The distributions for DSE and nAch at both time points were positively skewed (see Table 16), hence the measures were transformed using the SPSS log function in order to fulfil the assumptions for parametric tests.

b) Perceived learning climate

A ten-item measure of LC (Tracey et al., 2001) was included in the survey instruments, which consisted of five items measuring managerial support (sample item “Managers give recognition and credit to those who apply new knowledge and skills to their work”) and five items measuring organizational support (sample item “There are rewards and incentives for acquiring and using new knowledge and skills in one's job”). Observed coefficient alpha was .90 at T_1 and T_3 respectively. A Principal Components Analysis [PCA] was run on the items ratings for T_1 to assess whether the scale loaded onto a single, or two, components. Although the sample size was small for data reduction techniques ($N = 127$) (Tabachnik & Fidell, 1996), all component loadings were greater than .4, with six loadings exceeding .8, indicating clear support for a one-factor solution, see Table 14.

Table 14: Component Matrix Learning Climate Study B

Items for Component 1: Eigenvalue [EV] = 5.71, 57% of variance explained	Component Loading
Managers give recognition and credit to those who apply new knowledge and skills to their jobs	.86
Management places a high priority on training and development	.84
Managers encourage their employees to learn new ways of performing their jobs	.83
Managers promote learning from one's mistakes and successes	.82
Independent and innovative thinking are encouraged by managers	.80
This organization dedicates significant resources to training and development	.76
Employees are provided with resources necessary to acquire and use new knowledge and skills	.75
There are rewards and incentives for acquiring and using new knowledge and skills in one's job	.73
Continuous learning is supported by this organization	.61
There are numerous professional development opportunities in this organization	.45

d) Gain scores

Gain scores were computed for SE, nAch and LC respectively by subtracting scores for T₃ from scores for T₁, see Table 15 for summary of means and standard deviations. The mean score for SE decreased marginally (by .05), whereas nAch (-.25) and LC (-.24) increased. As gain scores are not normally distributed, they were transformed to the log for subsequent bivariate and multivariate analyses.

5.3.4.4 Demographic variables

Demographic variables were age (in years and months), gender (men were coded as ‘1’, women as ‘2’) and tenure (years and months).

5.3.4.5 Outcomes

a) Perceived Utility

Reactions to the appraisal process were measured at T₃ by ten items asking about the perceived utility of the current development appraisal process for people’s development. Five items were written specifically for the purpose of this study (as

indicated in Table 15) and five were based on Mabey (2001), observed coefficient alpha was .89. A PCA was run in order to confirm whether the items loaded onto one component. Although the sample size was small for data reduction techniques (n = 102) (Tabachnik & Fidell, 1996), all component loadings were greater than .4, with 6 loadings exceeding .8, indicating clear support for a one-factor solution.

Table 15: Component Loadings Perceived Utility Study B

Component 1: Eigenvalue [EV] = 6.62, 66.2% variance accounted for			
Item	M	SD	Loading
Reviewing my work with my manager helps me to set goals for the future (^B)	3.80	1.88	.92
Reviewing my work with my manager helps me to understand how to improve my work performance (^B)	4.07	1.88	.90
Reviewing my work with my manager has given me a clear idea of where I can most benefit from training and development	3.68	1.83	.88
My last review/ appraisal has helped my career development	3.20	1.79	.86
Considering my personal experience with the current approach to work review and staff development, I would consider the overall process fairly handled (^B)	4.26	1.67	.84
I receive recognition for developing my skills	3.35	1.84	.83
My manager and I have agreed on how to best follow up my progress (a personal development plan) (^B)	3.79	1.81	.76
I get sufficient direction and feedback from the person I report to	4.76	1.96	.72
I have considerable say in the way my career develops	3.17	1.99	.70
My personal development plan has been followed up in supervision meetings (^B)	3.61	1.90	.69

(^B) Indicates items written specifically for the purpose of this study, the other items were derived from Mabey (2001)

b) Participation in training and development activities

In order to devise an organization-specific measure of the types of training and development activities employees typically took part in, the questionnaire used at T₁ contained an open-ended item which asked employees to list the development and activities employees had taken part in during the last two years (a longer time period than for Study A was chosen to give more opportunity for a breadth of activities to be listed). From the responses to this item a tick list was developed, which was included in the questionnaire for T₃. This asked employees to indicate which activities they had taken part in during the preceding 12 months (“Have you taken part in any of the following development activities during the last twelve months? *[You can tick more than one option]*”).

As in Study A, participation in a) types of training activities and b) types of development activities were coded separately. Formal internal and external courses were coded as ‘training’, whereas other activities, such as secondments, coaching, mentoring, or peer supervision, were coded as development.

The indicated number of types of activities were firstly transformed into an ordinal scale, where ‘no activities’ were coded as 0, ‘one activity’ as 1 and so on; and then collapsed into a categorical measure for a) development and b) training; where 1 was coded for ‘has not participated’ and 2 for ‘has participated’. With regards to training activities, 11.8 % had participated in no activities, 43.1% in either internal or external training once and 28.4% in both internal and external training (15.7% missing). With regards to development activities, 12.7% had participated in no activities, 22.5% in one type of activity, 22.5% in two activities and 45.2% in three or more activities (15.7% missing).

c) Career movement

For career movement ‘no career movement’ was scored as ‘1’, ‘job change (such as a secondment)’ scored as ‘2’, a ‘promotion’ as ‘3’ and both a ‘job change’ and a ‘promotion’ as ‘4’. There was relatively little career movement, as 77.2% of respondents had been neither promoted nor experienced a lateral movement (such as a secondment), 11.9% had experienced a lateral change and 6.9% had been promoted (4% missing).

5.3.4.6 Control variables

Participants’ job role and area of service were collected as control variables to ensure that all areas of service had been represented proportionally.

5.3.4.7 Additional information

Participants’ open comments were invited at the end of the questionnaires at each time point. Missing data were replaced with the item mean for scale responses and for categorical data recorded as such. All comparisons were conducted pair-wise.

5.4 Findings

5.4.1 Comparison of means

Testing H₁, the means for T₁ and T₃ for nAch and LC were compared using paired sample t-tests (not for DSE, as the mean had decreased marginally only by .05). Using the Bonferroni correction for the number of tests employed for a one-tailed test (adjusting the p-level by the number of tests), the difference was statistically significant for perceived learning climate (t (61) = -1.104, p < .05), but not for nAch, see Table 16 for a summary of the results.

Table 16: Paired Samples t-Test for nAch and LC

n = 62 Df = 61		M	SD	SE	95% Confidence Interval		t
					Lower	Upper	
Pair 1	nAch T ₁ – nAch T ₃	-.46	3.31	.42	-1.31	.38	-1.10
Pair 2	LC T ₁ - LC T ₃	-.39	1.51	.19	-.77	-.0035	-2.02*

*significant at .05 level

5.4.2 Bivariate analyses

Intercorrelations were computed using Pearson’s Product Moment Coefficient, a full summary is provided in Table 17. Testing H₂, the gain score for nAch was associated with participation in development (r = -.48, p < .05, n = 63). The negative

association between the gain score for DSE and career movement narrowly missed statistical significance ($r = -.28$, $p = .05$, $n = 63$); the gain score for LC was associated with perceived utility ($r = .43$, $p < .05$, $n = 63$). Tenure was associated negatively with participation in development ($r = -.46$, $p < .01$) and with gain score LC ($r = .27$, $p < .05$, $n = 63$). Age was associated with the gain score for nAch ($r = -.46$, $p < .06$, $n = 62$) and with the gain score LC ($r = .28$, $p < .05$, $n = 62$).

Table 17: Intercorrelations Study B

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
T₁																		
<u>Demographics (AV n = 59, range 50-111)</u>																		
1. Age	39.89	9.40	-	.32**	-.20*	.13	.14	.09	.26*	.20	-.04	-.23	-.46*	.28*	-.12	.10	.13	-.07
2. Tenure	8.18	6.67		-	-.38**	-.07	-.09	-.01	-.08	-.03	-.29*	.03	-.18	.27*	.10	-.46**	-.07	-.16
3. Gender					-	.15	-.01	.01	.13	-.11	.37**	-.07	.04	.02	-.14	.19	.27	.05
<u>Individual differences (Av n = 63, range 54-118)</u>																		
4. DSE	5.55	1.20			(.69)	-.25*	.15	.34**	.24	-.01	.24	.32	-.32	-.02	.06	.10	-.05	.01
5. nAch	4.82	.97				(.44)	.18*	-.23	.15	.03	.31	.52**	.03	.18	.18	-.01	-.11	.08
6. Learning Climate	3.71	1.28				(.90)	.19	-.04	.36**	-.21	-.06	-.29	-.26*	.21	.32*	.32*	.26	.26
T₂ (Av n =64, range 53-127)																		
7. DSE	5.50	1.49.				(.85)	.04	.10	-.85**	.05	-.19	-.00	.10	.16	.10	.16	.10	.10
8. nAch	5.07	2.56					(.52)	.05	.14	-.58**	.32	.48**	.27*	-.07	.27*	.27*	.16	.16
9. Learning climate	3.95	1.40						(.90)	-.36*	.08	-.27	.36**	.22*	.35**	.22*	.35**	.22*	.22*
<u>Gain scores (Av n = 64, range 53-127)</u>																		
10. GS DSE	.05	.40						-		.24	.30	.07	-.16	-.01	.07	-.16	-.01	-.28
11. GS nAch	-.25	.36								-	.15	-.07	-.48*	.03	-.07	-.48*	.03	.01
12. GS LC	-.24	1.52									-	.43*	-.19	.31	.43*	-.19	.31	.17
<u>Outcomes (Av n = 63, range 50-96)</u>																		
13. Perceived Utility	3.95	1.38										(.89)	.11	.14	.05	.14	.05	.05
14. Participation in Development													-	-.02	-.02	-.02	-.02	.27*
15. Participation in Training														-	-	-	-	.08
16. Career Movement																		-

** Correlation is significant at the .01 level (two-tailed). * Correlation is significant at the .05 level (two-tailed). Figures in () denote coefficient alpha. .

5.4.3 Regression analyses

In order to further test H₂ and H₃, a series of regression analyses was run as summarized in Table 18, only IVs that had a moderate correlation with the DV were considered. First, perceived utility was regressed to tenure and gender; neither variable was a significant independent predictor. Next participation in development was regressed to the gain score for nAch, the equation was statistically significant (Wald = 4.14, p< .05). Last, LC gain score was regressed to participation in training, the beta weight very narrowly missed statistical significance (p = .05).

Table 18: Summary of Regression Analyses Study B (n = 59)

1. Perceived utility regressed to tenure and gender			
Variable	B	SE B	β
Tenure	.15	.24	.10
Gender	-.34	3.2	-.02
2. Participation in development regressed to gain score nAch			
Variable	B	SE B	Wald
Gain score nAch	-7.58	3.72	4.14*
3. Participation in training regressed to gain score LC			
Gain score LC	-2.69	1.90	3.85

*p<.05

5.5 Discussion

As in Study A, the pattern of results indicated partial support for the hypothesized relationships. The first hypothesis predicted that DSE, nAch and LC will change significantly and positively at T₃. This held true for LC, but not for the other two variables. There are several possible explanations. As the introduction of the appraisal system was thought long overdue (judging from the initial consultation with the organization) and conducted with a high profile, participants’ expectations were perhaps raised at T₃, resulting in more favourable ratings on this measure. In addition, appraisals operate on an organizational level (in order to manage employees’ performance) as much as on an individual level (helping people to improve

performance and develop). Thus the perceptions of the environment were perhaps more salient to participants than nAch and DSE. It is equally tenable that appraisals did not affect any change in nAch or DSE, as appraisers were perhaps not equipped or trained to affect change at an individual level. In organizational reality, managers are often asked to keep appraisal goals 'SMART' (Specific, measurable, achievable, realistic and within a time-frame). This could mean that any such goals and projected outcomes stay too much within individuals' comfort zone, thus preventing change from appraisal period to appraisal period. Research has shown consistently that goals have to be achievable but difficult to affect behaviour as discussed in Chapter 3 (e.g. Locke & Latham, 1990).

The second hypothesis predicted that any such positive changes will be associated with development outcomes. Change in nAch was associated with participation in development, change in LC just missed statistical significance for participation in training. Interestingly, the observed coefficient indicates that as perceived LC goes up, participation in training goes down, although the opposite had been expected. Perhaps an environment that is deemed too supportive does not encourage employees to change their behaviour. No significant predictors were established for either perceived utility or career movement. The descriptive statistics showed that there was hardly any career movement at all across participants, a fact which was lamented in the open comments by several respondents.

With regard to the third hypothesis, tenure was associated negatively with participation in development. This is likely to be due to the fact that participants with longer tenure in this sample had perhaps less access to and interest in development, as their work was generally manual. Also, the pattern of correlations showed less LC for employees with longer tenure, indicating a lower level of perceived support. Indeed, the results also shows that a negative association between gain scores LC and age; perhaps showing that older workers are either more disillusioned, or indeed more realistic, about their perceptions of organizational support. On the other hand, age was associated positively with changes in nAch.

In Study A, gender was negatively associated with participation in development activities (although not quite significant at the .05 level), age was associated with DSE and tenure negatively associated with DSE. A comparison between Study A and Study B with regard to demographic differences indicates that

they influence development-related variables differently in different organizations and that broad conclusions are difficult to draw.

nAch appeared more important than DSE in the associations with development outcomes, which is consistent with the findings from Study A. Changes in LC were associated strongly with participation in training in the bivariate analysis, but narrowly missed significance as an independent predictor in the regression equation. It is not clear why the same pattern does not hold true for participation in development activities, as surely perceived support for learning from the environment may be even more important for wider and more self-led development activities than it is for training. Different types of development activities should be distinguished (e.g. by degree of formality) as the measure employed here may have been too blunt.

Likewise, it was somewhat surprising that no associations with perceived utility were established, as this measure has attracted so much attention in the training literature. One possible explanation are the methodological difficulties of assessing reactions with on-going development activities. In training research, interventions are distinct and reaction measures are taken from all participants at the same time. With an on-going activity such as appraisal, this is more difficult to employ, unless reaction measures are taken at the end of the appraisal interview, which may lead to doubts about confidentiality and anonymity.

5.5.1 Study limitations

It cannot be inferred with certainty that the observed effects were truly due to participation in the new appraisal system as there was no control group. It was not possible to withhold appraisals from any one group of employees for the following reasons. Appraisals took place on a 'rolling basis' (rather than in a yearly appraisal round), meaning that it would have been impossible to reach a substantial number of participants who experienced an appraisal within an exact and confined time-frame. In addition, appraisal effects can take a while to become apparent, as the period between appraisals is usually 12 months and future-directed development goals are necessarily of a long-term nature. In effect, this would have meant withholding appraisals for a comparatively long time period for a control group. Given the importance of appraisals for performance management and staff development in this organization,

such practice would have been unethical. Hence, it cannot be discounted that positive effects observed were simply due to maturation over time.

It further needs to be acknowledged here that the sample size obtained affected the study in several ways, for instance the number of employees per predictor was small for the regression analyses, and thus affected the power of the tests.

As in Study A, the observed coefficient alphas for nAch (.52 for T₁ and .44 for T₃) were lower than one would have expected from the alphas reported in the original study that reported the scale development (Steers, 1975). Due to the longitudinal nature of this study, results from Study A were not available before data collection commenced; otherwise a more consistent measure for nAch may have improved the study methods for Studies B and C. As it is, the findings need to be interpreted with caution, as any changes in nAch may be due to different inconsistencies in responses, rather than true changes over time. Although test-retest reliability was included in the results section (as computed using Pearson's *r*) one would not have expected high test-re-test correlations as these malleable measures of individual difference had been expected to change a priori.

5.5.2 Implications for Study C

Overall, the findings from this study showed similarities to Study A, as well as differences. The common finding was that DSE was not associated with development outcomes. Perhaps DSE is more relevant for an activity that is more structured, and therefore more like training, such as a development centre. The gain score for nAch was associated with participation in development but not at all with participation in training ($r = .03$). As nAch is more future-focused (relating to wanting to improve one's work performance), rather than focused on a present belief as DSE, it may be more important for development than for training.

The additional independent variable considered, LC, increased significantly after appraisal participation, but was not associated with any of the outcome variables, although the association with participation in training just missed significance at the .05 level. LC is perhaps more salient in an appraisal context than other individual differences, as appraisals are often highlighted as an organizational activity, rather than individual one, resulting in the increased ratings at T₃, but any such ratings may

be due to raised expectations, rather than genuine differences in the environment that relate to outcomes.

Chapter 6: Changes in DSE and nAch, and their association with development centre ratings and development outcomes

6.1 Introduction and Study Hypotheses

Chapter 3 outlined that appraisals and development centres [DCs] have in common that they are purportedly both a diagnostic tool and a development activity. DCs lend themselves to quasi-experimental research in applied settings; and perhaps better to controlled research than appraisals. They are one-off events and therefore more like a discrete training activity than other less structured development activities; plus they offer the advantage of an objective measure obtained at confined times— the feedback ratings from the observers. Thus, this Study [C] investigated individual differences and development outcomes in a DC context. As evident from Chapter 3, it still requires investigation how DC participation impacts on individual differences and development outcomes; and whether this potentially differs from other activities such as appraisal.

Studies A and B included three measures of individual differences, which were DSE, nAch, and LC. LC was not considered in Study C, as DCs are a stand alone event that is heavily simulated and somewhat removed from the organizational context. Thus, a measure of the perceived environment may be less relevant in this context, than measures of motivation at the individual level. In addition, there was a need for parsimony in terms of the inclusion of measures, as DC in any one organization typically only attract a small selective cohort.

DSE has not yet been investigated in relation to DC participation. Development centres are purported to increase candidates' potential to develop by giving them greater insight into their development needs (Carrick and Williams 1998; Halman and Fletcher 2000). Such effects may depend partly on how much participants believe that they can actually benefit from the activity. SE is trainable (e.g. Bandura, 1988) and it is therefore expected that levels of DSE will rise following DC participation, and that such changes are associated with positive DC ratings.

Changes in nAch have been investigated following participation in an assessment centre for promotion (Fletcher 1991). Unsuccessful candidates reported a drop in nAch immediately after participation, which remained significant on some dimensions of nAch (a multi-dimensional measure was used) at the time of a six-months follow up. As nAch is a future-focused construct which implies a concern to keep improving one's performance as measured against external standards (McClelland, 1962), it is expected that high nAch will be associated with high DC ratings. Moreover, levels of nAch may change following DC participation. DCs are implemented for their intrinsic motivational potential, which is purported to encourage participants to take charge of their (long-term) development. The first hypothesis was:

H₁ that levels of DSE and nAch will increase following DC participation.

Consistent with previous studies, largely from the domain of training but also from research on participation (e.g. Noe, 1986; Tannenbaum et al., 1991; Maurer & Tarulli, 1994) any behaviour changes instigated by DC participation may depend on baseline levels of motivation. Thus, the second hypothesis was:

H₂ that T₁ DSE and nAch will be associated positively with DC ratings.

As discussed in Chapter 3, Halman and Fletcher (2000) found rating congruence between self- and observer-ratings increased significantly following DC participation, where female ratings exhibited more congruence with other ratings whereas younger participants exhibited less congruence. It may be inferred from the results that older participants and women tend to be rated higher in a development centre, as they gain a more accurate self-image and better knowledge of their respective strengths and weaknesses. Although older workers are less likely to take part in training (Warr 1994) and development activities (Warr 1994; Warr & Birdi, 1998), there is little reason to believe that older workers should benefit less from participation in DCs than their younger counterparts as participation in simulated exercises clearly calls on prior experience (which is dependent on age). As self-ratings were not available (only the observer ratings, hence a comparison between self- and other- ratings could not be computed), the third exploratory hypothesis was:

H₃: age and gender will be positively associated with DC ratings (with older workers and women receiving higher ratings).

Even though DC ratings are not necessarily correlated with concurrent measures of performance (Fleenor, 1996) the aim of development centre participation is to stimulate future development activities and motivate participants to instigate changes to their careers. If DCs do trigger such long-term behaviour changes, then DC ratings should be associated with future participation in development activities and changes to participants' careers. The last hypothesis was:

H₄: that DC ratings, changes in DSE and nAch, gender and age will be positively associated with T₄ development outcomes (participation in development and training activities and changes in individuals' careers).

6.2 Organizational context and study settings

This study combined data from three different organizations as it is rare to be able to sample a sufficient number of DC participants in any one organization. The DC design and competency based frameworks that underpinned the DC design in each organization were remarkable similar, as set out below, although there were variations in the organizational context.

6.2.1 Sample One

Sample One [O₁] was drawn from the head office of a national UK public sector organization which had recently received a government grant to implement eight customised DCs. Participation in the Centres was voluntary, and employees (N = 793) could either nominate themselves or seek nomination via their line manager or the organization's HR department. Places were allocated on a 'first come, first serve' basis. The DCs were based on a competency-based framework (six dimensions) which had been devised specifically for the DCs and a related 360-degree feedback programme. Each DC had six participants and three observers (external consultants) and consisted of seven exercises, such as role-plays and an in-tray and lasted three days. Each centre concluded with a self-review (candidates' summary of performance in the centre and current stage of development), and was followed by feedback on each of the exercises. No formal decisions were based on the centre; it was up to each candidate to formulate a personal development plan with their line manager to further

their development. Participants were rated on a 6-point scale ranging from ‘extremely effective’ to ‘not at all effective’ (an option for ‘not applicable’ was also given; coded as ‘0’). As the organization had recently obtained IIP it took part in this study research in order to document the evaluation of its on-going development initiatives to the IIP inspectors.

6.2.2 Sample Two

Sample two [O₂] was drawn from a large UK organization which had commissioned DCs as part of a leadership development programme. A substantial percentage of managers were going to retire during the next few years, and due to the safety-critical nature of the work involved, it was intended to develop managers already familiar with a pervasive safety culture through the ranks, rather than recruit from outside. In addition, demands on managers had been changed as the organization had changed from public sector to a public/ private partnership. Ten centres were run in total. Each DC participant had been identified as having ‘Significant Potential’ (defined as being able to advance over more than one staff grade in the short to medium term and as ‘staff, who have the *aspiration, motivation and potential* to progress’ [Internal documentation, italics added]) by their immediate line manager in advance of the annual appraisal round. The aim of the DCs was to foster such potential and give a recommendation (‘Well developed’, ‘Developed’ or ‘Development Need’). DCs were based on the organization’s competency-based framework which had been developed specifically for the leadership programme and had eight dimensions. DCs consisted of six business simulation exercises, including discussion of a priori collected 360-degree feedback, an in-tray exercise and group exercises. Each DC had six participants and three observers (trained senior managers) and lasted two and a half days. Ratings were made on the above three-point scale per exercise and per competency. There was a structured individual feedback session at the end of the centre which was used to formulate a personal development plan for the candidate to take away and work on with their line manager.

6.2.3 Sample Three

Sample Three [O₃] was drawn from a local government department in the South West of the UK (N = 20,000). The purpose of the DC was to identify

management potential for candidates elected to a ‘fast track’ programme. The development centre (one centre for 12 participants) was devised by a consultancy and based on a competency-based framework (seven dimensions) developed specifically for this purpose. Senior managers were trained and served as observers; two members of the organization’s HR department were the administrators. Candidates were nominated to the centre by their line managers; nominations were approved by the HR department. The ratio of observers to participants was one to two; the duration of the centre was 2.5 days. The DC consisted of ten exercises in total. Ratings were made per exercise per competency on a 4-point scale ranging from ‘no evidence’ to ‘achieving’. Participants received extensive verbal feedback from the observers at the end of the DC, and a detailed written report approximately three weeks after participation.

6.2.4 Comparison of DC processes for O₁, O₂ and O₃

The DCs across all organizations had clear similarities being based on competency-based frameworks with similar dimensions (such as commercial awareness, business knowledge and communication skills). The centres also comprised a similar array of exercises, such as 360-degree or peer feedback, business simulations and structured interviews and individual feedback was given at the end of the development centre, rather than after each exercise. Although participants from O₂ and O₃ received a ‘development recommendation’ based on their performance on the exercises (participants for O₁ received feedback on each dimension and exercise rather than an overall rating), no formal decision to promote candidates was made on the basis of DC ratings alone. Rather, all three organizations emphasized to participants that DC participation was a first step towards developing an effective development plan that required follow up with the respective line managers. The similarities and differences for the DCs are summarized in Table 19.

Table 19: Differences and Similarities DCs O₁, O₂ and O₃ for Study C

	Nomination to Centre	Number of Competencies	Observers	Ratio observers to candidates	Number of exercises	Rating scales	Duration in days	Feedback
O ₁	Candidates nominate themselves	6, examples were 'business vision, 'working with others'	Psychologists	1:2	6	7-point scale on each exercise for each competency	3	Verbal feedback given at the end of centre
O ₂	Candidates with possible 'significant potential' put forward by line manager; agreed by HR and senior management	6, examples were 'commercial awareness', 'personal impact'	Trained senior managers	1:2	7	3-point scale rating on each exercise for each competency	2.5	Verbal feedback given at the end of centre
O ₃	Candidates with 'development potential' nominated by line manager, approved by HR	7, examples were 'achieve excellence, collaborate and cooperate'	Trained senior managers	1:2	10	4 point scale rating on each exercise for each competency	2.5	Verbal feedback given at the end of centre, plus written feedback report to candidate app. three weeks after participation

6.3 Methods

6.3.1 Sample statistics

In all, 93 out of 107 total DC participants responded at least once, equalling an overall 87 % response rate. 86 participants responded both before and after participation and were included in the statistical analyses testing H_1 to H_3 . The average age was 40 years ($SD = 8.00$) and the average tenure 10 years ($SD = 7.05$). The gender ratio was 53.3 % male and 26.7 % female (20 % missing, due to missing data at T_1). Follow up statistics were available for 47 employees, which were used for the following descriptive indicators and for the analyses testing H_5 . (NB: There were several administrative reasons why a reduced response rate occurred at different time points. Induction packs for O_1 had already gone out for the first two DCs at the commencement of the research resulting in a reduced T_1 sample; DCs overran substantially in O_2 , resulting in a reduced number of T_2 respondents; and DC ratings were lost for two participants. Due to the timeframe of the present research, it was not further possible to collect follow up data for 18 participants from O_2 .)

6.3.2 Design

Study C employed a quasi-experimental related design, which compared measurements taken before, shortly after the DC and six months after DC participation, (staggered for each group of DC participants) as summarised in Table 20.

6.3.3 Procedure

6.3.3.1 Initial Consultation

After extensive consultation in all organizations which involved interviews and discussions with the respective HR departments, line managers as well as external consultants involved in the development centre process, questionnaires were designed and customised for the respective organizational context. The lists of development activities varied slightly between the organizations, please refer to Appendix D which shows how the activities were assigned to the various types of activities.

6.3.3.2 Questionnaire distribution and collection of data

T₁ surveys were distributed to DC participants with the DC induction pack (containing directions to the venue and general information about the format) which was sent out approximately two weeks before each centre. Participants were asked to post completed forms directly to the researcher. At T₂, candidates took part in the DCs and received developmental feedback. The DC observers collected the DC ratings per participant and forwarded these to the researcher in a spreadsheet after the centre. T₃ surveys were completed at the end of each DC just after the individual feedback sessions and collected by the DC administrator who posted these directly to the researcher. T₄ surveys were distributed to all DC participants via internal mail six months after participation, participants were asked to mail completed surveys directly to the researcher. Staff numbers (names for O₃) were used to identify participants over time and no individual data were disclosed to the organization. Respondents were assured of confidentiality at each time point.

6.3.4 Measures

Please see Appendix C for samples of the questionnaires used.

6.3.4.1 Survey piloting

Initial versions of the questionnaires were piloted with two human resource managers and an occupational psychologist in O₁, with three human resource managers and an occupational psychology consultant (who had been involved in setting up and running the development centres) in O₂; and with two human resource managers and two line managers in O₃. All pilot participants were invited to comment on language, ease of instructions and layout. A number of questionnaire items were reworded following participants' suggestions in order to fit with the in-house terminology (e.g. substituting 'subordinate' for 'jobholder'); for several scale items the word 'organization' was replaced with the name of the actual company in order to increase face validity.

6.3.4.2 Summary of measures

The measures for each time point, n and response rate are summarized in Table 20.

Table 20: Overview of Measures Study C

	T ₁	T ₂	T ₃	T ₄
N and response rate (out of total DC participants)	85 out of 107 total participants, 79% response rate	86 out of 107 DC participants, 79% response rate	89 out of 107 DC participants, 83% response rate	49 out of 107 participants, 46% response rate
Collection of Data	Self-reports distributed prior to Development Centre Participation with candidate information pack	Participation in DC; candidates obtain developmental feedback; DC ratings collected by observers	Surveys distributed immediately after Development Centre Participation	Follow up surveys sent out to candidates six months after participation
Measures	Individual differences: DSE nAch Demographics: Age Gender Control variables: Tenure, department and job role	DC ratings	Individual differences: DSE nAch Reactions: Perceived utility	Development outcomes: Participation in Training activities Formal development activities Career-related development activities Informal development activities Career Movement

6.3.4.3 Individual differences

a) DSE and nAch

DSE was measured at T₁ and T₃ by three items (Maurer and Tarulli 1994). Studies A and B had used two items only. The third item (“I could succeed and learn as well as the next person in a class designed to improve skills”) was awkwardly worded and ambiguous; this perhaps being due to the fact that the scale had initially been developed in a US context (where the word ‘class’ may be more relevant to US DC participants). Adding the third item improved the internal consistency in this study however, average coefficient alpha was .82 at T₁ and at T₃. The correlation between T₁ and T₃ DSE was moderate ($r = 0.47, p < .05$), which is adequate given that nAch and DSE were expected to vary a priori.

nAch was also measured by the same four items (Steers and Braunstein 1975) as used previously. Observed coefficient alpha was .63 at T₁ and .62 at T₃. Item descriptives revealed that both measures were positively skewed, and a logarithmic transformation was applied. Gain scores were computed by subtracting scores for T₁ from T₃.

6.3.4.4 Demographic variables

Demographic variables collected at T₁ were age (in years and months) and gender (men were coded as 1, women were coded as 2).

6.3.4.5 Outcomes

a) DC Ratings

At T₂, DC observer ratings for each candidate were collected per competency, averaged across the exercises. These competency ratings were summed and averaged and converted into z-scores (as the number of competencies and rating scales differed slightly between the organizations) to produce an overall score for each candidate.

b) Reactions: Perceived Utility

Participants’ reactions to the perceived utility of the DC process were measured by ten items which were derived from a previous study that had investigated participants’ reactions to development processes from an organizational justice perspective (McDowall & Fletcher, 2004). A PCA was run to ascertain

whether the items tapped into one single construct. Although it has to be acknowledged that the sample was small for factor reduction techniques, the results (using Varimax rotation and suppressing values smaller than .4 suggested clearly that a one-factor solution fitted the items best, see Table 21.

The items loading onto the first factor were retained, summed and averaged to create an overall ‘perceived utility’ measure, observed coefficient alpha was .86. As item descriptives revealed the measure to be positively skewed, a logarithmic transformation was applied.

Table 21: Component Loadings for Perceived Utility Items Study C

	M	SD	Component 1
Item	Eigenvalue [EV] = 4.66, % variance 38.86		
Considering my personal experience with the current Development Centre format, I would consider the process fair and just	6.31	.97	.78
The current DC format is comprehensive enough to review my development needs accurately	5.60	1.31	.74
Participation in the Development Centre has given me the impetus to drive my own development	5.85	1.11	.71
The Development Centre format is suited to my job role	5.54	1.43	.67
Overall, the feedback that I received from the observers was constructive (*)	6.47	.79	.66
Development Centres generally facilitate the review and development process	5.97	.85	.65
I perceive a clear link between my participation in the Development Centre and my future development within [name of organization]	5.44	1.27	.63
The Development Centre clearly pinpointed my strengths and weaknesses and my areas for future development	5.83	1.27	.63
Overall, the feedback that I received from the observers was accurate (*)	6.38	.68	.62
I received sufficient feedback during the Development Centre	6.34	.76	.60

c) Participation in Development and Training Activities

From participant's responses to the item pertaining to participation in training and development, measures of participation were coded in four categories. Formal internal and external training courses were coded as participation in training; there were three different categories for development. Participation in career-related development activities, which were 360 feedback, mentoring, coaching, secondments and temporary promotions were coded as 'career-related activities. There were two additional separate categories for participation in other formal development activities (such as conferences, seminars) and also participation in informal development activities (such as visiting the intra/internet or development library for information). Responses were first coded as the types of activities employees had engaged in per category (where 'no activities' was coded as 0, 'one type of activity' as 1, 'two types of activities' as 2); and then collapsed into a categorical 'taken part'/'not taken part' response.

c) Career Movement

This was the same measure as in Studies A and B.

6.3.4.6 Control variables

Tenure (in months and years) was recorded as this measure is highly correlated with age. Participants' department and job role were recorded to determine whether departments and job roles were adequately represented amongst the DC participants.

6.3.4.7 Additional information

Participants were invited to provide open comments at the end of the questionnaire at T₃. Missing data were replaced with the item mean for scale responses, age and tenure, and scored as such for other variables. All comparisons were conducted list-wise, unless indicated otherwise.

6.4 Findings

6.4.1 Pair-wise comparisons

Testing H₁, levels of DSE increased from T₁ to T₃, whereas levels of nAch decreased. A matched samples t-test established that the difference for both means

($t_{nAch} (85) = 3.31, p < .01$; $t_{DSE} (84) = -3.73$) was significant at the .01 level for a one-tailed test, however not in the expected direction for nAch, see Table 22.

Table 22: Paired Samples T-Tests

	M	SD	SE Mean	95% Confidence Interval		t	Df
				Lower	Upper		
nAch	.3478	.97	.11	.14	.56	3.31**	85
				Lower	Upper		
SE	-.4078	1.01	.11	-.63	-.19	-3.73**	84

** $p < .01$

6.4.2 Bivariate analyses

Intercorrelations were computed using Pearson’s Product Moment Coefficient, a full summary is provided in Table 23. Considering the control variable first, tenure was (as expected) highly correlated with age, but not with DC ratings or any of the other outcome variables; and therefore not included in the multivariate analyses.

T₁ nAch ($r = .37, n = 86$) and T₁ DSE ($r = .33, n = 86$) were significantly associated with the DC ratings, as was age ($r = .37, n = 85$), but only the gain scores for nAch had a significant correlation with the ratings ($r = -.36, n = 85$); neither variable was associated with perceived utility. None of the T₄ outcome variables was associated with either changes in nAch, DSE or demographic variables, hence there was no support for H₄.

Table 23: Intercorrelations Study C

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T ₁ (Av n = 84, range 83-86)																		
1. Tenure	10.48	7.16	-	-0.17	0.28**	-0.02	0.12	-0.18	-0.03	0.15	0.00	0.01	-0.12	-0.12	0.09	-0.26	0.14	0.07
2. Gender				-	-0.03	-0.15	0.22*	0.24*	0.11	0.18	-0.23*	0.07	0.03	-0.20	-0.14	-0.12	0.07	-0.18
3. Age	39.17	8.00			-	-0.08	-0.18	0.37**	-0.31**	-0.04	0.20	-0.17	-0.01	-0.11	0.10	0.01	0.11	-0.04
4. nAch	5.40	.95				(.82)	0.35**	-0.46**	0.33**	0.20	0.58**	0.21	0.17	-0.11	-0.07	0.08	-0.08	0.19
5. DSE	5.60	1.02				(.63)	-0.33**	0.39**	0.47**	-0.04	0.69**	0.07	0.07	-0.21	-0.22	-0.11	-0.19	-0.09
T ₂ (Av n = 85, range 81-86)																		
6. DC rating								-	-0.25*	-0.01	-0.18	-0.36**	0.12	0.18	0.16	0.03	0.15	-0.08
T ₃ (Av n = 86)																		
7. nAch	5.02	.87							(.82)	0.18	-0.58**	0.28*	0.07	-0.24	-0.16	-0.02	-0.15	-0.07
8. DSE	5.96	.90							(.62)	0.02	0.02	-0.32**	0.23*	0.02	-0.03	0.08	-0.05	-0.03
9. Gain nAch										-	-0.06	0.08	0.08	0.11	0.07	0.08	0.06	0.21
10. Gain DSE											-		-0.11	-0.27	-0.24	-0.19	-0.18	-0.08
11. Perceived Utility	5.75	.88											-	0.14	-0.02	0.04	0.08	0.11
T ₄ (Av n = 47)																		
12. Participation Training														-	0.35**	0.29*	0.07	0.16
13. Participation career activities															-	0.14	0.10	0.24
14. Participation formal activities																-	0.10	0.02
15. Participation Informal activities																	-	0.19
16. Career movement																		-

** Correlation is significant at the 0.01 level (two-tailed). * Correlation is significant at the 0.05 level (two-tailed). Figures in () denote coefficient alpha

6.4.3 Regression

In order to further test H₂ and H₃, the DC rating was regressed to age, gender, and T₁ scores for DSE and nAch respectively. The model was overall highly significant (R square = .34, adjusted R square = .31); and all variables but T₁ DSE were significant independent predictors, see Table 24.

Table 24: DC Rating Regressed to Age, Gender, T₁ DSE and T₁ nAch for Study D (n = 84)

	B	SE	β
Gender	0.42	0.20	0.20*
Age	0.05	0.01	0.39**
DSE T ₁	-.12	.13	-.11
nAch T ₁	-.44	.14	-.39**

* p<.05, ** p<.01

6.5 Discussion

DSE increased significantly following DC participation, but nAch decreased; thus H₁ was partially supported. Although it was hypothesized that nAch would increase, the observed pattern is consistent with findings from a promotional AC context (Fletcher, 1991).

As hypothesized, gender and age were associated with DC ratings. The association with and T₁ nAch was significant, but in the opposite direction; T₁ DSE was not significant. For the demographic variables this observation may be explained through underlying levels of self-awareness, as women and older workers have been shown to be more aware of their strengths and weaknesses (Halman & Fletcher, 2000). But it is also possible that liking and a ‘similar to me’ bias has a role to play here (see Chapter 4). DC raters in two of the three organizations were senior managers (with a higher age profile), who perhaps rated older participants higher. Similar information was not available for gender, but it is possible that the gender breakdown of raters were biased towards either gender.

T₁ nAch was a significant *negative* predictor, but not DSE. As nAch is more future-focused, this is perhaps a more relevant motivational construct in the context of development, but it is surprising that this association was negative. Perhaps this indicates that high levels of nAch are associated with candidate performance on DC exercises that is not rated highly by observers, because participants appear overly confident, or not focused on the exercises themselves.

No associations with the outcome measures at T₄ were observed. The measures of participation for the quantitative studies in this Thesis (which divided measures of participation into categorical indices of participation in different types of activities) may be too crude. As evident from Chapter 3, a lot of development activity may happen informally, and it is difficult to capture these in quantitative measures. With regard to the utility measure, reactions here were uniformly high (the mean was 5.75 on a 7 point scale) and participants did not use the full rating scale. A possible explanation is that being singled out to participate may result in a process of post-hoc rationalisation, where participants automatically ‘reward’ participation with inflated ratings (“I got the opportunity, therefore it must have been great”). These ratings may actually not reflect whether or not the exercises and the feedback were genuinely useful to each participant. At the same time, the sample dwindled over time; due to staff rotation, absence, and turnover, the response rate was relatively poor at T₄. With a bigger sample size, several of the hypothesized associations would have been statistically significant.

6.5.1 Study limitations

It had been part of the initial draft design for this study to conduct comparisons between DC participants and a matched control group for O₁ and O₂. This would have provided better evidence as to whether DC participation affects employees in the long-term, or whether any effects are simply due to maturation over time. However, due to organizational constraints (O₁ was badly affected by the events of September the 11th, and also moved head offices during the research period) it had only been possible in O₂ to collect data from 17 volunteering non-participants at T₃. Participants were slightly older (M = 45.49 compared to M = 42.07) than in the comparison sample and a higher percentage of men replied in the comparison sample (61.1 % compared to 47.4 %). Due to the sample size, and as the comparison sample

did not fully match the study sample, no inferential statistical analysis was conducted to compare the two groups. Comparing the means, the study sample scored higher on DSE (5.80 compared to 5.60) than the comparative sample, the mean number of types of activities which employees engaged in at T₄ (3.75 compared to 2.22) and career movement (1.77 compared to 1.33), giving some indication that DC participants did better on average. As participation was entirely self-led and voluntary however, the difference may be due to the fact that those who are more motivated and perform to a higher standard anyway are more likely to put themselves forward for development centre participation. In all, it cannot be inferred from the results with certainty that individual-level measures changed as a result of DC participation, as any observed effects could be due to maturation over time.

In addition, the participants for this study were sampled across three different organizations. This was possible, as the DC design had strong similarities and the same measures were used in each organization. Nevertheless, it is acknowledged that there may have been a variety of other, organization-specific, factors that may have influenced the results. To start, the agenda for implementing the centres varied from a true developmental purpose in O₁ to explicit fast-tracking in O₃. It cannot be discounted that participant characteristics that were not accounted for in the study varied considerably, such as career motivation. Equally, participants may adjust their behaviour more in a DC setting if they know that organizational decisions may be (part-) based on the ratings. These potentially confounding variables were not controlled for in Study D; which is a potential drawback that applies in general to applied research in organizational field settings (Fletcher, 1988).

6.5.2 Conclusions and implications for Study D

The findings presented here have several implications. It appeared that individual differences changed as a result of participation, and both these gain scores and age and gender were associated with DC ratings. However, there was no association with T₄ outcomes. The outcome measures here drew from earlier research by Birdi et al. (1997) and Maurer et al. (1994, 2002) which holds that participation in different types of activities has different precursors. The design of the study was based on training effectiveness research, which is usually based on pre- and post-comparisons. Given that development is so on-going and future-focused, it is possible

that such quantitative approaches are not suited to the topic, as it may be difficult to reduce outcomes to a 'tick list'. A qualitative, process-driven approach may establish whether a) there is such a difference between training and development activities, b) how development outcomes could be defined, and c) what makes development effective.

Chapter 7: How do managers conceptualise development and training?

7.1 Introduction

As discussed in Chapter 3, the literature in the field of management and employee development suffers from a lack of coherent frameworks and adequate definitions (Latham & Seijts, 1998). There is some agreement that development is wider-ranging, more long-term and more career-focused than job-specific training (Rosow & Zager, 1988; Noe & Wilk, 1993; Birdi et al., 1997; Maurer et al., 2002; Maurer et al. 2002; Warr, 2002; Maurer et al., 2003). Most published studies have taken a quantitative approach, for example the body of literature on *participation* in development; where measures have included attitudes about development, demographic variables and self-efficacy as well as perceived benefits of development (Noe & Wilk 1993; Maurer & Tarulli, 1994; Bird et al. 1997). Such quantitative approaches attempted to define the construct of development by differentiating different types of activities. To illustrate, Birdi et al. (1997) used what they termed ‘dimensions’ (e.g. are activities mandatory or voluntary) and ‘types’ (e.g. training, informal activities, education sponsorship).

Noe and Wilk argued (1993) that it is necessary to collect data from employees directly through self-report measures, rather than rely on seemingly objective data. Other sources may not be able to provide an accurate snapshot of on-going development activity at any one time and it may be difficult in practice to obtain accurate information from other sources. Central HR records, such as appraisal documentation, may be inaccurate or lag behind and line managers are not always in a position to observe directly all types of activities which employees engage in.

The use of survey methods in this context is limited by two underlying assumptions. First, it is assumed that employees have a shared understanding and definition of development as well as of the different types of activities. Secondly, it is assumed that employees are able to remember retrospectively all development activities they have engaged in, and can remember these when answering ‘tick lists’. Studies A to C showed that both assumptions can be problematic for the following reasons. A number of development activities are informal (Maurer et al., 2003) and occur without prior planning. These informal activities (as well as more formal

development activities that have not been flagged up as such) may not be salient to employees. It can therefore not be inferred with certainty that retrospective quantitative accounts of development are accurate. Any longitudinal investigation is also affected by dwindling sample sizes and the difficulty to control for any extraneous variables that may have affected development outcomes, such as the budget available to sustain training and development activities.

As discussed at the end of Chapter 3, there is little evidence in the research literature that demonstrates how employees and their managers experience and *define* development. Some researchers have clearly distinguished training and development as different types of activities (Warr, 2002). Others have categorised training as a subset of formal development activities (e.g. Maurer & Tarulli, 1994; Birdi et al., 1997). It clearly needs to be investigated how people in organizations conceptualise development and training, whether they are seen as different entities or how they overlap. If they are seen as conceptually different, it needs to be ascertained how managers' make decisions about different types of activities, and whether different criteria are applied to development or training decisions.

Moreover, findings from the two longitudinal studies reported in this Thesis showed that there are methodological difficulties associated with the research of development outcomes. Although there is potential merit in applying frameworks derived from training research and evaluation to provide structure and guidance for the investigation of development, it is difficult to contain a holistic measure of development activity in a questionnaire index. Frequency counts or simple categorisations do not capture process-related variables such as links between different activities.

Thus, there is a need to investigate how development outcomes are defined in organizations, and whether these differ from training, as there is little research whether, and if so, how, employee development is effective in organizational practice.

Therefore Study D was aimed at managers who are usually the 'gatekeepers' to development and training by contributing to decisions on what kind of activities employees engage in. This study took a realist epistemological perspective, which holds that objective facts can be uncovered with qualitative methods (e.g. King, 2004), rather employing the hypothetico-deductive method that is associated with

positivist epistemology. Semi-structured interviews with open-ended questions were utilised to solve what Mason (1996) calls a ‘mechanical puzzle’:

How do managers define and conceptualise effective development, does this differ from training, and if so, in what way?

How do managers make decisions about training and development, do they use different criteria for different activities?

How do managers measure successful outcomes for training and development, do they vary between different activities?

What makes training and development useful and successful in organizations from managers’ points of view, and what are the potential barriers?


This was the first study that investigates how training and development are conceptualised by managers in personal accounts and a different methodological approach to the earlier studies reported in this Thesis needed to answer these research questions. A qualitative study made it possible compare differences and similarities between people’s personal accounts. Interviews were the best method to collect the data since they are flexible and audio-taping allowed thorough transcription, rather than having to rely on often patchy research notes and retrospective access to the language which participants use (Silverman, 2000).

7.2 Methods

7.2.1 Summary of analyses

As depicted in the overview shown in Table 25, the analyses for this study started with the review of the literature and resulted in the formulation of further research questions arising from the findings of this study.

Table 25: Summary of Analyses

	1. Review of research literature, findings from previous studies to generate hypotheses, decision to take qualitative approach
	2. Purposive Sampling
	3. Development of Interview Schedule
	4. Transcription of Interviews
	5. Template Analysis (Thematic Coding) of the Transcripts
	6. Formulation of further research questions

7.2.2 Sample

This study had a purposive sample (Silverman, 2000) of 20 managers (12 male, 8 female) from 20 different organizations. Inclusion criteria were that participants had responsibility for a) identifying development and training needs in employees and b) for making decisions on taking appropriate action (e.g. recommending attendance of a particular course or activity following a staff appraisal). Nine managers were approached directly as they had participated in prior research; the others responded either to a call for participants via an email contact network for psychologists or to a brief notice asking for volunteers on a web-based HR discussion forum. Participants were from different company sizes (ranging from approximately 150 to 10,000 employees) and industry sectors (such as IT services, financial services, NHS, Local government, emergency services and retail); the number of direct reports varied from two to nine. The industries represented are shown in Table 26.

Table 26: Industries Represented in Sample Study D

Industries	N
Financial Services	4
Emergency Services	4
IT services	3
Retail	3
Telecommunications	1
Event Management	1
Local Government	1
NHS	1
Postal Service	1
Education	1

7.2.3 Interview schedule

As participants were dispersed in different locations, the interviews were conducted over the telephone. Each interview lasted approximately 30 minutes, commencing with a brief introduction to the nature and topic of the research (“to fill a gap in research, as managers have not yet been asked how *they* conceptualise training and development”). To start, each participant was assured that names and organizations were anonymised in the analyses; the rationale for tape-recording the interview had been explained and consent to proceed was obtained. Next, their industry sector, current management responsibilities and job role, as well as the size of their organization and the size of their team (or unit or department) were recorded.

The main interview consisted of a series of open-ended questions around managers’ definitions and experiences of development and training in a work context. It incorporated the Critical Incidents Technique (Flanagan, 1954) to ask participants for a particular example of an effective, and for an example of a not so effective, development or training activity which they had witnessed with a particular employee. An example of the semi-structured interview schedule is provided below, as it maps onto the research questions; the actual schedule from Interview One is appended in Appendix X:

- a) Definitions of development and training:

How do you [as an individual, but in a work context] conceptualise (probe: define) ‘training’ and ‘development’?

Imagine you had different pots that you can sort different types of activities into: what activities would you categorise as a) 'training', or b) 'development'? (Probe: Do you need a third pot, and why?)

What do you think is different about 'training' and 'development' [The order was reversed for some participants, asking about 'development' first]

b) Decisions about development and training:

Under what circumstances or conditions are 'training' or 'development' most useful? (Probe: what would make you choose training rather than development activities, or development rather than training, for a particular employee?)

If you had one pot of money [an agreed budget], and you could send an employee either on a training course or use it to fund a development activity, what criteria would guide your decision?

c) Examples of measures and outcomes:

Can you give me an example of a time when you sent an employee for a development or training activity (Probe: or witnessed an employee undergoing one) that you thought was particularly successful?

What were the outcomes that made you think that it was so successful?

Can you also give me an example of an activity that you thought was not successful?

What made you think that this was not successful?

As a ball park figure, for you as a manager, what kind of development and training activities do you find most useful for employees? (Probe: Please give me some practical examples)

In summary, what are the factors that are most likely to make development and training effective? (Probe: Please give me some practical examples)

Whilst conducting the first few interviews, it appeared that participants found it much easier to define and talk about training, then to define and talk about development. As people had to be prompted, from there on development was usually mentioned first and managers were probed for concrete examples with more direct

questions where appropriate (e.g. ‘Where do you think activities such that are based on feedback fit into this?’).

7.2.4 Template Analysis

The audiotapes of the interviews were transcribed verbatim and edited into a single transcript. Template Analysis was used to code the transcripts (King, 1998). Template analysis can be used within a variety of methodologies and epistemological positions (King, 2004). It is most commonly used to analyse interview transcripts, but could be used for any textual data through the development of a set of codes which are then summarised and organised in a meaningful manner.

A template is “essentially a list of the codes or categories that represent the themes revealed from the data that have been collected” (Saunders, Lewis & Thornhill, 2003, p. 395). A code is a “label attached to a section of text to index it as relating to a theme or issue in the data which the researcher has identified as important to his or her interpretation” (King, 1998, p.119). Codes can be descriptive, or interpretive. Typically, templates are presented in a table where each column refers to a level within the template (with the first column representing the highest level) and each row refers to codes and sub-codes. The aim is to code all segments of text which appear relevant to the research questions in a hierarchical manner, whereby higher order codes (broad themes) encompass sub-codes (successively narrower and specific themes). Any codes that do not prove useful for the analysis can be deleted, higher order codes can become lower order codes and categories of codes can also be collapsed to form a simpler structure. King (1998, p.128) uses an example of a mental health study in his Chapter on Template analysis, where an example for a higher order code is “case background history” and an example of a third level specific code following on from this is “Patient’s personal history”.

The number of levels will depend on the data and the research questions, but generally ranges between two and four levels; the current study had two levels in the initial template, and three levels in the final template. An example for a first level code in the latter was ‘definitions’; this was used to group second level codes such as ‘development activities’, which in turn grouped third level codes such as ‘feedback-based development’.

7.2.5 Transcript notation

The following notation was used, following general guidelines for transcription conventions (Silverman, 2000), see Table 27:

Table 27: Transcript Notation

Notation	Meaning
IR	Interviewer
I	Interviewee
(...)	Dots in parentheses indicate a pause
()	Empty parentheses indicate transcribers inability to hear what was being said
(word)	Words in parentheses indicate possible hearings, where the transcriber was unsure
(I laughs)	Denotes transcribers description
<u>word</u>	Underscoring indicates some form of stress or emphasis
[name of organization]	The names of actual organizations have been anonymised, indicated with square brackets
[specific job title]	Specific terms, such as the names of particular programmes, titles, or job roles, have been generalised in the text

7.2.6 Development of the final Template

The analysis commenced inductively by repeatedly listening to a sub-set of five transcripts (Interviews One, Three, Six, Eight and Nine) to identify recurring themes across questions (rather than for each question individually). Next, these transcripts were edited into one single document, and the interviewer questions deleted; an initial set of codes emerged from this document that was largely descriptive, as seen in Table 28.

Table 28: Template 1 (Preliminary codes)

1. Overarching definitions	1.1. Examples of training activities
	1.2. Examples of training activities
2. Differences	2.1. Content
	2.2. Impetus and responsibility
	2.3. Focus
	2.4. Time-frame
	2.5. Degree of formality and specification
	2.6. Who controls?
	2.7. Learning
3. Links	3.1. Provided by same function in organizations
	3.2. Development builds on training
4. Decision Criteria	4.1. Needs: individual or organizational
	4.2. Resources
	4.3. Trainer/ manager skills
	4.4. Will the outcome be quantifiable; projected returns
	4.5. Priorities : training over development?
	4.6. Budget
5. Success Factors	5.1. Opportunity for practical application in job and transfer of learning
	5.2. Individuals' motivation and attitudes and buy in
	5.3. Pitching activities at the right level
6. Barriers to effectiveness	6.1. Lack of organizational commitment and investment
	6.2. Lack of motivation and buy in
7. Outcomes	7.2. Development outcomes are personal
	7.2. Training outcomes relate to the job

Even at this preliminary stage, the transcripts seemed to show that managers were able to differentiate between the conceptualisation of training and development, since more differences than links or overlap appeared. The preliminary template was then used to analyse the remaining transcripts one by one. The initial codes were used as a guide, critically reflecting on whether the number of themes was adequate to capture the content, but also to ensure that there were no redundant codes. Each transcript was read forwards (starting with the first section), and then again in reverse order, starting from the last section, identifying all sections of text which were relevant to the research questions (King, 1998). The content was constantly compared to the existing template, adding new codes and dropping redundant codes throughout. This process continued until no new codes emerged from the data, a process known as

saturation (Patton, 1980). To illustrate some of the changes, the code “learning” was promoted from a second level code to a first level codes and relabelled “process – learning”, all other first level codes stayed the same. It was further decided that a third level of coding was needed to transcribe the data in detail. For instance, “Training: transfer of knowledge” was labelled a second level code for “success factors”, third level codes for this were “opportunity to apply in job” or “timing. As a last step, all transcripts were read one last time, starting with the last page of the edited transcripts and finishing with the first page, to ensure that no relevant data had been missed. The result of this analysis was the final Template as shown in Table 29.

Table 29: Final Template

1. Definitions	1.1. Personal definitions	
	1.2. Training activities (see Table 29 for detailed overview)	
	1.3. Development activities (see Table 29 for a detailed overview)	
	1.1.1. Training in one sentence	1.1.2. Development in one sentence
		1.2.1. Formal training: internal or external
		1.2.2. Mandatory Training: health and safety first aid, industry-specific training (financial skills, editing skills)
		1.2.3. Specific skills training
		1.2.4. Self teach (videos, books, CDs etc)
		1.2.5. Distance learning
	1.3.1. Feedback based development (360, use of psychometrics)	1.3.2. Discussions with manager (formal or informal)
		1.3.3. Team activities
		1.3.4. Seminars
		1.3.5. Research on internet, intranet
		1.3.6. Informal activities: e.g. networking, unplanned meetings
	1.3.7. Coaching, mentoring, buddying	1.3.8. Development Centres
		1.3.9. Personal Development Plan
		1.3.10. Workshops

3. Differences (in administration)		
	3.1. Content	<p>3.1.1. Training: skills based, technical, focused around the job</p> <p>3.1.2. Development: interpersonal, softer skills, can contain career-related element about change in job role</p>
	3.2. Time-frame	<p>3.2.1. Training: here and now, present, confined to time-period</p> <p>3.3.2. Development: on-going, directed to future, open-ended</p>
	3.3. Formality and planning	<p>3.3.1. Training: always planned</p> <p>3.3.2. Development either: ad hoc and unplanned or pre-planned</p>
	3.4. Provider	<p>3.4.1. Training: provided by organization, internal or external course</p> <p>3.4.2. Development: either provided by manager, by external consultant or provider; or not provided but solely initiated by learner</p>
4. Decision criteria	4.1. Level of job knowledge and job performance	<p>4.1.1. Training: if skills are lacking and performance is poor, training required</p> <p>4.1.2.2. If all necessary skills present, development next step; maximise performance</p>
	4.2. Specificity of objectives and projected returns	<p>4.2.1. Training for a priori defined improvement in clearly defined skills; often an organizational priority</p> <p>4.2.2. Development if more general increase in knowledge or personal growth required; less visible; change in attitudes and behaviour (long-term)</p>
	4.3. Training or manager skills	<p>4.3.1. Can the manager help with the activity</p> <p>4.3.2. Can the course be delivered in-house</p>

5. Process - Learning	4.4. Individual preferences	4.4.1. Learning by doing
		4.4.2. Reflective learning
	4.5. Budget	4.5.1. On the job activities may be more cost-effective
		4.5.2. More difficult to justify development, as outcomes less visible
	5.1. Knowledge acquisition	5.1.1. Training: adding new knowledge to existing skill set
		5.1.2. Development: taking knowledge to deeper level, learning through feedback, learning through self-reflection, learning through collaboration
	5.2. Focus	5.2.1. Training: extrinsic, on the task, visible
		5.2.2. Development: intrinsic, focus on internal change within the learner, on heightened awareness
	5.3. 'Locus of control'	5.3.1. Training external, driven by organization
		5.3.2. Development internal, driven by learner
	5.4. Responsibility	5.4.1. Training: with organization, who is also responsible for evaluating outcomes
		5.4.2. Development: responsibility with learner and/or line manager

6. Success factors	6.1. Training: transfer of knowledge	6.1.1. Opportunity to apply new knowledge in job
		6.1.2. Pitched at right level
		6.1.3. Testing of knowledge at the end and/ or leading to recognised qualification
	6.2. Development: individual differences	6.1.4. Timing
		6.2.1. Employees' willingness to engage and take ownership
		6.2.2. Willingness to go 'outside comfort zone'
	7.1. Training: easy to measure and quantify	7.1.1. easy to measure
		7.1.2. Clear link to a priori objectives
		7.1.3. If successful improvements in performance on the job immediately visible
	7.2. Development outcomes: personal	7.2.1. Subjective and personal, outcomes could be private to individual
7.2.2. Open-ended, envisaged outcomes liable to change as development occurs		
7.2.3. Can be about achieving excellent in current job, or about career change in terms of lateral move or promotion		
7.2.4. Feeling of being appreciated by organization		
7.2.5. Change in mindset such as more positive attitude		
7.2.6. Learning how to learn: about prioritising one's own development		
7.2.7. Organizational level outcomes (retaining staff, morale etc)		

8. Potential barriers to effectiveness	8.1. Lack of organizational commitment to training and development	8.1.1. Reluctance to take people out of job
		8.1.2. Lack of investment
	8.2. Potential barriers to training success	8.2.1. Interruptions, not being able to switch off
		8.2.2. Trainee resistance
		8.2.3. Lack of trainer skills and empathy
	8.3. Potential barriers to development success	8.3.1.. Content potentially too personal for manager and/ or employee
		8.3.2. Group dynamics need to be right (for group activities)

The higher order codes from the template (shown in the first column) are used in the following to describe the data in detail, illustrating each theme with quotes across transcripts. This was a succinct way of presenting the most salient findings from the thematic analysis; although it is recognised that not all transcripts are presented in equal measure. Names, company names, specific job titles and occasionally the names of actual training courses or development programmes, are omitted in order to preserve anonymity. All quotes are inserted as they were transcribed without any attempts to correct the grammar or spelling.

7.3 Findings

7.3.1 Definitions of training and development

Managers defined development and training in different ways. Development is much broader, and to do with the person rather than with the job. A manager from the emergency services, summed this up as “*I think development is for me*” (...) “*I think training as one for the job*”. Training is about the provision of specific courses, whereas development is long-term, and occurs as part of individuals’ progress in their job. The following quote from a senior project manager illustrates this in more detail:

“Development I would see as something that is a sort of on-going, development, many things feed into development. One of the things that may feed into development is training. I see training as a specific thing that is done to address either a specific need or a long-term need. Whereas development is something that can be down to a person’s day-to-day job, which ultimately should be developing them, if that makes sense. Training I would describe as a specific programme to address specific needs, development I would describe ultimately as the sort of long-term change in an individual as they work towards a specific target.”

Some, but not all, managers conveyed that development goes beyond the current job and links with employees’ personal life, whereas training is always confined to the job. Thus, employees may develop by engaging in activities in their spare time (such as doing charity work), which may result in positive behaviour changes at work.

It follows from the different definitions that the activities relating to training or development also differ. Managers generally agreed that training always refers to formal courses, which are pre-planned and specific, whereas development refers to a diverse range of activities. However, managers found it difficult to answer the second question about what activities they would group as training and what activities they would group as development by providing a list. Rather, participants remembered more activities as the interview continued.

Thus, the transcripts one more time were analysed one more time to list the different development and training activities in two columns, in ascending alphabetical order, as shown in Table 30. When planning this study, it was envisaged to conduct a content analysis by counting the frequencies for types of activities in either column. Once the data was obtained this did not appear conducive, since some activities (e.g. formal training, external training) are umbrella terms for other activities (e.g. specific technical training); and other activities could be coded in multiple categories (e.g. editing skills may be a formal course that is either provided internally or externally; or leads to a professional qualification).

Nevertheless, the list shows that for some activities, there was a clear demarcation between training and development. For instance, managers unanimously agreed that formal training, technical training and specific skills training (such as health and safety) are always training. Equally, without exception, participants classified feedback based activities (such as coaching or mentoring or 360-degree feedback) and personal development plans as developmental.

For some activities, the demarcation was less clear; any activities that overlap with activities shown in the other column are marked with (*). As shown in Table 29, several participants classed training with a 'soft' content around interpersonal issues as development, whereas at least one manager classified 'listening skills' as training, since the particular course is run formally. This links in with the distinctions between training and development in the literature on participation as discussed in Chapters 1, 2 and 3. Arguably, one distinction between training and development is the level of formality – if a course is formal, it may be classified as training; if skills are conveyed in a less formal matter, the activity may be classified as development. This links in with a code from the second level, '3.1 Formality and planning', in the final

Template: training is always formal and planned, whereas development could be planned or unplanned.

One manager said that training in software for presentations is training if the aim is to understand and use the application, but is development if the aim is to get better at communicating to an audience. Thus, another distinction is the content – a focus on hard or technical skills relates to training, whereas a focus on interpersonal skills appears to mark development activities; which related to the second level code about content in the template. Training is skills-based, whereas development is usually (although not exclusively) focused on interpersonal issues.

Several managers classed ‘giving people more challenging activities’, or different projects to work on, as development, whereas one manager classified ‘delegating work’ as training. This shows that training on the job may fall in-between training and development.

Equally, educational qualifications appeared both under training and under development. Here, the distinction appeared to be whether or not the course takes place in work-time and/ or is sponsored by the employer, this was labelled Provider (code 3.4) in the final template in Table 29. Education-sponsorship by the employer may be perceived as training, whereas education in one’s own time is development, especially if the content is non-vocational. Again, this links in with the literature on participation, which as considered the different correlates of participation in work-time and non-work time (e.g. Birdi et al., 1997; Maurer et al., 2002; Maurer et al., 2003.)

Table 30: Training and Development Activities Study D

Examples of Development Activities	Examples of Training Activities
360-degree feedback	Academic qualification*
Appraisals*	Appraisals*
Away day	Attending conferences
Browsing the internet	Company led training activities
Buddying	Copyright course
Coaching	Delegating work to someone*
Communication systems	Diploma
Feedback	Direct marketing course
Leadership training*	Distance learning
Learning about motives and motivation	Driver training
Learning about new products	Education sponsorship
Management (development) training	E-learning
Management meeting	European Computer Driving license
MBA*	External courses
Mentoring	First aid
Networking	Formal training
PDP (personal development plan)	Hard skills
Personal understanding (becoming more aware, self awareness)	Health and safety training
Presentation skills*	Html coding
Project based team work (e.g. working on different project than employees normally work on)	Internal courses
Psychometrics	Interview skills*
Qualification training*	IT training
Secondment	Learning from Videos, DVDs, books
Seminars	Listening skills*
Shadowing	Mandatory training
Soft skills*	National training programme (specific skills)
Supervision*	Presentation skills*
Team (building) events	Professional Qualification Training*
Team discussion (informal)	Project management improvement programme
Team meetings	Recruitment training
Training/ learning on the Job*	Soft skills*
Understanding others (becoming more aware)	Software training
Working on different assignment (e.g. asked to lead meeting etc)	Specific editing skills
	Specific financial skills training
	Supervisory skills*
	Technical training

Workshops	Time management skills Training on budgeting Training on customer service Training on HR procedures (disciplinary action) Training on operational requirements Training/ learning on the job*
-----------	--

Given the focus of the first two studies reported in this Thesis, several managers were prompted directly about staff appraisals, and how they relate to training and development. Some managers classed these as training, because they constitute a formal process. Some managers classed these as solely developmental. Others said that they have elements of both, as the feedback is developmental, but that training needs and a training plan can arise out of the process. One manager also said that shadowing can fit both into training and development since shadowing could be done to get someone to learn a specific task, or as a developmental exercise for someone who had perhaps reached a plateau in their career. Finally, the activities discussed above were categorised as shown in the Final Template, Table 29, under the second order code ‘1.4: Activities that could be either training or development’. The differences will be addressed again below in Section 7.3.3.

Linking these findings to the classification of activities into either training or development as done in studies A to C, the above analysis shows that such a distinction is not always clear cut, as several activities were classified as either training or development by different managers. To illustrate, Studies A to C always classified formal courses as ‘training’ whereas some managers from this sample would see them as developmental if the content is focused around soft skills. In terms of interpreting the findings of the previous studies, the implication is that precursors of participation in either type of activity may not differ or indeed be difficult to establish if boundaries between the types are this blurred.

7.3.2 Links between training and development

Interestingly, two managers used the example of learning how to drive a car to describe the link between training and development. Training compares to learning to drive in the first place, whereas development compares to taking an advanced driver course, where acquired skills are honed and practiced to a deeper level. This is how another senior manager from the emergency services put it:

“As an example, I suppose driver training you need to learn how to drive the car and that’s your training but then you go onto develop those skills further to become an advanced driver”

Training and development are usually addressed by the same department and/or by the same employees. Thus, a number of managers said that they had not really thought about training and development as being different, until they had been asked to consider this. Managers stated that training and development should go hand in hand to be effective and valuable. As an event manager said, *“to be honest, I don’t think one is better than the other; I think you’ve got to combine them. I really don’t think that one can exist without the other”*. Thus, development takes training one step further and adds value (*“training without development is less valuable”*).

Training was seen by several managers as a means for development; in other words training is a process and one available mechanism of improving someone’s development, and development is the outcome and the umbrella term. This is illustrated here in two quotes, the first from a senior Sales Manager, and the second from a senior IT Manager:

“Yeah, ok. I would see, the more I talk about it development is probably the over arching category that training would fit into and I would see it as that and in a work environment development needs would normally come out of, or will often come out of an appraisal meeting. Or some kind of management system or some 360 or something like that, the development needs come out of that. And one way of addressing those needs might be a training course, another might be having a coach, another might be joining the community where you just share ideas and gain knowledge from other people and so on”

“Training I would see as something that feeds into development, I would not say that they are different. I would ultimately say that training is, should be and can be a long-term part of development. Now, you could argue if training was something that actually was not needed, towards a long-term goal but just short-term, then maybe it is not something to do with long-term development, but ultimately, training feeds into long-term development.”

7.3.3 Differences between training and development

Despite the agreement that development and training are linked, managers appeared to be able to differentiate clearly. These differences are summarised in Table 31, illustrated with quotes from a number of transcripts.

Training is skills-based, technical and focused on the current job, whereas development is usually seen as wider-ranging and relating to interpersonal skills. Nevertheless, some managers listed activities such as listening skills, which is arguably an activity aimed at interpersonal communication, under training. This may be due to the fact that such courses are pre-planned. There was agreement that training is always planned and formal whereas development activities can be either ad hoc, unplanned, sporadic and informal or pre-planned, for instance specific management courses, which people saw as developmental rather than training, illustrated here by a quote from a senior HR manager in a local authority, who discussed an example of an employee undergoing management training as an example of a particularly successful development activity:

“This is a developmental one [an example for a successful development activity], he’s been working in the team for quite a long time and really his prospects weren’t very good, he was doing well in his job but his prospects weren’t very good. And I suggested to him to get some management experience that he would go on some management training.”

Development can (but does not have to) entail a career-related element about a change in the person’s job role, such as a move into a different job role or department or a promotion.

Table 31: Differences between Training and Development

	Training	Development
Content	Skills based, technical: "training on certain key skills"; "training for me I suppose would be immediate skills stuff", "training is normally technical training"	Softer skills, interpersonal: "its just a bit... softer skills", "personal development skills.... things like, managing relationships and communication skills"
Standard	Focused on adequate standard of performance for current job: "Yes, I see very much training as 'this is the job you need to do lets make sure you can do it to a good standard'"	Can have career related element, therefore adequate standard is prerequisite: "and development is moving it onto the next level either within that role or in the future moving into a different role"
Degree of formality	Always pre-planned: "Well obviously there is formal training", "Training is normally, almost always, formal in our context"	Can be planned or unplanned: "So its something that was actually completely unplanned really, probably had a big effect on that", "And development is often (....) formal, but sometimes is less formal or coaching, meetings, that sort of thing"
Focus	Extrinsic, on the task: "when we've trained to people to do a particular task", "You need to learn how to do this in order to do your job so I'll teach you to edit this piece of video or send you on a course to edit this piece of video and you can then come back and we'll give you opportunities to apply that training"; "task-based and therefore training"	Intrinsic, heightened awareness: "and more aware of the way you act and how that affects other people..... understanding what you've done, whether or not that's been profitable or whether it could have worked, whether you could have been more effective in what you've done"
Time-frame	Here and now; confined to a particular time period, distinct beginning and end: "about key skills that need addressing in the here and now", "what's needed for the job now, at the moment"	Directed to the future, on-going and open-ended: "I think development is about where you want to take that individual in the future", "because it's developing people for a future role, () to making people better for the future"; " in going from today to tomorrow to next week to next year they develop"
Who provides	Provided by the organization: "It would have to be, training would have to be something that you attended, so there would be a curriculum or a programme and training is usually, it would be provided in house or by an outsider its something that I wouldn't provide"	Could be provided by manager ("I would provide development for the staff but I wouldn't myself provide the training for them"), or externally, or come solely from individual her/himself

Furthermore, training refers to the present, is confined to a particular time period and has a distinct beginning and end whereas development is directed to the future, remains on-going and is open-ended. Training is provided by the organization in internal or external training courses, which may be generic or tailored to specific requirements. There are several ways of providing development. It could be provided or initiated by the line manager or take a collaborative approach that builds on two-

way communication. However, one core theme was that development is not necessarily provided by anyone in particular, but it is up to the individuals themselves to take their development forward.

7.3.4 Decision criteria

It appeared that managers apply different decision making processes to a) training and b) development, which are contingent on the level of employees' level of skills. If employees are lacking key skills, they receive training which equips them to do the current job. A manager from the emergency services summed this up as follows:

"I think they're different. I think for training it's a question of having the skills and the knowledge to do the job that they're doing now and making sure that performance is at a reasonable level.....once they've got their tool-bag fairly healthily full up with the training they need to do, then I would consider developmental training, on secondments and things like that".

Once an employee has been trained and the focus shifts beyond the current job role, development activities are more appropriate. The activity choice also depends on the definition of objectives (what kind of activity has to be learned). For clear and measurable objectives (such as improving technical skills) training is most appropriate, whereas if employees need to learn about a different area of the business, shadowing or mentoring might be more appropriate. A manager from the postal services put this as follows:

"But I do think that mostly it probably comes down to the type of thing that you're trying to learn about for example if you're trying to learn a particular software package it might be that, I think then you'd have to have some sort of training....Where as if it's more like learning about that particular area of the business then I would say that'd be more sort of development activities where you might do shadowing and so on. But generally I think it would be the activity that would dictate what you did."

Several interviewees agreed that since training is more quantifiable and has more demonstrable benefits for the organization, it usually takes precedence over

development. Since this was one of the issues where there was widespread agreement and was interpreted as a salient finding, several relevant quotes are summarised in Table 32.

Table 32: Why Training may take Precedence over Development

Criteria	Example
Job Performance	"If it was something that, a change, a person literally couldn't perform their job without going, quite often that will happen as well, the legislative changes and that kind of thing. So basically I think that training sometimes would come out as the higher priority, if there was a need of that kind, so if there was very poor performance I think training would have to. So I think (...) development can sometimes be secondary"
Return on Investment and measurement of benefits	<p>"If you're spending money on training then there's got to be some demonstrable return for the company to make that investment"</p> <p>"I think the actual training course would always take precedence over maybe a more esoteric development course... If you're spending money on training then there's got to be some demonstrable return for the company to make that investment. that there are going to be demonstrable benefits coming back to the company for spending that money"</p> <p>"Whereas if it's more personal development it's very difficult to put any metrics on the benefits, it's very difficult to say well ok we sent somebody away to develop this part of their personality and it's difficult to say well fine, how do you measure the benefits?"</p>

This potential emphasis on technical skills may result in deficits at the interpersonal level. One manager from the financial services industry, identified that activities relating to softer skills (such as managing relationships) can get neglected. Although employees can be technically proficient in their given job role, they may not be equipped to deal with man management; and he identified a lack of emphasis in organizations on interpersonal skills in training and development, at least in his experience. This stands in contrast to the experience of another manager, who said that a focus on more interpersonal aspect, taking a ‘coaching approach’, is much more valuable. In his opinion then, development is potentially more important than training:

"I think it varies a lot; it really depends on the individual and the circumstances. My own view is that coaching and that sort of personal one on one development is more useful than standard courses. Sometimes you just have to do standard courses but very often the outcomes of spending one on one time with someone, or one on two, or whatever it is, as long as they are

prepared to do it are far more useful, a much better use of our time and our money”.

However, he qualified his statement by emphasizing “*as long as they are prepared to do it*”, implying that employees’ motivation to develop is a prerequisite for any successful outcomes.

Some managers said they take account of how employees prefer to learn when they choose an appropriate activity, as some prefer to learn by doing, others have a different learning style and this needs to be taken into account when choosing a particular activity. The available budget also influences training and development decisions. Managers said that they try to minimise any spending and hence are likely to give preference to on-the-job activities as these are more cost effective. Even with an infinite budget, people still need to be taken out of their job for some times if they are to partake in a particular activity, which also can mean a preference for on the job activities. However, this stands in contrast to the earlier observation that overall, formal training is appears to be the most frequent activity, which is foremost in managers’ minds when they talk about training and development.

7.3.5 Process of learning

There are differences between training and development in how employees acquire knowledge. Managers generally agreed that training is about “adding to their skill set” and adding new knowledge, such as “learning to use new software”. There are several potential mechanisms through which people develop. Development may happen through taking existing knowledge, which could have been recently acquired through training, to a deeper level by applying the knowledge in the job. A manager from the usability department of a financial services company described the process as follows:

“You can teach me something but I need to take what I have been taught and apply it to my own situation and take the bits I need out of it and take the bits I can applyso I think it needs internalising and chewing over and applying”.

This links in with the observation made earlier that training, without any application of acquired knowledge in the job that ultimately leads to development, is less valuable, which can potentially be explained by relating to the existing frameworks of training evaluation and training effectiveness. In terms of Kirkpatrick's (1955) model, it could be argued that development may occur from the 'behaviour' level onwards. In other words, once knowledge from training is applied on the job, development begins. Crucially, for the transfer of such knowledge that enables development, the organizational environment has to be supportive, or at least be perceived as supportive of learning by the individual. This links to Colquitt et al. (200) who stressed the impact of LC (albeit in the context of training) on motivation and learning.

In addition to the application of acquired knowledge on the job, development is also facilitated through feedback from another person to identify employees' strengths and weaknesses, as described by one of the managers:

"And yes, as I say I hadn't thought of that but that is a very important part of the development its getting feedback and acting on it hopefully, which might include training courses but won't necessarily. So appraisals, but also more informal feedback as you're going along. I'd sort of count those as development as well".

This feedback could thus be formal or informal, but is always linked to self-reflection on part of the employee. Lastly, learning in development may be a result of collaboration and the opportunity to work with someone, who could be either the direct manager or someone more senior or peers. Learning in this context occurs through the sharing of experiences and observation. John, an event manager, described a successful informal team meeting, where his employees first got to share their experiences, which they continue to do back in their working environment: "And as a result they've got different experiences and they actually quite a lot talk to each other about 'what do you think about doing this' or 'how would you do that'".

In training, the learner is a passive recipient of new knowledge that is being taught and therefore the 'locus of control' is external. Development in contrast is seen as active and driven by the learner who has to take responsibility for their own learning and driven by personal, rather than organizational, goals. Several managers

used the term “*their responsibility*” [emphasis added], as illustrated here by a quote from a retail manager:

“And development would be I guess far more longer term in terms of some of the outcomes. And then again with the development it’s much more about the individual taking responsibility for it as opposed to the manager taking responsibility for it. It’s very much led by the individual rather than the manager.”

7.3.6 Outcomes

In this sample of managers, there appeared to be agreement on training outcomes. As discussed above, training is skill-based and thus should result in observable behaviour changes on the job. Such outcomes are easy to measure, visible and linked to clear objectives, in other words they constitute a planned improvement of job-specific skills. In contrast, development outcomes were interpreted to be more varied, and likely to extend over a longer time period. Therefore, they will not be immediately visible following engagement in an activity, as one manager put it:

“(....) less easily measured, of a longer-term nature, in other words you don’t go to another course to develop your interpersonal skills and come back with them wonderfully developed. It’s something that you build up and develop over a period of time I think”.

Development outcomes may also be private to the individual, as coaching for instance is often a confidential process, which renders any outcomes less tangible and open to interpretation. Development outcomes were perceived as not only future-directed but also open-ended. As a result, they are potentially difficult to evaluate longitudinally, as people’s insight into their strengths and weaknesses, and therefore their personal goals, may change halfway through any development process. One manager described this as follows:

“And I think its quite difficult to do even longitudinally because you could ask somebody at the beginning of something ‘how do you feel about such and such’ and they might say ‘well I feel ok’ but then having gone through the process and seeing themselves develop, they say ‘well I didn’t even’,

sometimes people don't even know realise what their gaps are until they try something."... "if you think about the evaluation of development I think it's got to be more qualitative.. it's got to be more subjective, because that's the very nature of development it's the person who takes from the opportunity what they need"

Development outcomes include the ability to prioritise one's further development, rather than a static 'one off' outcome such a measurable increase in skills. This links in with the section on the process of learning and shows that development appears to be about developing self-awareness and being able to identify one's own strengths and weaknesses better. Development outcomes can, but do not necessarily have to, entail a career-related element such as a role change (either up the hierarchy or to a different department or unit, in a role). They can also be about maximising performance in the current job and achieving above average standards and commitment, as the manager cited with the last quote put it: *"And I think for development its about making the added value really, its about increasing peoples performance to above average standards and aiming for excellence and aiming for commitment and some kind of progression [within the role]"*. Such outcomes entail a positive or 'enlightening' change in mind-set, for instance through developing a more positive attitude towards the organization. In other words then, development outcomes are about learning how to learn on an individual level, they are personalised and subjective, on-going and perhaps of a qualitative, rather than quantitative nature.

Another potential development outcome that emerged from the transcripts was a feeling of being appreciated by the organization due to being able to participate in a different or unusual activity. One manager also said development outcomes should be wide-ranging at the organizational level, such as retaining staff, improving morale and motivation and visibly valuing your employees.

7.3.7 Success factors

It was discussed earlier that combining training with development appears to result in more positive outcomes. One manager recounted a particular experience, when her organization had achieved great success by getting an underperforming employee to undergo a specific external training course, which was accompanied by

coaching from a more experienced co-worker, who helped her to embed the learning in the workplace. However, some success factors for training or development may be spontaneous, and hard to plan. They can depend on the right mix of people, the right trainer or manager, or perhaps the right moment when everyone is relaxed and willing to move forward. As one manager put it, *“it is not always totally scientific”*.

For training, the success factors that identified were largely to do with what was term the ‘administration’, in terms of pitching it at the right level, effective trainers who relate to their audience and crucially the opportunity for practical application in the job and resulting transfer of learning. Thus, training success factors were at the organizational level.

For effective development, there was clear agreement that these were to do with individuals’ motivation, their ‘buy in’ for the process and openness about what needs to be changed, and be willing to stretch themselves and to *“out of their comfort zone”*. This is illustrated well by one manager who said: *“I think with development you are going to get nothing unless the person is really open to taking, to seizing an opportunity”*.

7.3.8 Potential barriers to effectiveness

A lack of organizational commitment to and investment on part of the organization affects development and training in equal measures. One manager from the emergency services cited as an example that training and development facilities in his area were being shut down and converted into storage space. A couple of other managers said that in their organizations, training and development were actively discouraged since they take people out of their job for too long, and there was not enough slack in the system to make do with fewer people for a while.

The most important barriers to training effectiveness that came up throughout the transcripts was a lack of opportunity to practice newly learned skills in the job; for instance a computer package that employees had just been trained on not being available back in the workplace for another few months. Other barriers specific to training were a lack of commitment from trainees who do not switch off from the day job, but continue checking their emails, perhaps because they do not feel that they need the training in the first place. Lack of skills and empathy can also render

outcomes unsuccessful. To illustrate this point, one manager recounted a particularly unsuccessful experience, where an (internal) trainer had been uncomplimentary about the trainees' department, which made them very upset and therefore hindered any transfer of the learning.

A hindrance for effective development appeared to be that the content of development activities may be too personal. Employees may find it too 'close for comfort' to want to engage and change, and also managers may be less comfortable with giving developmental feedback, as put by this manager: *"It's much more difficult to say to somebody that (...) 'You know actually I've had some feedback on how you manage your relationships' (...) and it all gets a bit personal and uncomfortable"*.

7.4 Study strengths and limitations

The strength of Study D is the use of qualitative methods which helped to capture complexities of managers' perceptions of training and development. These may have been missed with quantitative methods, but it also has to be recognised that the study may have several limitations. The sample consisted of managers who were willing to a) give up their time and b) talk about training and development. Hence, it cannot be discounted that these managers had a particular interest in the matter which may have influenced the data. A larger random sample would have been impractical in this context, but may nevertheless have yielded a different set of codes. Besides, telephone interviews could potentially have several limitations, as visual clues are absent which may affect interpretation of the and the 'flow' of the data (Saunders, Lewis et al. 2003). However, the use of telephone interviews (as opposed to face-to-face) was justified in this instance, as participants were recruited from all over the UK and it was possible to establish credibility of the interviewer, seek consent and arrange a mutually convenient time before each interview.

7.5 Conclusions and implications for future research

The first research question was to investigate how managers conceptualise training and development, what the differences (and potential links are), whether

different decision criteria apply and what the outcomes are. There appeared clear agreement that training and development are different. The former is skill-based, specific and related to the present job, whereas development is about the person, open-ended and can transcend a job or career. Training and development are interlinked, as training is one of the mechanisms that may lead to development. In other words, you need to be trained to be competent at your job first, before you can develop. Equally training without development, that entails deeper internalisation and reflection of individual strengths and weaknesses, appears less valuable.

In answer to the second question, these differences appear to guide managers' decision making. If an employee needs new skills, and/or is underperforming in the current job, training is chosen. If employees are ready to move on beyond the current role, and if there is a need to enhance interpersonal skills, then development activities, such as secondments or coaching, are the next step. Although several managers said that on-the-job development can be more time and cost effective, in general, managers still appear to prefer formal training. This may be due to the specificity of the outcomes, which relates to the third question about the conceptualisation of outcomes. Training outcomes are visible, measurable and quantitative, whereas development outcomes are subjective, can be private to the individual and not necessarily linked to specific objectives, or to objectives which are liable to change during the development process.

Lastly, the success factors and potential barriers are also different. For training, the opportunity to transfer learning in the job is absolutely essential, as is effective 'administration' by pitching training at the right level or employing effective trainers, whereas content that is too difficult or easy or not relevant to the current job will prevent 'trainee buy in'.

For development, individuals' motivation to develop and their willingness to stretch themselves and to move out of their comfort zone emerged as the most important success factor. In contrast to training, which is provided, the impetus for development always has to come from the individual itself, even if some of the learning could later occur through interaction with others. Arguably, individual differences may be even more important for development than they are for training.

As argued in the earlier part of this Thesis, it is surprising then that such differences have been largely ignored in development research. This links to the observation made by Colquitt et al. (2000) in their meta-analysis with regard to training motivation, who found that both personality and motivation have strong effects on learning. Surely then, it needs to be investigated which personality factors are associated with development outcomes. In terms of established constructs such as the big five, openness to experience has been found to be linked to training success (Barrick & Mount, 1991), and the construct may be relevant to development, too. But other concepts, such as Emotional Intelligence (EI) may be relevant also, in particular as proponents would argue that EI is trainable (Goleman, 1998). Emotional intelligence is multi-faceted and consists of clusters such as motivational characteristics, empathy, adaptability, motivation and drive and the ability to cope with stress. It could be argued that some of these, in particular motivational aspects, may be core to successful development, and indeed change positively following participation in development activities. Moreover, as development is not always solely initiated by the learner, but can be initiated by the manager or refer to a two-way process, it also is potentially important to evaluate the characteristics of the manager. For instance, it could be argued that they also need to be highly motivated and committed to any process.

In all, the analyses showed that the success factors for development are at the individual level – employees have to be willing to ‘go the extra mile’ and go ‘beyond their comfort zone’. It needs to be investigated how such ‘motivation to develop’ can best be defined and measured. A qualitative approach may be the best first step and should be aimed at the employees’ perspective. Employees could be asked to report critical incidents that ask them to report a time when they felt particularly motivated to develop or train, and techniques such as cognitive interviewing could be used to determine the thoughts, attitudes and emotions that underlie such motivation.

A potential barrier preventing effective development appears to be an over-emphasis on training. As development is less visible and outcomes are harder to quantify, development can take ‘second place’ because organizations appear less likely to fund development activities. But it needs to be borne in mind that this is the managers’ perspective. Since development is driven by the individual, it is possible that a lot of development goes on in different ways to what managers perceive as

development in their employees, so clearly the employee perspective needs to be investigated. Managers in this sample agreed that development outcomes are by far not always tangible and multi-faceted, which was not to say that they are less valuable. Since development outcomes are future-directed and linked to individual goals, it can be a part of an individuals' development to recognise that initial goals need to be changed and are no longer relevant. Thus, trying to evaluate development outcomes can be like 'shooting a moving target'. For instance, an employee may find that rather than enjoying and being suited to a more senior management position, he or she actually finds greater contentment in a different role that enables him or her to work in a different department.

It therefore needs clarification, whether, and if so, how development outcomes can be evaluated. Future research should investigate how they can be measured. Solely quantitative approaches, that generalize across respondents, may be inappropriate, as envisaged outcomes (e.g. to aim for a promotion) may change half-way through a development activity. Initially qualitative approaches, such as the 'change paradigm' (Rice & Greenberg, 1984), which has been used to identify process changes in counselling sessions may be able to investigate factors that affect the development process. In order to apply this approach, actual development activities, say a 360-degree feedback session, would need to be recorded and analysed in their entirety. The focus of this type of analysis is centred on the personal communication, to elicit at what point the feedback recipient changes their behaviour, and what factors contribute to these behaviour changes.

Another approach would be to use critical incidents, and perhaps use dyads of managers and employees to discuss these, in order to draw up a list of examples of particularly successful development activities and their outcomes, and map out contributory factors. There may well be a difference between what managers perceive as a successful outcome, which may be more aligned with organizational strategy, and individual outcomes that may be more concerned with individual life-long learning. It would be conducive to understand such different expectations so that development can take place in a manner that is effective at both the organizational and individual level.

Either of the above approaches may eventually allow us to develop quantitative measures that allow us to capture development in more detail. Session

specific research that investigates the role of feedback may result in better guidelines for practice for the effective administration of such activities. Research with dyads of managers and employees may allow us to capture how expectations at the individual and organizational level overlap, and also how they differ.

In summary, Study D serves to highlight both differences and communalities between training and development, and thereby helps us to understand the concept of development from the perspective of the managers. It is clear from the findings that characteristics at the individual level are perhaps even more important for development, than they are for training. What we now need are better measures. In order to develop these measures, we will need to investigate the development process, in order to facilitate our understanding of outcomes. To start, we need to face the challenge of conceptualising and operationalising ‘development motivation’.

Chapter 8: Drawing up a research agenda for employee development

8.1. Overview

This last Chapter draws together the arguments and studies presented in this Thesis by commencing with a summary of the literature review and showing how the study findings map directly onto this. It is made evident that experimental approaches derived from training research may not be sufficient to fully understand employee development. The quantitative studies reported here showed that a) the variables studied in training are only partly relevant to development, and that b) it is challenging to quantify outcomes in a discrete or continuous manner. The results from Study D corroborate the conceptual difference between training and development, but also show that both are more valuable if implemented hand in hand. It will be argued that in order to understand employee development we need to develop cohesive theory-driven frameworks that help researchers and practitioners alike to understand the complex processes that facilitate successful outcomes at different levels.

8.2. The status quo of UK training, development and learning

By considering the importance of training, learning and development at different levels in Chapter 1, it was argued that the UK still has way to go in terms of developing an effective workforce. Nation-wide schemes such as IIP have had varied success. There is mixed evidence for activities at the team level, differences between groups exist in terms of skill development and we arguably know more about factors contributing to successful training outcomes, than about factors that contribute to the success of development activities.

Both development and training are purported to be crucial to individual employees' life-long learning however. Chapter 2 outlined theoretical frameworks in training, which have informed a wealth of research that has helped to establish what kind of training works best for particular individuals. Chapter 3 discussed that development activities appear to be guided by fads and fashions, rather than empirical

grounding. At the end of the nineties, 360 - degree feedback was highly popular (e.g. Fletcher & Baldry, 1999); this has now been surpassed by coaching as the activity of choice (e.g. Whybrow & Palmer, 2003). DCs continue to be popular despite the cost and expertise required to set them up. Staff appraisals are accepted and implemented across almost all organizations in the UK and purported to be useful for individuals' development, although evidence to this end is sparse (Fletcher, 1997).

In all, development activities appear to be instigated at an organizational level without much consideration for whom, and why, these activities may be effective. Thus, the current state of UK training and development points a national skills deficit (Campbell, 2001), despite a wealth of wide-spread national schemes and programmes, and there appears to be "little evidence for the success of learning organizations" (Doyle, 2004; p. 216). As self-led development is now purported to be more important than training (e.g. Sloman, 2003), the onus is on researchers and practitioners alike to demonstrate which development activities lead to successful outcomes. In order to achieve this aim, it was argued that two different but nevertheless complimentary approaches are needed:

- a) to investigate whether models of training effectiveness can be applied to development to demonstrate which individual differences are associated with successful outcomes
- b) to investigate how effective training and development are conceptualised in organizations to elicit whether these are distinct types of activities that are associated with different decision criteria, success factors and outcomes.

8.2. The difference between training and development

As argued at the end of Chapter 1 and set out over Chapters 2 and 3, the lack of evidence for employee development activities may be rooted in the methodological split between training and development. Training models assume that learners learn in a structured and organised manner (e.g. Fitt, 1951; Tannenbaum et al., 1991) and that relevant activities need to be implemented and evaluated in a rigorous and cyclical fashion (e.g. Goldstein, 1993; Alliger & Janak, 1997). Training effectiveness models purport that we know which individual differences influence training success,

pointing to variables such as demographics, motivation, personality and learning climate (e.g. Colquitt et al., 2000). In essence, the vast body of training research takes the stance that individual learning as a result of training takes place in an organized fashion, and that we can therefore investigate related activities in a tightly controlled empirical manner.

This assumption somewhat differs from the frameworks underlying employee development, some of which stem from looser theoretical orientations (see Chapter 3), not all of which offer a detailed account of how learning as a result of development may take place. In order bring together different employee development activities a classification was offered (Chapter 3, Table 5) which has implications for research. To start, more informal activities are difficult to study in an organised manner, as informal activities may not be as well remembered by the involved stakeholders as other more formal activities. The degree of simulation is also important. The quantitative studies reported here show that appraisals (which are close to the job) are perhaps less suited to being studied longitudinally than DCs, which by way of their degree of simulation are more like a distinct and formal training activity. The key findings from all studies are summarised in Table 33 and discussed in the following. Despite the methodological differences there are many links between the findings reported in this Thesis, and they point to areas of future study with the aim of furthering our understanding of employee development.

Table 33: Summary of Hypotheses and Research Questions

Study and Chapter		Support in findings		Comments and Observations	
Study A, Chapter 4					
H ₁ : High DSE and high nAch will be associated with perceived utility, participation in a) development activities, b) participation in training activities and c) career movement.		Not supported		nAch appeared more important than DSE	
H ₂ : Demographic characteristics (age, gender, tenure, appraiser role) will be associated with perceived utility, participation in a) development activities, b) training activities, c) career movement and d) with nAch and DSE		Partially supported: Appraiser role was significantly associated with development utility and with career movement Age associated with participation in development activities and participation in training		Appraiser role being significant fits with previous research by Birdi et al. (1997) Reaction measures 'too blunt'? Maybe increased participation to do with life stage; i.e. we know better what we want to do as we get older	
Study B, Chapter 5					
H ₁ : Individual differences (nAch, DSE and LC) will change positively following participation in developmental appraisals.		Partially supported for LC		Perhaps organisation-level variables are more important for appraisals, which take place in the working environment with the line manager	
H ₂ : Significant changes in nAch, DSE and LC will be associated with positive development outcomes, as measured by a) development utility, participation in b) training activities, c) development activities and d) career movement.		Significant for nAch changes and participation in development; near significant for participation in training and LC however in opposite direction; tenure associated with gain score LC and negatively with participation in development activities utility, age associated with gain scores nAch and LC		nAch perhaps more important for development than DSE as more future-oriented If striving for performance improvement increase, more development activity (development more personal) Perhaps older employees do not take part as much as they have less support, or do they receive less support as they don't express as much interest?	
Study C, Chapter 6					
H ₁ : Levels of DSE and nAch will increase following DC participation		Partially supported, DSE increased, nAch decreased		Increase in DSE consistent with training literature, decrease in nAch consistent with AC study by Fletcher (1991)	
H ₂ T ₁ DSE and nAch will be associated positively with DC ratings		Only T ₁ nAch negatively associated with DC ratings		Some indication that nAch more relevant for development as more future-focused; however high levels of nAch may result in overconfidence, that is not rated highly by DC observers	

Table 33 continued

<p>H₃: Age and gender will be positively associated with DC ratings (with older workers and women receiving higher ratings).</p> <p>H₄: That DC ratings, changes in DSE and nAch, gender and age will be positively associated with T₄ development outcomes (participation in development and training activities and changes in individuals' careers)</p>		Supported	Age and gender are associated with self-awareness; also more experienced employees perhaps more skilled at simulation exercises
NS			Difficulty of framing on-going activities as discrete criteria may account for lack of effects, but also small sample size due to attrition
Study D, Chapter 7			
How do managers define and conceptualise effective development, does this differ from training, and if so, in what way?	Managers are able to differentiate; training short-term and job focused, development long-term and for the individual		Training and development differ with regard to content, time-frame, formality and planning and how it is provided
How do managers make decisions about training and development, do they use different criteria for different activities?	Different criteria apply: training is chosen for newcomers, or if job performance needs to be improved; development for plateaus, or for deepening of skills		The level of job performance of the employee, the specificity of objectives and projected returns guide decisions, as well as the level of expertise of the trainer or manager, individual preferences for learning and the budget
How do managers measure successful outcomes for training and development, do they vary between different activities?	Training outcomes are visible and quantifiable, whereas development outcomes can be private to the individual, about 'learning how to learn'		Due to the lack of visibility of development outcomes, managers may prefer formal training. This would also link in with findings from studies A to C, that development outcomes are not easily quantified for experimental studies
What makes training and development useful and successful in organizations from managers' points of view, and what are the potential barriers?	Success factors vary between training and development: being 'willing to move out of comfort zone' crucial for development, whereas training success more to do with the administration		This may link to first studies, as nAch and DSE not relevant for all activities. What is 'development motivation', and how can we best measure it?

8.2. Individual differences and employee development

The quantitative studies reported in this Thesis originated from the literature discussed in Chapter, 2, where it was argued that training effectiveness research may potentially be a guidance tool for the investigation of more formal development activities. Nevertheless, it appeared that there are differences between training and development which may have implications for future research. First, the individual difference measures investigated in this thesis, as derived from the training literature (nAch, DSE and LC), were not relevant in all studies. In general, nAch was associated more highly than DSE with development outcomes although the associations with DC ratings in Study C were negative. As discussed in Chapters 4 to 6, one limitation of the studies was the limited reliability for these measures, which cautions against over-interpretation. Nevertheless, one could tentatively conclude that measures from training research are not directly applicable to development research. As discussed in the opening Chapters and corroborated by the findings of Study D, development is more future-focused and on-going than training, and thus may require a different skill set and motivational characteristics on behalf of the individual to lead to effective outcomes. In this thesis, nAch, which is far more future-focused than DSE but has received less attention in the training literature, was more important. As shown in Study D, development is perceived to be more future-focused and on-going, and there appears to be a need to investigate individual differences that aid individuals' capacity to sustain the momentum and impact of development activities over time.

LC was investigated in Study B, and changed positively following appraisal participation, indicating that participants had more favourable perceptions at T₃. Nevertheless, the scale items were general (e.g. "Continuous learning is supported by this organization"; see Table 14, p. 100) as the scale was written for potential application in different settings and contexts. As such, scale responses do not allow further inferences about what exactly it was about the introduction of the developmental appraisals that made employees react more positively to their environment. It is possible that the effect was due to raised expectations, rather than due to any treatment effects. For this reason this finding would need to be followed up over time, also incorporating qualitative data gathering techniques such as interviews, which would allow more in depth insight into how the introduction and implementation of development activities impact on employees.

It is possible that alternative individual difference measures are needed altogether for development. Study D showed that individuals' willingness to stretch themselves in order to "move out of their comfort zone" and "seizing an opportunity" is deemed crucial by their managers for development success. It needs to be investigated whether this willingness to reach beyond what is comfortable in terms of learning maps onto existing variables (such as existing attitudinal variables, or personality measures); or whether different models and scales need to be developed that are context specific to employee development. This subject is highly topical. It has recently been argued that in some industries that the move away from employer – provided training towards self-led learning has gone too far, with some industries such as IT attributing this as the cause for the observed skill deficiencies in the workforce (Goodwin, 2006).

It is feasible that personality theory may offer a framework for further investigation through the Five Factor Model (FFM; e.g. Barrick & Mount, 1991). This model offers the advantage that it has been corroborated all over the world and a wealth of evidence is available. One of the scales pertaining to this mode, openness to experience, has been associated with learning attainment (Barrick & Mount, 1991). It could be speculated that the 'willingness to move out of the comfort zone' discussed above relates to such openness to experience. Individuals who prefer to try new things and to stray from the conventional paths may develop differently to individuals who prefer to stick with 'tried and tested methods'. Thus, employees on one end of the scale may be more suited to formalised and rigorous development activities, whereas others prefer informal development through discussions and feedback. A preference for working with detail has also been found to be associated with more successful learning and predicts learning over and above cognitive ability (Colquitt & Simmering, 1998). It is less clear whether such a preference for detail and meticulous analytic strategy would also be associated with successful development outcomes, as a preference for detail may be more advantageous for outcomes envisaged from structured and formal development activities (such as DCs) than for more informal activities.

One clear advantage of considering personality measures in the research of development is that reliable and valid instruments exist which correct for biases such as social desirability (Rust & Golombok, 1999) and thus avoid some of the concerns

associated with the use of other self-report measures. Personality theory already underlies much development activity, as personality inventories are increasingly used to structure development discussions. There is limited evidence about how different personalities react to developmental feedback. One study showed that extraverts were more likely to accept positive feedback and reject negative feedback than introverts, and people who scored higher on neuroticism were more likely to accept negative feedback (Furnham & Varian, 1990). These findings should be followed up and investigated further as they could inform future development practice. If personality profiles relate to development outcomes and feedback reactions, they may prove a valuable tool to help managers and individuals identify which particular development activities are helpful. Other personality measures such as Locus of Control (Rotter, 1966) may also constitute a useful diagnostic, as it may be expected that individuals who make internal and stable attributions are more likely to carry any activities through to a successful outcome.

The common finding from the quantitative studies was that demographic differences are associated with development outcomes. Age was associated both with participation in development activities in an appraisal context, but also with DC ratings (as was gender); but associated negatively with LC in study B. Age effects can potentially be explained by life-span psychology (Sugarman, 2001). Although previous frameworks that are concerned with stages in people's life postulate that ability to learn decreases as we get older (e.g. Levinson, 1978), a more contemporary perspective holds that this is not the case and we are better equipped to process complex information and make informed decisions as we get older (Sugarman, 2001; Doyle, 2004). In fact, younger employees are usually ill-equipped to make long-term career decisions, as lack of work experience means that they have not had the chance to gain much of an insight into their strengths and weaknesses. Older workers are potentially better positioned to lead their development due to the insight that they have gained during their work experience. They may also be rated more highly by managers or observers due to this experience, as they may be more likely to draw on their own experiences to provide examples of preferred behaviours. Nevertheless, older workers may not always receive the support needed, as managers may see them as less trainable as younger workers.

However, as the pattern of associations for demographics varied between the studies reported here (such varied effects being consistent with conclusions drawn from the training literature, e.g. Colquitt et al, 2000) and due to the correlational or quasi-experimental designs, it is not possible to investigate cause and effect with the data presented here. The implications for research and practice are that demographic characteristics certainly need to be investigated in relation to development as variables in their own right. Practitioners may need to be mindful that these may be associated with the effectiveness of any activities and monitor this carefully.

Other individual differences may also contribute to a theory of development motivation; in particular learning strategies (e.g. Zimmerman & Pons, 1986), learning styles (e.g. Honey & Mumford, 1992, Kolb, 1984) and goal orientation (Dweck & Legget, 1988). Goal orientation may be associated with development outcomes where individuals with performance goal orientation (interested in the *process* of learning), rather than a mastery outcome orientation (want to succeed) benefit more from participation in development activities. It is tenable that employees with different learning styles might be suited to different development activities. For instance, individuals exhibiting higher levels of experiencing (learning from practical experience) may suit on the job activities, such as walking the floor, shadowing and also activities based on face to face interaction. Individuals exhibiting higher levels of conceptualising (a preference for abstract thinking) may suit activities that rely on simulation exercises, such as development centres. Learning strategies have been extensively researched in education, and it has been found that high achieving students display greater use of self-regulation strategies, which in turn were best predictors of test achievement scores (Zimmerman & Pons, 1986). All of this points to a need to understand the *process* of effective learning on part of the employee which in turn may be associated with successful outcomes.

On the one hand, as development activities are alleged to have a career-related element, there is a whole host of career related variables that may require further empirical study. London's theory of career motivation (London & Noe, 1997) postulates that career motivation consists of three constructs; which are career resilience, career insight and career identity. Career insight, which according to London is similar to crystallized knowledge (Super, 1980), has been explored in relation to participation in different types of activities (Maurer & Tarulli, 1994) and

found to be positively associated with participation in career-related activities. Different aspects of career motivation might be more relevant to participation or to long-term outcomes, as for instance career resilience may be crucial for long-term success, whereas career insight is a prerequisite for getting employees engaged in development activities in the first place.

On the other hand, it is also tenable that the construct of career is perhaps not that relevant to development motivation, if development outcomes are more to do with ‘learning how to learn’ than with relatively straight forward progression in terms of changing one’s job or career. As such, we may need to examine in more detail, whether, and if so, how, career progress relates to development. As alluded to before, development may be very subjective at the individual level, and progression in an organizational hierarchy may not constitute effective development on part of the employee, if this is not associated with greater fulfilment and satisfaction.

Attitudinal measures have also been frequently employed as a proxy-measure of motivation. Organizational commitment, which refers to individuals’ involvement in and identification with their organization, has been extensively studied in the training literature. Tannenbaum et al. (1991, p.760) postulated that “employees’ organizational commitment levels are likely to predispose them to view training as more or less useful, both to themselves and to the organization. When viewed in this way, organizational commitment can be considered as an influence on training effectiveness”. Post-training organizational commitment has been demonstrated to be positively related to motivation and to positive training reactions, however appears to be negatively related to learning and to training fulfilment (how much training fulfilled expectations) (Tannenbaum et al., 1991). Birdi et al. (1997) found that organizational commitment was associated with participation in mandatory training courses and work based development activity, although it was unrelated to participation in voluntary activities in employees’ own time. In today’s fast moving environment, which might render identification with any one organization less relevant, researchers have also considered professional commitment or occupational commitment, which is individuals’ identification with their profession of choice (Aranya & Jacobson, 1975; Brierly, 1996). This attitudinal variable has not yet been explored extensively, and may provide avenues for future research into development outcomes. Individuals’ development and life-long learning is likely to exceed tenure

in any one organization and may encompass different careers; thus it would be useful to explore how professional commitment influences not only individuals' participation in development activities, but also the success of outcomes. Such studies may help us to understand why some employees sustain activities in a self-motivated and regulated fashion over time, particular at points of personal transition from one organization to another, or even one career to another.

8.3 The challenge of capturing development outcomes

As discussed above, a separate body of literature has developed on training and development respectively. The findings from Study D corroborate that managers perceive training and development as different, albeit interdependent, activities. To start, managers seem to apply different decision criteria. If job performance needs to be improved, training is chosen; whereas if employees need or want to move into a different area or have reached a 'plateau', development activities are seen as more appropriate. Equally, development activities appeared to be associated with the interpersonal domain (activities focused on communication, or team building for instance) rather than technical content. As development outcomes also appear more private, and more liable to change, it is possible that managers prefer more visible and quantifiable training.

However, managers agreed that training and development are much more valuable if combined. In other words, learning from a training course needs to be internalised and "chewed over and applied" to affect long lasting behaviour change. This ultimately results in development. This implies an assumption that training in itself is not enough to achieved desired outcomes. Thus, there may be a paradox. On the one hand, training may be a preferred activity as outcomes are more visible and tangible. On the other hand, development may be necessary to affect long lasting change, but is potentially neglected in organizational contexts as the outcomes appear less tangible.

There is an apparent necessity to measure development outcomes in various ways at different levels. At the macro or organizational level, there has been a call to align development to organizational objectives and strategy (e.g. Jansen & Vloebergh, 2003; Woodruffe, 1999) in order to manage talent effectively, manage succession

planning and enhance productivity. At the group level, it is important to assess which activities affect effective working together (team work) but also to ensure that activities are available to all regardless of demographics. It is the individual level or ‘micro’ level that is perhaps most tricky to quantify. Traditional individual-level based measures are perhaps too narrow and short-term in focus to capture the richness and time-span involved in development activity.

The studies reported here have a clear link with regard to the challenge of capturing development outcomes. Studies A to C measured development outcomes as reactions, participation in follow up training activities, follow up development activities and career movement; the observed associations varied between studies, and neither were linked to individual differences in Study C. It is possible that the measures were too crude, as employees may not think in terms of lists of participation; which meant that a binary variable was used (whether or not employees had taken part in either part of activity). This is underlined by the findings from Study D, where employees remembered more activities as the interviews went along, rather than being able to provide a list of typical activities in one go. There is also little evidence in the quantitative studies that individual differences are associated with career movement. Indeed, the descriptive statistics showed that there was little career movement within the organizations. Potentially this observation links to the paradox of retention (Horner, 1993) that once employees have developed skills, they move on to another employer, rather than undergo career changes within the organization. This raises interesting questions about how organizations can retain staff – if not by providing development in terms of career options, then perhaps development in terms of stretching and intrinsically rewarding tasks is needed.

Fundamentally, it appears challenging to measure individual development outcomes solely with quantitative methods. At first glance, it may seem feasible to relate individual differences in development to organization-specific outcomes, such as goals and targets. However as discussed in Chapter 4, when such goals relate to performance, they are often ‘SMART’, and thus not much change may be observed as a result of any activity. Plus, ideally PDPs should be working documents that are subject to constant revision and change, which renders long-term evaluation difficult. Indeed, little research has concerned itself with personal development plans, due to the methodological difficulties outlined in Chapter 3 (e.g. difficulty of access to

private documentation). A thorough investigation of such plans may help us to understand how practitioners can help effective development in terms of what makes a development plan effective, what and how much support from the supervisor and other involved stakeholders is expected, and ultimately useful. One way of doing this would be to study seasoned employees who have experience of different organizational contexts. Repertory Grid Interviews (Rep Grids) could be used to elicit underlying constructs (Kelly, 1955) to determine what distinguishes a useful PDP from a less effective document and process. Rep Grids tend to generate rich data, and one of their advantages is that any constructs elicited can be analysed both in a qualitative manner, for example with content analysis, or in a quantitative manner, with PCA or Cluster analysis (Jankowicz, 2004). Still, one of the difficulties of such an approach is that employees may no longer remember what was useful and what was not useful at the time. Also, it would not appear ethically defensible to actively manipulate development plans, where potentially more effective methods are compared with less effective methods, as this may have long-term consequences for Any participants.

Alternative methods, which also utilise qualitative approaches to both data gathering and analysis but focus on present initiatives, could be applied. One potential approach is the events paradigm (Rice & Greenberg, 1984), which is derived from counselling psychology and is used to identify episodes that have helped clients to change as part of counselling sessions. Typically, individual sessions are tape-recorded and the conversation analysed using discourse or conversation analysis to determine at what points the conversation between counsellor and client changed, as an indicator for a shift in personal beliefs or values. Such an approach may be particularly useful to investigate the value of developmental feedback sessions, for instance when using psychometrics for development or even staff appraisal meetings, to help practitioners understand the interpersonal aspect of common activities.

Regardless of the best measures for capturing developmental changes, it is a necessary prerequisite to establish the validity of different employee activities first. Potentially, the theoretical concepts and empirical findings drawn together in this Thesis may have implications for practice. There is an obvious necessity for organizations to monitor the availability and uptake of training and development activities for all employees to ensure equal opportunities; and practice needs a better

framework for employee development that helps us to classify, understand, choose and lastly evaluate different activities.

Table 34 which gives an overview of the research agenda for employee development.

8.4 Conceptualising employee development

The review of the literature as set out over the first three Chapters (which distinguishes between training and development as separate entities) links in with the last study in this Thesis where managers in organizations were clearly able to differentiate between training and development. Training is seen as short-term, job- or role-specific and linked to clearly visible outcomes. Development is about the person, not the job, and much more future-focused and wider-ranging, and outcomes are less visible. There appears to be agreement that training is one of several potential processes or activities that can lead to development. Several studies could build on the findings discussed here. Thus, it would be useful to investigate whether employees define development and training in the same way as managers, or whether their perceptions differ. It would also be useful to conduct a triangulation by investigating whether, and if so how, stakeholders differentiate training, development and education; and whether this differs between managers, employees and potentially staff in education as well as training providers. In fact, education appeared as one potential development activity in Study D, and it would be fruitful to follow up whether education is a process deemed necessary for successful development outcomes (in the same way that training appears to be a process that leads to development), or whether these constructs need to be defined in different ways.

Such triangulation has been done before to investigate understanding of the aforementioned skill shortages in the UK. The template process with groups of providers (education), consumers (students who become employees) and employers groups showed that different stakeholders have different views (Skinner et al., 2003) on what is important for job-relevant skills. Higher Education lecturers particularly emphasized “willingness to learn” and “self management” as necessary for job success, whereas both consumers and employers emphasized job specific technical skills. Whilst specific skills may relate particularly to training (and perhaps less so development) these findings nevertheless relate to the present research. If perceptions of skills differ, then it is possible that perceptions of the processes that lead to such

skills (such as training and development) also differ between stakeholders, and this clearly needs to be followed up. The arguments presented so far are summarised in Table 34 which gives an overview of the research agenda for employee development.

Table 34: A Research Agenda for Employee Development

Potential Research Areas	Why?	Sample Research Questions
Development Motivation/ Individual Differences	Findings from the quantitative studies show that traditional individual differences as discussed in the training literature are partly relevant to the study of development; associations varied between studies. The qualitative study demonstrates that individual 'willingness to move out of the comfort zone' is crucial to development.	How can we assess development motivation? Can we develop objective and standardised measures that relate to individual differences with regard to development, rooted in a unifying theory of development motivation? Are some development activities more suited to certain groups of employees (e.g. depending on personality, demographic differences)?
Development Outcomes	Findings from this Thesis show that development outcomes do not necessarily lend themselves to experimental designs, due to their long term and variable nature.	Can research differentiate clearly between different types of development activities at different levels (e.g. individual and subjective indicators vs. objective and organizational indicators)
Construct Definition and Validation	Findings from Study D show that development and training differ in several ways, such as the time-frame and focus from the managers' perspective. There also seemed to be some tentative indication that development is not always as self-led as purported in the practitioner literature. An (at least initially) qualitative approach may be more conducive to further our understanding. Practice is ahead of research in employee development as activities such as coaching, mentoring, teambuilding have been used before evidence on their effectiveness was available	Do employees conceptualise training and development in the same way as managers, or differently? How do training and education providers define development and training, and does this differ from employees' and managers' definitions? How do training, development and education differ from each other? Are activities such as coaching an effective development tool? How do they work?
Development Processes (such as the role of feedback)	The results from study D show that development may occur in many ways, formally and informally. As discussed in Chapter 3, prior research shows that feedback does not always result in behaviour changes, or can have negative effects. The role of the feedback was assessed in the quantitative studies through reaction measures which did not have the same relevance as in training studies, perhaps due to the fact that development activities are less suited to rigorous experimental designs	How do employees develop effectively, how can they be developed in an effective manner?

Table 34 continued

Relating existing theories and variables to Development	Why?	Sample Research Questions
Career-related Variables: e.g. Career motivation (London & Noe, 1997)	It is said that development usually has career related element (Birdi et al, 1997); however there was no association with the measure of career changes in studies A to C. Equally, results from study D showed that managers do not necessarily relate development to careers.	Is Career motivation a distinct construct from development motivation? Is career-related motivation associated with development outcomes?
Perceptions of the organizational environment and the environment itself.	Results from study B showed that the perceived learning climate changed after introduction of developmental appraisals. However, the gain scores were not related to T3 outcomes. Perhaps, we need more differentiated measures that tap more fully into how an organisation is perceived to be supportive of, and indeed can help individuals' development. It can be argued that developmental activities, and developmental feedback, can only be acted upon when there is good training and development support.	Is a positive (perceived) organizational environment prerequisite for individual development outcomes? Does this hold truer for some activities than others? What are the most important factors for creating a beneficial development environment; how is this different from findings that have used self-report measures such as the perceived learning climate?
Personality: FFM (e.g. concentrating on openness to experience) Locus of control	Hardly explored as correlates of development outcomes Valid and reliable instruments available	Is openness to experience/ conformity associated with successful development outcomes? Do employees who attribute events internally and controllably experience greater long-term development success?

Table 34 continued

Attitudinal variables: Organizational commitment, professional commitment, job involvement, job/ life satisfaction	Vast body of research for training, but not for development, also some evidence for participation in development activities	Is high identification with and loyalty to organization necessary precursor to effective development (as postulated in training), or is professional commitment more important, as development 'portable' from organization to organization?
Goal orientation	Goal orientation related to training performance; with a performance orientation being associated with more successful outcomes.	Do employees high in performance goal orientation benefit more from development activities?
Learning related variables, such as learning styles, motivation to learn	Hardly any research on learning and different development activities	Are different learning styles/ strategies better suited to different types of activities?
Demographic characteristics: e.g. Age, gender, educational level, employment status	Differences in outcomes (skill attainment) exist, but we know little about the reasons	Why are some groups of employees offered more development and training opportunities than others?

8.5 Why research on employee development needs to be theory-driven

The findings reported here indicate that one cannot assume that any one activity might be equally effective for all participants; hence individual differences have to be considered in the design of development activities and overarching organization-wide programmes. To this regard the expertise of organizational psychologists can, through the formulation of clear objectives and the assessment of individual differences and organizational variables, clearly aid. In the domain of training it has long been argued that any evaluation is impossible if outcome criteria are not clear from the outset (Goldstein, 1993). Before the development of more sophisticated models of training effectiveness, training evaluation in organizations stood accused of being atheoretical (Tannenbaum & Yukl, 1991). It could be argued that the practice, and to some extent the research, on employee development has arrived at a similar point as development activities appear to be implemented in fads and fashions, rather than guided by a thorough evidence base.

Ultimately, it is up to researchers to present clear and unambiguous frameworks and findings, whether they are of a quantitative or qualitative nature. This should help to convince practitioners that thorough effectiveness investigations for employee development activities can reap rich benefits, by ensuring that activities are tailored to individual and organizational needs and are designed to achieve envisaged aims. This is a challenging agenda. Research on training evaluation and effectiveness has been accused of being unrealistic in its demands about experimental rigour, which are deemed unrealistic for fast-moving contemporary environments (Doyle, 2004). The methodological approaches applied in this Thesis were also involved, and it may be unrealistic to expect practitioners to be able to conduct similar studies on an on-going basis. As outlined before, longitudinal studies are time-consuming to set up and follow through, and extraneous variables always pose a threat to the validity (Fletcher, 1988). The qualitative approach taken in the last study demanded equal rigour, albeit in a different manner, using thorough Template Analysis.

However, further such research which has been conducted with methodological thoroughness may actually result in a user-friendly framework for

best practice, as any findings will provide a clear evidence-base for best practice in organisations, provided care is taken about the ecological validity and generalisability of the designs. More research on individual differences, as well as qualitative approaches investigating ‘development motivation’, may help us to be able to formulate concrete predictions about which types of activities are best suited to different people. More research on development processes may help us to gain a better understanding of the mechanisms that lead to development, and how processes such as interpersonal feedback can be used to their full advantage. More research on the construct of development itself and development outcomes may help us to understand how such outcomes could be measured, for instance by helping organizations to apply learning gained from successful individual case studies. At the same time, it must not be neglected that successful outcomes from an organizational perspective may differ from success at the individual level, and it will remain a challenge to reconcile different expectations and objectives. Organizations are by their nature focused on profitability and productivity, and activities are ultimately aimed to benefit the organization as a whole. In contrast, life-long learning at the individual level necessarily refers to personal, as well as professional growth; meaning that the individual focus may be on activities that do not directly benefit the organization – and even result in a change to a different employer or career altogether.

In summary, it is argued here that a combination of both qualitative and quantitative approaches that therefore transcends the experimental nature of most training research is needed to gain a better understanding of employee development. Qualitative research is needed to help us understand what is an effective development outcome, the processes that lead to such outcomes and to help us construct measures of ‘development motivation’. Once we gain a better understanding of these constructs, they can be tested in relation to existing frameworks such as personality and individual differences. Psychological theory and evidence-based approaches have much to offer to the field of employee development and development motivation providing clear methodological approaches are upheld.

8.6 Final conclusion

This Thesis is concerned with employee development for the following reasons. First, there is an obvious gulf in the UK between a) the claim that life-long learning is the key to organizational and individual success (e.g. Senge, 1990; Hall & Mirvis, 1995) and b) the fact that the outcomes of such learning are found to be wanting resulting in a national and regional skills shortage (Green & Ashton, 1992; Green & Owen, 2003). Secondly, there is a danger of employee development being led by fashion, rather than research. Organizations appear to invest in the implementation of development activities, without much interest in their evaluation by investigating for whom, and why, these activities actually have the desired effects. In contrast to the sophisticated methods available for training, we lack a coherent framework that allows researchers to fully understand the individual differences, process and outcomes that are associated with successful development. The quantitative studies presented here show that individual differences derived as studies in the training literature (such as nAch or LC) change following participation in activities and that age differences such as age are associated with development ratings. However, the association with long-term follow up activity appears elusive. This links in with the findings from the last study; that managers appear to define training and development in different ways, with development outcomes being seen as on-going, and liable to change, and thus apply different decision criteria to either activity.

To conclude there is a clear research agenda for employee development. It appears desirable, if not necessary, to develop a coherent theory of development motivation that mirrors the breadth and depth of the training literature. The methodological approaches may have to be different however by combining qualitative approaches (such as interviews with different stakeholders, rep grids or the change paradigm) with existing variables and frameworks (such as personality and workplace attitudes). The application of existing measures as well as the division of potentially new variables derived from qualitative exploration should help us understand a) what motivates employees to take charge of their development, b) what processes make a development activity effective and c) how we can measure successful development outcomes. This would make a valuable contribution to theory

and practice alike. If we know how to not only measure but also influence ‘development motivation’ then we can address the UK skills deficit, and move towards a working environment where self-led learning across the life-span is understood and facilitated to the benefit of employers and employees alike.

References

- Allen, N. & Hecht T., (2004). The 'romance of teams': Toward an understanding of its psychological underpinnings and implications. *Journal of Occupational and Organisational Psychology*, 77, 439-461.
- Alliger, G. M. & Janak, E. A. (1989). Kirkpatrick's level of training criteria: Thirty years later. *Personnel Psychology*, 4, 221-342.
- Alliger, G. M. & Tannenbaum, S. I. (1997). A meta-analysis of the relations among training criteria. *Personnel Psychology*, 50, 341-358.
- Anderson, N. & Sleap, S. (2004). An evaluation of gender differences on the Belbin Team Role Self-Perception Inventory. *Journal of Occupational and Organisational Psychology*, 77, 429-437.
- Antonioni, D. (1996). Designing an Effective 360-Degree Appraisal Process. *Organisational Dynamics*, 2, 24-38.
- Aranya, N. & Jacobson, D. (1975). An empirical study of theories of organizational and occupational commitment. *Journal of Social Psychology*, 97, 15-22.
- Argyris, C. & Schön, D. (1978). *Organizational learning: A theory of action in perspective*. Reading, Mass, Addison Wesley.
- Arnold, J., Silvester, J., Patterson, F., Robertson, I., Cooper, C. & Burnes, B. (2004). *Work Psychology*, FT Prentice Hall.
- Atwater, L. E. & Yammarino, F. J. (1992). Does Self-Other Agreement of Leadership Perceptions Moderate the Validity of Leadership and Performance Predictions? *Personnel Psychology*, 45, 141-163.
- Bailey, C. & Fletcher, C. (2002). The impact of multiple source feedback on management development: Findings from a longitudinal study. *Journal of Organizational Behavior*, 23(7), 853-867.
- Balcazar, F., B. & Hopkins, L.. (1985). A critical, objective review of performance feedback. *Journal of Organisational Behaviour Management*, 7, 65-89.
- Baldwin, T.T. & Padgett, M.Y. (1993). Management development: A review and commentary. *International Review of Industrial and Organisational Psychology*, vol. 8, pp. 35-86.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, New York, Prentice Hall.
- Bandura, A. (1986). *Social foundations of thought and action: a social-cognitive view*. Englewood Cliffs, New York, Prentice Hall.
- Barbeite, F. & Maurer, T. (2002). *Importance of learning and development opportunity to job choice decisions*. Annual Conference of the Society for Industrial and Organizational Psychology, Toronto, Ontario, Canada.
- Barrick, M. R. & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.
- Fighting the brain drain* (2003, 23rd September). Retrieved from the BBC news archive at http://news.bbc.co.uk/1/hi/programmes/working_lunch/2290474.stm on 23rd September 2003
- Ministry blamed for learning fraud* (2003, 23rd September). Retrieved from the BBC news archive at <http://news.bbc.co.uk/1/hi/education/2913987.stm> on 23rd September 2003.
- Becker, T. E. & Klimoski, R. J. (1989). A field study of the relationship between the organizational feedback environment and performance. *Personnel Psychology*, 42, 343-358.
- Belbin, R. M. (1981). *Management Teams. Why they succeed or fail*. London, Heinemann.
- Belbin, R. M. (1993). *Team Roles at Work*. Oxford, Butterworth-Heinemann.
- Bennis, W. (1989). *On Becoming a Leader*. New York, Addison Wesley.

- Bennis, W. (1993). *An Invented Life: Reflections on Leadership and Change*. Reading, Addison-Wesley.
- Bevan, S. & Thomson, M. (1992). *Performance Management in the UK: an analysis of the Issues*. London, Institute of Personnel Management.
- Birdi, K., Allan C. & Warr, P. (1997). Correlates and Perceived Outcomes of Four Types of Employee Development Activity. *Journal of Applied Psychology*, 82, 845-857.
- Blau, P. M. (1964). *Exchange and Power in social life*. New York, Wiley.
- Blackwell, L. (2001). Occupational Sex Segregation and Part-time Work in Modern Britain. *Gender, Work and Organization*, 8, 146-161.
- Brierly, J. A. (1996). The measurement of organizational commitment and professional commitment., *Journal of Social Psychology*, 136, 265-267.
- Brown, S. P. & Leigh, (1996). A New Look at Psychological climate and Its Relationship to Job Involvement, Effort and Performance. *Journal of Applied Psychology*, 81(4), 358-368.
- Campbell, D. T. & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Campbell, M. (2001). *Skills in England 2001. The key messages*. Report commissioned by Department for Education and Skills (DfES) and LSC, 2003. Available on-line at <http://www.dfes.gov.uk/research/data/uploadfiles/SIEO1.PDF>, retrieved 16th February 2005.
- Cannell, M. (2004). *Training: a short history*. London, Chartered Institute of Personnel and Development. Available on-line at <http://www.cipd.co.uk/subjects/training/general/thistory.htm?IsSrchRes=1>, retrieved 16th February 2005
- Carrick, P. & Williams, R. (1998). Development Centres - a review of assumptions. *Human Resource Management Journal*, 9(2), 77-92.
- Cascio, W. F. (1998). *Applied Psychology in Human Resource Management*. Upper Saddle River, Prentice-Hall.
- Clayton, A. (2001). *Review of Research and Evaluation on Investors in People*. London, Department for Education and Skills.
- Colquitt, J. A., LePine, J. A & Noe, R.A.. (2000). Toward an integrative theory of training motivation: A meta-analytic path of 20 years of research. *Journal of Applied Psychology*, 85, 678-707.
- Colquitt, J. A. & Simmering, M. J. (1998). Conscientiousness, goal orientation, and motivation to learn during the learning process: A longitudinal study. *Journal of Applied Psychology*, 83, 654-65.
- Cook, M. (1993). *Personnel Selection and Productivity*. Chichester, Wiley.
- Cook, M. (2004). *Personnel Selection. Adding Value Through People*. Chichester, Wiley.
- Davenport, T. & Prusak, L. (1997). *Working knowledge*. Boston, Harvard Business School Press.
- Davenport, T. O. (1999). *Human Capital: What is it and why people invest in it*. San Francisco, Jossey Bass.
- Deci, E. L. (1972). Intrinsic motivation, extrinsic reinforcement and inequity. *Journal of Personality and Social Psychology*, 22, 111-120.
- DeNisi, A. S. (2000). *Performance Appraisal and Performance Management. A multi-level analysis*. In Klein, J.K.& Kozlowski, S.W.J. (Eds.) *Multilevel Theory, Research and Methods in Organizations*. New York, Jossey Bass.
- Learning and Training 2002*. Report published by Department for Education and Skills [DfES] (2003), IIF Research, SFR02/2003.
- 21st Century Skills. Realising our Potential*. Report Presented to Parliament, London, by Department for Education and Skills [DfES], July 2003. DfES, CM5810

- An introduction to the foundation degree*. Report issued by Department for Education and Skills [DfES] (2003). Reference Number PPSPGD10/PUB030191/1003/53
- The future of higher education*. Report presented to Parliament by Department for Education and Skills [DfES] (2005), Reference CM5735, Retrieved from <http://www.dfes.gov.uk/hegateway/strategy/hestrategy/exec.shtml> on 5th January 2006
- Skills: Getting on in business, getting on at work*. Report commissioned by HM Government from Department for Education and Skills [DfES] (2005). TSO, Norwich
- Doty, D. H. & Glick, W. H. (1998). Common Methods Bias: Does Common Methods Variance really bias results? *Organizational Research Methods*, 1, 374-406.
- Doyle, M. (1995). Organisational transformation and renewal: a case for reframing management development? *Personnel Review*, 24(6), 6-18.
- Dweck, C. S. & E. L. Legget (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.
- Ellis, R. A. & Taylor, M.S. (1983). Role of self-esteem within the job search process. *Journal of Applied Psychology*, 68, 632-640.
- Engelbrecht, A. S. & Fischer, A. H. (1995). The Managerial Performance Implications of a Developmental Assessment Centre Process. *Human Relations*, 48, 387-404.
- Feinberg, L. B. & Halperin, S. (1978). Affective and cognitive correlated of course performance in introductory statistics. *Journal of Experimental Education*, 46, 11-18.
- Flanagan, J. C. (1954). The Critical incident technique. *Psychological Bulletin*, 51, 327-58.
- Fleenor, J. W. (1996). Constructs and Developmental Assessment Centers: Further Troubling Empirical Findings. *Journal of Business and Psychology*, (10), 319-333.
- Fletcher, C. (1988). Occupational Psychology: Some difficulties of doing experimental research. *Bulletin of the British Psychological Society*, 33, 11-14.
- Fletcher, C. (1991). Candidates' reactions to assessment centres and their outcomes: a longitudinal study. *Journal of Occupational Psychology*, 64, 117-127.
- Fletcher, C. (1997). *Appraisal. Routes to improved performance*. London, Institute of Personnel and Development.
- Fletcher, C. (2001). *The Psychological Management of Individual Performance*. In S. Sonnentag (Ed.), *A Handbook in the Psychology of Management in Organizations*. Chichester, Wiley.
- Fletcher, C. & Baldry, C. (1999). *Multi-Source Feedback Systems: A research Perspective*. International Review of Industrial and Organisational Psychology. London, John Wiley & Sons Ltd.
- Fletcher, C. & Baldry, C. (2000). A study of individual differences and Self-awareness in the context of multi-source feedback. *Journal of Occupational and Organisational Psychology*, 73, 303-319.
- Fletcher, C, Baldry, C. & Cunningham-Snell, N. (1998). The Psychometric Properties of 360-degree Feedback: An Empirical Study and a Cautionary Tale. *International Journal of Selection and Assessment*, 6, 19-33.
- Fletcher, C. & Perry, E. L. (2001). *Performance Appraisal and Feedback: A Consideration of National Culture and a Review of Past and Contemporary Research and Future Trends*. In N. Anderson, D. Ones, H. Sinangil & C. Viswesvaran (Eds.) *International Handbook of Industrial and Organizational Psychology*. Sage Publications.
- Fletcher, C. & Williams, R. (1996). *Performance Management, Job Satisfaction and Organisational Commitment*. *British Journal of Management*, 7, 169-179.
- Foundation Degrees* (2005). Retrieved from www.foundationdegree.org.uk on 5th January 2006.
- Francis-Smythe, J. & Smith, P. M. (1997). The psychological Impact of Assessment in a Development Centre. *Human Relations*, 50, 149-167.

- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences*, 7, 385-406.
- Furnham, A., Steele, H. & Pendleton, D (1993). A psychometric assessment of the Belbin team-role self-perception inventory. *Journal of Occupational and Organisational Psychology*, 66, 245-247.
- Furnham, A. & Varian, C. (1990). Predicting and accepting personality test scores. *Journal of Personality and Individual Differences*, 9, 735-748.
- Gagne, R. M. (1985). *The conditions of learning and theory of instruction*. New York, CBS College Publishing.
- Gibbins, C. (1994). *Women and training*. Employment Gazette, 102, 391-402.
- Gist, M. E. & Mitchell, T. R. (1992). Self-efficacy: a theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Gist, M. E., Rosen, B. & Schwoerer, C. (1988). The influence of training method and trainee age on the acquisition of computer skills. *Personnel Psychology*, 41, 255-265.
- Goldstein, I. L. (1993). *Training in organisations*. Pacific Grove, CA, Brooks Cole.
- Goleman, D. (1998). *Working with emotional intelligence*. London, Bloomsbury.
- Goodge, P. (1994). Development Centres: Design Generation and Effectiveness. *Journal of Management Development*, 13, 16-22.
- Goodwin, B. (2006). Responsibility for updating skills being pushed onto staff, says Imis. *Computer Weekly*, 18th April 2006, p. 60.
- Green, F. & Ashton, D. (1992). Skill shortage and skill deficiency: a critique. *Work, Employment and Society*, 6, 287-301.
- Green, F. & Owen, D. (2003). Skill shortages - local perspectives from England. *Regional Studies*, 37, 123-134.
- Gregura, G. J., Ford, J. M. & Brutus, S. (2003). Manager attention to multisource feedback. *Journal of Management Development*, 22, 345-361.
- Greller, M. M. (1998). Participation in the performance appraisal review: Inflexible manager behavior and variable worker needs. *Human Relations*, 51(8), 1061-1083.
- Gupta, N. & Beehr, T. (1982). A test of the correspondence between self-reports and alternative data sources about work organizations. *Journal of Vocational Behavior*, 20, 1-13.
- Hall, D. T. & Mirvis, P. (1995). The new career contract: Developing the whole person at midlife and beyond. *Journal of Vocational Behavior*, 47, 269-289.
- Hall, D. T. (1996). Protean Careers of the 21st Century. *Academy of Management Executive* 10(4), 8-16.
- Halman, F. & Fletcher, C. (2000). The Impact of Development Centre Participation and the Role of Individual Differences in Changing Self Assessments. *Journal of Occupational and Organisational Psychology*, 73, 423-442.
- Hardy, M.A. (1993). *Regression with Dummy Variables*. Sage Publications Inc.
- Hazucha, J. F., Hezlett, S. A. & Schneider, R.J. (1993). The Impact of 360-Degree Feedback on Management Skills Development. *Human Resource Management Journal*, 32, 325-351.
- Herriot, P. (1989). *Selection as a social process*. In Smith, M & Robertson, I. (Eds.) *Advances in Staff Selection and Assessment*. Chichester, Wiley, 171-187.
- Honey, P. & Mumford, A. (1992). *The manual of learning styles*. Maidenhead.
- Horner, L. & Jones, A. (2003). *Great Expectations. Understanding the motivation of young workers*. London, the Work Foundation.

- Huselid, M. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38, 635-672.
- The National Standard, Links and Assessment Indicators*. IIP-UK (1994). Sheffield., Department of Employment.
- Ilgen, D. R., Fisher, C. D. & Taylor, M.S. (1979). Consequences of Individual Feedback on Behaviour in Organisations. *Journal of Applied Psychology*, 64, 349-371.
- Irving, J. A. & Williams, D. I. (2001). Development: training with ill-defined objectives? *Selection and Development Review*, 17, 3-7.
- Jankowicz, D. (2004). *The Easy Guide to Repertory Grids*. London, Wiley
- Jones, R. G. & Whitmore, M. D. (1995). Evaluation Developmental Assessment Centers as Interventions. *Personnel Psychology*, 48, 377-388.
- Judge, T. A. & Bono, J. E. (2001). Relationship of Core Self-Evaluation Traits - Self-esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability - With Job Satisfaction and Job Performance: a Meta-Analysis. *Journal of Applied Psychology*, 86, 80-92.
- Kaye, B. & Jordan-Evans, S. (2000). Retention: Tag, you're it! *Training and Development*, 54, 29-33.
- Kelly, G.A. (1955). *The Psychology of Personal Constructs*. London, Routledge.
- Kennedy, C. (2003). *From Dynasties to Dotcoms: The Rise, Fall and Reinvention of British Business in the Past 100 Years*. Kogan Page.
- King, N. (1998). *Template Analysis*. In C. Cassell & G. Symons (Eds.) *Qualitative Methods and Analysis in Organizational Research*. London, Sage Publications Ltd.
- King, N. (2004). *Template Analysis*. Retrieved from http://www.hud.ac.uk/hhs/research/template_analysis/index.htm on 5th January 2005.
- Kirkpatrick, D. L. (1959). Techniques for evaluating training programs. *Journal of ASTD*, 13(11), 3-9.
- Klimoski, R. & Strickland, W. J. (1977). Assessment Centres - valid or merely prescient? *Personnel Psychology*, 30, 353-61.
- Klimowski, R. & Brickner, M. (1987). Why do assessment centers work? The puzzle of assessment center validity. *Personnel Psychology*, 40, 243-257.
- Kluger, A. N. & DeNisi, A. (1996). The Effects of Feedback Interventions on Performance: A Historical review, a Meta-analysis and a Preliminary Feedback Intervention Theory. *Psychological Bulletin*, 119, 254-284.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, New York, Prentice Hall.
- Kram, K. & Ohlott, J.P. (1995). Promotion decisions as a diversity practice. *Journal of management development*, 14 (2), 6-23
- Kraiger, K., Ford, K. & Salas, E. (1993). Application of Cognitive, Skill-based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation. *Journal of Applied Psychology*, 78(2), 311-328.
- Labour-Force-Survey (1994)*. London, HMSO.
- Laird, D. (1985). *Approaches to Training and Development*. New York, NY, Wiley.
- Latham, G. P. & Seijts, G.H. (1998). *Management Development*. In T. Drenth (Ed.) *Handbook of Work and Organisational Psychology*, Psychology Press, 257-272.
- Lee, C. (1998). *Learning from Employee Development Schemes*. Brighton, Institute of Employment Studies.

- Lefkowitz, J. (2000). The role of interpersonal affective regard in supervisory performance ratings: A literature review and proposed causal model. *Journal of Occupational and Organizational Psychology*, 73, 67-85.
- Lent, R. W. & Brown, S. D. & Larkin, L.C. (1987). Comparison of three theoretically derived variables in predicting career and academic behaviour: Self-efficacy, interest congruence, and consequence thinking. *Journal of Counseling Psychology*, 34, 293-298.
- Lievens, F. & Klimoski, R. J. (2001). Understanding the Assessment Centre Process: Where are we now? *International Review of Industrial and Organisational Psychology*, 16, 245-286.
- Locke, E. A. & Latham, G. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, New York, Prentice Hall.
- London, M., Larsen, H. H. & Nellenman Thisted, L. (1999). Relationships between feedback and self-development. *Group and Organization Management*, 24(1), 5-27.
- London, M. & Noe, R. A. (1997). London's career motivation theory. An update on measurement and research. *Journal of Career Assessment*, 5, 61-80.
- London, M. & Smither, J. W. (1995). Can Multi-Source Feedback Change Perceptions of Goal Accomplishment, Self-evaluations, and Performance-Related Outcomes? Theory-based Applications and Directions for Research. *Personnel Psychology*, 48, 803-839.
- Mabe, P. A. & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology*, 67, 280-296.
- Mabey, C. (2001). Closing the circle: participant views of a 360-degree feedback programme. *Human Resource Management Journal*, 11(1), 41-53.
- Mabey, C. & Thomson, A. (2000). The determinants of management development: the views of MBA graduates. *British Journal of Management*, Special Conference Issue 11, S1-S15.
- Mason, J. (1996). *Qualitative Researching*. London, Sage.
- Mathieu, J. E., Martineau, J. W. & Tannenbaum, S.I. (1993). Individual and Situational Influences on the Development of Self-efficacy: Implications for training effectiveness. *Personnel Psychology*, 46, 125-147.
- Maurer, T. J., Mitchell, D.R.D & Barbeite, F.G. (2002). Predictors of attitudes toward a 360-degree feedback system and involvement in post-feedback management development activity. *Journal of Occupational and Organizational Psychology*, 75(1), 87-107.
- Maurer, T. J., Weiss, E. M. & Barbeite, F.G. (2003). A Model of Involvement in Work-Related Learning and Development Activity: The Effects of Individual, Situational, Motivational, and Age Variables. *Journal of Applied Psychology*, 88(4), 707-724.
- Maurer, T. J., Pierce, H. R. & Shore, L.M. (2002). Perceived beneficiary of employee development activity: A three-dimensional social exchange model. *Academy of Management Review*, 27(3), 432-444.
- Maurer, T. J. & Tarulli, B. A. (1994). Investigation of Perceived Environment, Perceived Outcome, and Person Variables in Relationship to Voluntary Development Activity by Employees. *Journal of Applied Psychology*, 79(1), 3-14.
- McClelland, C. (1967). *The achieving society*. New York, Free Press.
- McDowall, A. & Fletcher, C. (2004). Employee development: an organizational justice perspective. *Personnel Review*, 33(1), 8-30.
- Meyer, H. H. (1991). A solution to the performance appraisal feedback enigma. *Academy of Management Executive*, 5, 68-76.
- Mitchell, T. R. (1985). An evaluation of the validity of correlational research conducted in organizations. *Academy of Management Review*, 10, 192-205.

- Mohrmann, A. M. & Resnick-West, S. (1989). *Designing Performance Appraisal Systems*. San Francisco, Jossey Bass.
- Mullen, B., Johnson, C. & Salas, E. (1991). Productivity Loss in brainstorming groups: a meta-analytic integration. *Basic and Applied Psychology*, 12, 3-23.
- Mumford, A. (1997). *Management Development*. London, CIPD.
- Naish, R. & Birdi, K. (2001). *Evaluation of the Behavioural, Affective and Financial Outcomes of Sixteen Management Development Centres*. Occupational Psychology Division and Section Annual Conference, Winchester, British Psychological Society.
- Nathan, B. R., Mohrmann, A. M. & Milliman, M. (1991). Interpersonal Relations as a Context for the Effects of Appraisal Interviews on Performance and Satisfaction: a Longitudinal Study. *Academy of Management Journal*, 34, 352-369.
- Noe, R. A. (1986). Trainees' Attributes and Attitudes: Neglected Influences on Training Effectiveness. *Academy of Management Review*, 11(4), 736-749.
- Noe, R. A. & Steffy, B. D. (1987). The Influence of Individual Characteristics and Assessment Center Evaluation on Career Exploration Behavior and Job Involvement. *Journal of Vocational Behavior*, 30, 187-202.
- Noe, R. A. & Wilk, S. L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology*, 78, 291-302.
- Noe, R. A., Wilk, S. L., Mullen, E.J. & Wanek, J.E. (1997). *Employee development: Issues in construct definition and investigation of antecedents*. In M. Teachout (Ed.). Improving training effectiveness in organizations. Hillsdale, N.Y., Earlbaum.
- Ogbonna, E. (1998). British Ethnic Minorities and Employment Training: Redressing or Extending Disadvantage? *International Journal of Training and Development*, 2 (1), 36-41
- Oliver, K. V. & Vincent, R. (2000). Management Development - what gets the best results? *Selection and Development Review*, 16, 14-15.
- Olsen, R. N. & Sexton, E. A. (1996). Gender differences in the returns to and acquisition of on-the-job training. *Industrial Relations*, 35, 59-77.
- Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. London, Continuum.
- Patton, M. Q. (1980). *Qualitative Evaluation Methods*. Newbury Park, CA, Sage.
- Pearce, J. L. & Porter, L. W. (1986). Employee Responses to Formal Appraisal Feedback. *Journal of Applied Psychology*, 71, 211-218.
- Pettigrew, A., Hendry, C. & Sparrow, P. (1988). *The role of vocational education and training in employers skills supply strategies*. Sheffield, Training Agency Report in conjunction with Coopers and Lybrand.
- Podsakoff, P. M. & Organ, D. W. (1986). Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management*, 12(4), 531-544.
- Porter, M.E. & Ketels, C.H.M. (2003). *UK competitiveness: moving to the next stage*. London, Department for Trade and Industry.
- Renn, R. W. & Fedor, D. B. (2001). Development and field test of a feedback seeking, self-efficacy, and goal setting model of work performance. *Journal of Management*, 27(5), 563-583.
- Rice, L. N. & Greenberg, L. S. (1984). *Patterns of Change*. New York, Guildford.
- Rosow, J. M. & Zager, R. (1988). *Training: the competitive edge*. San Francisco, Jossey Bass.
- Rouiller, J. Z. & Goldstein, I. L. (1993). The relationship between organizational transfer climate and positive transfer of training. *Human Resource Development Quarterly*, 4, 377-390.

- Rousseau, D. M. (1995). *Psychological Contracts in Organisations. Understanding Written and Unwritten Agreement*. Thousand Oaks, Sage Publications.
- Rust, J. & Golombok, S. (1999). *Modern Psychometrics*. London, Routledge.
- Saunders, M., Lewis, P. & Thornhill, A. (2003). *Research Methods for Business Students*. Harlow, Prentice Hall.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, Doubleday.
- Senior, B. & Swailes, S. (1998). A Comparison of the Belbin Self Perception Inventory and the Observer's Assessment Sheet as Measures of an Individual's Team Roles. *International Journal of Selection and Assessment*, 6, 1-8.
- Shrauger, J. S. & Rosenberg, S. E. (1970). Self esteem and the effects of success and failure feedback on performance. *Journal of Personality and Social Psychology*, 38, 404-417.
- Silverman, D. (2000). *Doing Qualitative Research. A Practical Handbook*. London, Sage Publications.
- Skinner, D., Saunders, M., Beresford, R. (2003). Towards a shared understanding of skill shortages. *Education + Training*, 46, 182-193.
- Sloman, M. (2003). *Training in the age of the learner*. London, CIPD.
- Sloman, M. (2005). *From Training to Learning*. Report commissioned by CIPD, London, Ref No 3208
- Smith, A. J., Boocock, G. & Loan-Clarke, J. (2002). IIP and SMEs: awareness, benefits and barriers. *Personnel Review*, 31, 62-85.
- Snyder, C.R. & Cowles, C. (1979). Impact of positive and negative feedback based on personality and intellectual assessment. *Journal of Consulting and Clinical Psychology*, 47(1), 207-209.
- Spychalski, A. C., Quinones, M. A., Gaugler, B.B. & Pohley, K. (1997). A survey of assessment centre practices in organizations in the United States. *Personnel Psychology*, 50, 71-90.
- Stajkovic, A. D. & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 124, 240-261.
- Steers, R. M. (1975). Task-goal attributes, n-achievement, and supervisory performance. *Organizational Behaviour and Human Performance*, 13, 392-403.
- Steers, R. M. & Braunstein, D. N. (1975). A behaviourally based measure of manifest needs in work settings. *Journal of Vocational Behavior*, 9, 251-266.
- Stumpf, S.A., Brief, A. P. & Hartman, K. (1987). Self-efficacy perceptions and coping with career-related events. *Journal of Vocational Behavior*, 31, 91-108.
- Sugarman, L. (2001). *Life Span Development. Theories, concepts and interventions*. Hove UK, Psychology Press.
- Super, D. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16, 282-298.
- Tabachnik, B. G. & Fidell, L. S. (1996). *Using Multivariate Statistics*. Northridge, HarperCollins Publishers Inc.
- Tannenbaum, S. I., Mathieu, J. E., Salas, E. & Cannon-Bowers, J.A. (1991). Meeting Trainees' Expectations: The Influence of Training Fulfilment on the Development of Commitment, Self-Efficacy, and Motivation. *Journal of Applied Psychology*, 76, 759-769.
- Tannenbaum, S. I. & Yukl, G. (1991). Training and Development in Work Organizations. *Annual Review of Psychology*, 43, 399-441.
- Tharenou, P. T. (2001). The relationship of training motivation to participation in training and development. *Journal of Occupational and Organizational Psychology*, 74, 599-621.

- Thomson, A., Mabey, C., & Storey, J. (1998). The determinants of management development: choice or circumstance. *International Studies of Management and Organisation*, 28(1), 91-113.
- Tracey, J. B., Hinkin, J. R., Tannenbaum, S. & Mathieu, J.E. (2001). The influence of individual characteristics and the work environment on varying levels of training outcomes. *Human Resources Development Quarterly*, 12(1), 5-23.
- Tracey, J. B., Tannenbaum, S. I. & Kavanagh, M.J. (1995). Applying Trained Skills on the Job: The Importance of the Work Environment. *Journal of Applied Psychology*, 80, 239-252.
- Tregaskis, O. & Brewster, C. (1998). Training and development in the UK context: an emerging polarisation? *Journal of European Industrial Training*, 22 (4), 180-189.
- Virtanen, M., Kivimaeki, M., Vartia, M. & Elovainio, J. (2003). Disparity in occupational training and career planning between contingent and permanent employees. *European Journal of Work and Organizational Psychology*, 12, 19-36.
- Vloeberghs, D. & Berghman, L. (2003). Towards an effectiveness model of development centres. *Journal of Managerial Psychology*, 18(6), 511-540.
- Vroom, V. (1964). *Work and motivation*. New York, Wiley.
- Warr, P. (1994). *Training for older managers*. Human Resource Management Journal, 4, 22-38.
- Warr, P. (2002). *Learning and Training*. In P. Warr. (Ed.) Psychology at Work. London, Penguin Books.
- Warr, P., Allan, C. & Birdi, K. (2001). Predicting three levels of training outcome. *Journal of Occupational and Organizational Psychology*, 72, 351-375.
- Warr, P. & Birdi, K. (1998). Employee age and development activity. *International Journal of Training and Development*, 2, 190-214.
- Warr, P. & Bunce, D. (1995). Trainee characteristics and the outcomes of open learning. *Personnel Psychology*, 48, 347-375.
- Webster, J. & Martocchio, J. J. (1995). The differential effects of software training previews on training outcomes. *Journal of Management*, 21, 757-787.
- West, M. A., Brodbeck, F. C. & Richter, A.W. (2004). Does the 'romance of teams' exist? The effectiveness of teams in experimental and field settings. *Journal of Occupational and Organisational Psychology*, 77, 467-473.
- Wimer, S. & Nowack K. M. (1998). 13 Common Mistakes Using 360-Degree Feedback. *Training and Development*, 5, 69-80.
- Woodruffe, C. (1999). *Winning the Talent War: A Strategic Approach to Attracting, Developing and Retaining the Best People*. London, John Wiley and Sons Ltd.
- Zimmerman, B.J. & Pons, M.M. (1986). Development of a Structured Interview for Assessing Student Use of Self-Regulated Learning Strategies. *American Educational Research Journal*, 23, 614-628

Appendix A

1. Study A – Questionnaire for O₁

Review and Development techniques evaluation survey

This survey is part of an ongoing research project at Goldsmiths College, which aims to evaluate how people are being appraised and developed, how this affects their work and how they feel about this in a variety of organisations. All data will be collected by an external researcher and used for research purposes only. The responses are collected anonymously and will be kept confidential; no individual results will be passed on to your organisation. Please answer all items in the questionnaire (apart from those which you are asked to leave out if you have not had particular experiences). All questionnaires need to be completed by the 7th of September, so please fill out the questionnaire today and forward it using the provided envelope to the Secretariat Room, where it will be put into a sealed container. Please tick the appropriate boxes (✓) or write your answer in the space provided. The questionnaire should not take you more than 15 minutes to complete

How old are you?	years			
What gender are you?	male		female	
How long have you been working in this organisation?	years		months	
What is your current Job Title?				
Which wing/ department do you mainly work in?				
For how long has your present manager been in charge of your performance planning reviews and/or development action plans?	years		months	

Have you changed jobs since you joined [name of organization]?	no		yes	
If “yes” to the last question, was this a transfer to another unit/wing?	no		yes	
If “yes” to the last question, was this a promotion?	no		yes	
Do you have a Performance Plan?	no		yes	
Do you have a Personal and Career Development Action Plan (PACDAP)?	no		yes	
Are you in charge of administering Performance Reviews and/or Development Action Plans to others?	no		yes	

When did your last meeting with your manager regarding your performance planning and development take place?	I have not had a meeting	
	0-3 months ago	
	4-6months ago	
	7-12 months ago	
	More than 12 months ago	

Have you taken part in any of the following training/development activities during the last year? (You can tick more than one option)	In house training course	
	External training course	
	Academic qualification	
	Vocational qualification	
	Mentoring/ Coaching	
	Other	
If 'other', please specify:		

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself at this moment in your current job. Please rate all items by ticking the appropriate box (✓), according to the following scoring key:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderately	Agree Strongly

	1	2	3	4	5	6	7
I try very hard to improve on my past performance at work							
I do my best work when job assignments are fairly difficult							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
I take moderate risks and stick my neck out to get ahead at work							
I try to perform better than my co-workers							
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							

Please skip the following section if you have not yet had any experience with the Performance Planning and Review System used in this organization.

	1	2	3	4	5	6	7
I have a considerable say in the way my career develops*							
I receive recognition for developing my skills*							
Reviews give me a clear idea of where I can most benefit from training and other development activities*							
I get sufficient direction and feedback from the person I report to*							
Reviews have helped my career development*							

Your comments

Thank you for completing this survey. We would now like to invite you to comment on any issues relating to the Performance Planning and Review System. Please remember that all information collected with this questionnaire is strictly confidential and will be kept anonymous.

(continue overleaf if necessary)

2. Study A – Questionnaire for O₂

NB: this questionnaire layout was tailored for a web-page; it would have appeared differently on a PC screen.

[Name of organization] staff development survey

This survey is part of an ongoing research project, which will provide [Name of organization] with feedback on the overall effectiveness of the present appraisal and development system. Everybody's input is of vital importance to us. So make sure you provide us with *your* feedback by filling in this questionnaire *now*. All data will be collected by an external researcher and kept **anonymous**. The questionnaire should not take you more than ten minutes to complete. You will need to fill out the whole questionnaire in one go; in other words do not take a break and then come back to it. Select the appropriate button, or write your answer in text where indicated. Only submit each page of the questionnaire once the page has been completed. **Do not attempt to go back and edit previous pages.** Should you have any queries regarding this survey, feel free to contact the researcher on wlc@worklifeconsulting.co.uk. Please create your **unique identification number here**, using the first initial of your mother's name, the first two digits of your date of birth, and the first initial of your secondary school (e.g. "s29r"). **This ID number will be used for statistical purposes only, no individual responses can be identified.** Press 'verify' once you have created and entered your ID here:

How old are you?	Years		Months	
How long have you been working for [Name of organization]?	Years		Months	
What gender are you?	Male		Female	

Which team do you work in?	Administration	
	Client Services	
	Creative Team	
	Digital solutions	
	ESC	
	Finance/ accounts	
	IT	
	Management	
	Marketing	
	Sales	

	The Factory	
	Think Lateral	

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself at this moment. Remember that all information collected with this questionnaire is strictly confidential. Please rate all items by clicking the appropriate option using the following scoring key:

	Disagree strongly	Disagree moderat ely	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderate ly	Agree Strongly
I try to perform better than my co-workers							
I do my best work when job assignments are fairly difficult							
I take moderate risks and stick my neck out to get ahead at work							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
I try very hard to improve on my past performance at work							

The following items concern our current appraisal system and the feedback you received from your colleagues. Please use the same scoring key as before:

	Disagree strongly	Disagree moderat ely	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderat ely	Agree Strongly
My appraisal(s) has/ have given me a clear idea of where I can most benefit from training and other development activities							
I have a considerable say in the way my career develops							
I get sufficient direction and feedback from the person I report to							
I receive recognition for developing my skills at [Name of organization]							
My appraisal(s) has/ have helped my career development							

Have you taken part in any development activities during the last 12 months?	No	
	Yes	
If 'yes', please specify here which activities this entailed (e.g. 'External Training Course', 'Academic Qualification', 'Video', 'Book'); please list all items, including on-going		

Your comments

Thank you for completing this survey. We would now like to invite you to comment on any issues relating to the current appraisal system. Please remember that all information collected with this questionnaire is strictly confidential and will be kept anonymous.

Press 'submit'

Thank you very much for taking the time to complete this survey, your feedback is extremely valuable to us.

Appendix B

1. Study B – Questionnaire for T₁

[Name of organization] staff development survey

This survey is part of an ongoing research project in collaboration with Goldsmiths College, which will provide [Name of organization] Housing Service with feedback on the overall effectiveness of the appraisal and development system. Everybody's input is of vital importance to us. So make sure you provide us with *your* feedback by filling in this questionnaire *now*. All data will be evaluated by an external researcher and kept **anonymous**.

The questionnaire should not take you more than ten minutes to complete. Should you have any queries regarding this survey, please feel free to contact the researcher on wlc@worklifeconsulting.co.uk.

Please create your **unique identification number** here, using your mother's first initial, the first two digits of your date of birth, and the first initial of your secondary school (e.g. "sm02f"):

_____. This will allow the external researcher to follow up our findings once we have implemented our new system. **No individual data will be disclosed to [Name of organization] Housing Service.**

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself in your current job at this moment. Remember that all information collected with this questionnaire is strictly confidential. Please rate all items using the following scoring key, use a tick (✓) to mark the appropriate boxes:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderately	Agree Strongly

	1	2	3	4	5	6	7
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
There are numerous professional development opportunities within this organisation							
I do my best work when job assignments are fairly difficult							
Continuous learning is supported by this organisation							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
I try to perform better than my co-workers							

	1	2	3	4	5	6	7
Independent and innovative thinking are encouraged by managers							
Managers encourage their employees to learn new ways of performing their jobs							
I try very hard to improve on my past performance at work							
This organization dedicates significant resources to training and development							
I take moderate risks and stick my neck out to get ahead at work							
I have a considerable say in the way my career develops							
There are rewards and incentives for acquiring and using new knowledge and skills in one's job							
Managers give recognition and credit to those who apply new knowledge and skills to their work							
Managers promote learning from one's mistakes and successes							
Management places a high priority on training and development							
Employees are provided with resources necessary to acquire and use new knowledge and skills							

Use a tick (✓) to mark the appropriate boxes, or write your answer in text where indicated for the following items:

How old are you?	Years		Months	
How long have you been working for [Name of organization] Housing Service?	Years		Months	
What gender are you?	Male		Female	
What is your job role?				
Which team do you belong to?				
Have you changed your job since you joined?	No		Yes	
If 'yes' to the last question, did this entail a promotion?				
Have you had an appraisal during the last two years?	No		Yes	

If 'yes' to the last question, when did your last appraisal take place?				
Have you taken part in any training/ development activities during the last two years?	No		Yes	
If 'yes' to the last question, which activities did this encompass (e.g. 'External Training Course', 'Academic Qualification', 'Mentoring'):				
Do you feel that you are in need of personal and professional development at this moment? (such as specific training, coaching or mentoring, on-the-job development)	No		Yes	
If 'yes' to the last question, do you know how these development needs can be fulfilled? (for instance, by requesting and getting approved, a specific course)	No		Yes	
Do you have a Personal Development Plan?	No		Yes	
If 'yes' to the last question, are you satisfied with your Personal Development Plan?	No		Yes	
If 'yes' to the question before the last one, do you feel that your Personal Development Plan is instrumental in helping you to fulfill your goals?	No		Yes	

Thank you for taking the time to complete this questionnaire. Your feedback will prove very useful to this research. We will follow up our initial findings in a few months time, and ask you to fill out another questionnaire. In the meanwhile, we would like you to comment on any issues raised by this survey:

2. Study B –T₃

[Name of organization] staff development survey – Part 2

This survey is the second part of an ongoing research project in collaboration with Goldsmiths College, which will provide [Name of organization] Housing Service with feedback on the overall approach to work review and staff development. The questionnaire should not take you more than ten minutes to complete.

Please create your **unique identification number here (same as last time if you completed the previous survey)**, using your mother's first initial, the first two digits of your date of birth, and the first initial of your secondary school (e.g. "sm02f"): _____.

This will allow the external researcher to follow up our initial findings. No individual data will be disclosed to [Name of organization] Housing Service.

Please note that all information on this cover-page will be processed as strictly confidential by Goldsmiths' College. This data is collected for statistical purposes only, and will under no circumstances be passed on to [Name of organization] Housing Department.

Which area of the service to you work for?	HAC	
	Caretaking Service	
	3 rd Floor/ Clements Road	
	Housing Management	

What is your job role?	
Which team do you belong to?	

How long have you been working for [Name of organization] Housing Service?	Years		Months	
Have you changed your job since January 2002?	No		Yes	
If 'yes' to the last question, did this entail a promotion?	No		Yes	

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself in your current job at this moment. Remember that all information collected with this questionnaire is strictly confidential. Please rate all items using the following scoring key, using a tick (✓) to mark the appropriate boxes:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderately	Agree Strongly

	1	2	3	4	5	6	7
Managers give recognition and credit to those who apply new knowledge and skills to their work							
Independent and innovative thinking are encouraged by managers							
Managers encourage their employees to learn new ways of performing their jobs							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
I have a considerable say in the way my career develops							
Managers promote learning from one's mistakes and successes							
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
Management places a high priority on training and development							
My Personal Development Plan has been followed up in supervision meetings ^B							
Employees are provided with resources necessary to acquire and use new knowledge and skills							
Reviewing my work with my manager helps me understand how to improve my work performance ^B							
I take moderate risks and stick my neck out to get ahead at work							

	1	2	3	4	5	6	7
My manager and I have agreed on how to best to follow up my progress (a personal development plan) ^B							
There are numerous professional development opportunities within this organisation							
Continuous learning is supported by this organisation							
I get sufficient direction and feedback from the person I report to ^B							
My last job review/appraisal has helped my career development ^B							
I try to perform better than my co-workers							
Reviewing my work with my manager has given me a clear idea of where I can most benefit from development and training							
Reviewing my work with my manager helps me to set myself goals for the future ^B							
There are rewards and incentives for acquiring and using new knowledge and skills in one's job							
I receive recognition for developing my skills ^B							
I try very hard to improve on my past performance at work							
Considering my personal experience with the current approach to work review and staff development, I would consider the overall process fairly handled ^B							

Were any of these review methods used in your last work review?	Analysis of Skills and Abilities	
	Career Development and Lifelong Learning	
	Career Review – Career Changes	
	Project Review	
	Team Based Development	
	Motivation and Personal Reflection Based	
	Guided Development using the Person Specification	
	Can't Remember/ Don't know	

Have you taken part in any of the following development activities during the last twelve months? (You can tick more than one option)			
Sharing information, knowledge, experience		External training course	
Internal training course		One-to-one time with manager (specific learning)	
Conferences/Seminars		Open/Distance Learning	
Academic Qualifications		Secondment	
Informal Career Discussions with Manager		Mentoring	
360-degree feedback		Shadowing	
Coaching		Other (please specify):	
Does your manager/supervising colleagues:			
Communicate decisions and changes		Communicate policy, practice and procedure	

Have you had an appraisal/job review during the last twelve months?	No		Yes	
If 'yes' to the last question, did you use the new appraisal toolkit?	No/ don't know		Yes	
If 'yes' to the last question, when did your appraisal take place? (e.g. "March '03")				

Overall, the following rating describes the present stage of my development at work (please tick ✓):	Well developed	
	Developed	
	Needs development	

Thank you for taking the time to complete this questionnaire. Please note down any comments you may have on the appraisal toolkit below. Can you think of anything that worked particularly well? Can you think of anything that needs improvement?

Continue overleaf if necessary

Appendix C

1. Study C – Questionnaire T₁ (O₁)

[Name of organization] Development centre Evaluation Survey – part I

This survey is part of an ongoing research project at Goldsmiths College, which will provide [NAME OF ORGANISATION] with feedback on the overall effectiveness of the present review and development methods. You will receive three surveys: this one, one survey *after* the Development Centre, and one long-term follow up. Your manager will be asked to comment on your career development **for research purposes only** at the time of the follow up survey. Please tick here if you give your consent ☐.

All data will be collected by an external researcher and kept **confidential**. **No individual results will be fed back to the organisation**. The questionnaire should not take you more than ten minutes to complete, try to answer all items. Please hand your completed questionnaire to Corinne Harper, using the attached pre-addressed envelope.

Please tick the appropriate boxes (✓) or write your answer in text where indicated.

Your staff number:		
Your current job title:		
What is your main business area? (Please tick one option only)	Chief Executive Office	
	Corporate Functions – Internal Audit, Corporate Communications, Safety & Quality	
	Projects & Programmes	
	HR	
	Finance	
	Strategy and Regulation	
	Technical Services	
	Operations & Customer Services HQ	
	Operations & Customer Services – Airports	
	Operations & Customer Services – ACS	
	Operations & Customer Services – OES	
Operations & Customer Services - SDI		

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself in your working environment at this moment. Remember that all information collected with this questionnaire is strictly confidential. Please rate all items using the following scoring key:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Agree slightly	Agree Moderately	Agree Strongly

	1	2	3	4	5	6	7
I try to perform better than my co-workers							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
I do my best work when job assignments are fairly difficult							
I try very hard to improve on my past performance at work							
I could succeed and learn as well as the next person in a class designed to improve skills.							
I take moderate risks and stick my neck out to get ahead at work							

Please indicate your answer by ticking the appropriate box (✓)

My last Career Development Review took place:	0-3 months ago	
	4-6 months ago	
	7-12 months ago	
	More than 12 months ago	

How old are you?	Years		Months	
How long have you been working for [NAME OF ORGANISATION]?	Years		Months	
What gender are you?	Male		Female	
Have you changed jobs during the last two years?	No			

	Yes	
If you responded 'yes' to the last question, was this a promotion?	No	
	Yes	
If you responded 'yes' to the question before the last one, did you transfer to another department?	No	
	Yes	

Have you taken part in any of the following development activities/ methods during the last year?; please note that we are confining this to activities that develop <i>managerial</i> competencies as opposed to <i>technical</i> , e.g. engineering, competencies)	On-the-job training	
	Formal courses	
	Conferences/Seminars	
	Academic Qualifications	
	Open/Distance Learning	
	360-degree feedback	
	Secondment	
	Mentoring	
	Coaching	
	Action Learning	
Other		
If you answered 'Other', please specify here:		

Overall, the following rating describes the present stage of my development at work (please tick ✓):	Well developed	
	Developed	
	Needs development	

Do you have a Personal Development Plan?	Yes		No	
--	-----	--	----	--

If you answered No, please skip the following two items (otherwise please use the same rating scale as before)

	1	2	3	4	5	6	7
My Personal Development Plan has helped my career development							
My Personal Development Plan has given me a clear idea of where I can most benefit from training and other development activities							

Thank you very much for helping us with our research by taking the time to complete this survey.

2. Study C – Questionnaire T₃ (O₁)

NB: This questionnaire contains extra items that were not used in Study C, but included for internal use in the organization.

[NAME OF ORGANIZATION] Development centre Evaluation Survey – part II

The following questionnaire should not take you more than ten minutes to complete. Please hand your completed questionnaire to Corinne Harper, using the attached pre-addressed envelope. All responses are collected anonymously and will be kept **confidential**. Should you have any queries, please feel free to contact the researcher on wlc@worklifeconsulting.co.uk.

Your staff number:	
--------------------	--

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself in your working environment at this moment. Please rate all items by ticking the appropriate box (✓), using the following scoring key:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Agree Slightly	Agree Moderately	Agree Strongly

Participants in the Development Centre has given me the chance to drive my own development

	1	2	3	4	5	6	7
Overall, the feedback that I received from the client was accurate							
I try very hard to improve on my past performance at work							
I could succeed and learn as well as the next person in a class designed to improve skills.							
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
I do my best work when job assignments are fairly difficult							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
I try to perform better than my co-workers							
I take moderate risks and stick my neck out to get ahead at work							

Overall, the feedback that I received from my 360-degree feedback

ratings was accurate

I was not surprised by the feedback I received

Our Development Centres

The following items will elicit general information about our present Development Centres. Please indicate your choice by ticking (✓) the appropriate boxes.

	1	2	3	4	5	6	7
I received sufficient feedback during the Development Centre							
Overall, the feedback that I received from the observers was accurate (*)							
The current DC format is comprehensive enough to review my development needs accurately							
Development Centres generally facilitate the review and development process							
Considering my personal experience with the current Development Centre format, I would consider the process fair and [Name of organization]							
Participation in the Development Centre has given me the impetus to drive my own development							
Overall, the feedback that I received from the observers was constructive (*)							
I perceive a clear link between my participation in the Development Centre and my future development within [NAME OF ORGANIZATION]							
The Development Centre clearly pinpointed my strength and weaknesses and my areas for future development							
The Development Centre format is suited to my job role							

360-degree feedback

The following items will elicit general information about the 360-degree feedback which was used as part of the Development Centre. Please rate the following statements by ticking (✓) the appropriate boxes, using the same scoring key as before.

	1	2	3	4	5	6	7
Overall, the feedback I received from my 360-degree feedback raters was constructive							
Overall, the feedback I received from my 360-degree feedback raters was accurate							
I was not surprised by the feedback I received							

	1	2	3	4	5	6	7
360-degree feedback facilitates my development							
Considering my personal experience with the 360-degree feedback format as used during the Development Centre, I would rate the process as fair and just							
I am satisfied with our current 360-degree feedback system							

Which of the following was the Development Centre Component that <i>you</i> consider the most useful for your personal and professional development? <i>(please tick one option only)</i>	360-degree feedback	
	Partner Meeting exercise	
	Project Team Meeting exercise	
	Performance Management Meeting exercise	
	Customer Meeting exercise	
	Interview	

Overall, the following rating describes the present stage of my development at work (please tick ✓):	Well developed	
	Developed	
	Needs development	

Your comments

We would now like to invite you to comment on any issues that may have arisen from having completed this survey, either with regard to specific questionnaire items, or with regard to the development process overall. Please remember that all information collected with this questionnaire is strictly confidential and will be kept anonymous.

(Please continue overleaf if necessary)

Thank you very much for helping us with our research by taking time to complete this survey.

3. Study C – Questionnaire T4 (O1)

NB: this questionnaire contains extra items that were not used for the analysis in Study C; but were included for internal purposes in the organisation.

[NAME OF ORGANIZATION] Development centre Evaluation Survey – part III

Thank you for completing the first part of our survey both before and immediately after you took part in the [NAME OF ORGANIZATION] Development Centre. This questionnaire is a follow up to our findings and will provide [NAME OF ORGANIZATION] with further information on the overall effectiveness of the present review and development methods.

Please answer all items. The questionnaire should not take you more than ten minutes to complete. Please submit the questionnaire using the attached addressed envelope. All data will be collected by an external researcher and kept **confidential**, please feel free to contact the researcher on wlc@worklifeconsulting.co.uk should you have any queries.

Your staff number:	
--------------------	--

There are no right or wrong answers for any of the following statements. The best answer is what you feel is true of yourself at this moment. Remember that all information collected with this questionnaire is strictly confidential. Please rate all items by ticking the appropriate boxes (✓), using the following scoring key:

1	2	3	4	5	6	7
Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree or agree	Slightly agree	Agree Moderately	Agree Strongly

I receive recognition for developing my skills at work

	1	2	3	4	5	6	7
If I took part in a career-related workshop, seminar, or course, I would probably learn at least as much as anyone else							
I take moderate risks and stick my neck out to get ahead at work							
I could succeed and learn as well as the next person in a class designed to improve skills.							
I try to perform better than my co-workers							
If I were to participate in a development activity (workshop, course, etc.), my success in that activity would be at least equal to most other participants							
I try very hard to improve on my past performance at work							
I do my best work when job assignments are fairly difficult							

My Personal Development Plan has given me a clear idea of what I can learn from my training and other development activities

My Personal Development Plan has been used to track progress, achieve goals and make a difference

Our Development Strategy

Please rate all items by ticking the appropriate boxes (✓), using the same rating scale as before.

	1	2	3	4	5	6	7
I am satisfied with my Personal Development Plan							
The follow up procedures for the Development Centre process are adequate							
My Career Development Review(s) has/ have helped my career development							
I get regular feedback on performance at work							
My Career Development Plan has helped my career development							
I understand how I fit in and the contribution I make to achieving my department's objectives							
Participation in the Development Centre has helped my career development							
I have received sufficient support from others (e.g. my colleagues, my manager) in order to follow through my Personal Development Plan							
My Personal Development Plan has given me a clear idea of where I can most benefit from training and other development activities							
I get sufficient direction and feedback from my manager							
I receive recognition for developing my skills at work							
My Career development review(s) has/ have given me a clear idea of where I can most benefit from training and other development activities							
I do not feel the best use is being made of my skills at work							
My Personal Development Plan has met its time scale							
I have opportunities for promotion at work							
I have a considerable say in the way my career develops							
The training and development opportunities available to me are adequate							
Participation in the Development Centre give me a clear idea of where I can most benefit from training and other development activities							
I am satisfied with the training and development I have received							
360-degree feedback has given me a clear idea of where I can most benefit from training and other development activities							
My Personal Development Plan has been specific, measurable, achievable and realistic							

Please indicate your answer by ticking the appropriate box (✓), or writing your reply in text where appropriate.

Have you changed jobs since you participated in the Development Centre?	No	
	Yes	
If you responded 'yes' to the last question, was this a promotion?	No	
	Yes	
If you responded 'yes' to the first question, did you transfer to another department?	No	
	Yes	
Did you have a Career Development Review since you participated in the development centre?	No	
	Yes	
If 'Yes', when did this take place?		

Have you taken part in any of the following development activities/ methods since partaking in the development centre? (You can tick more than one option; please note that the options should be confined to activities that develop <i>managerial</i> competencies as opposed to <i>technical</i> , e.g. engineering, competencies)	On-the-job training	
	Formal courses	
	Conferences/Seminars	
	Academic Qualifications	
	Open/Distance Learning	
	360-degree feedback	
	Secondment	
	Mentoring	
	Coaching	
	Action Learning	
Other		
If you answered 'Other' please specify here:		

Overall, the following rating describes the present stage of my development at work (please tick ✓):	Well developed	
	Developed	
	Needs development	

Thank you for helping our research by taking the time to complete this survey.

Appendix D

Classification of Development and training activities for Study C

O₁

Training Activities:	Internal or externally run formal courses
Career:	Temporary promotion, presence of PDP, work on PDP with line manager, secondment, discuss development with line manager, coaching, 360
Formal:	Conferences/seminars, academic, NVQ, open/distance
Informal:	Visit net, visit learning resource centre, other

O₂

Training:	Internal or externally run formal courses
Career:	360-degree feedback, secondments, mentoring, coaching, presence of PDP
Formal:	conferences, academic, open learning
Informal:	On-the-job training, action learning, other

O₃

Training:	Internal or externally run formal courses
Career:	360-degree feedback, mentoring, coaching, presence of PDP, secondment
Formal:	Conferences, academic, open learning
Informal:	On the job learning, action learning, other

Appendix E

Interview Schedule from Interview One, Study D

This interview was held with a female manager, who lead the Usability Team (web-based) in a large UK Financial Services Organization

The interview commenced with a general introduction to the topic of the research, set out the time frame; the interviewer then asked permission to record and transcribe the interview before commencing with the questions set out below.

Definitions of training and development, prevalent training and development activities in the organisation

Question 1:	To start us off, I would just like to ask you – How do <i>you</i> define training and development?
Question 2:	So imagine you had two different pots that you could sort various sorts of activities into. One of them would be a training pot and the other a development pot. W what kind of activities would you put in the training pot, and what in the development pot?
Question 3:	What about activities such as staff appraisals? Where would they fit into the picture?
Question 4:	Do they fit into either of the two pots or do you maybe need a third pot?
Question 5:	And do you do any one to one activities as well for instance coaching or mentoring?

Differences between training and development

Question 6:	That's useful to know actually. So, what do you think are the differences between training and development?
Question 7:	Under what circumstances or conditions would training on the one side or development on the other side be most useful? Or in other words what would make you choose training rather than development for a particular employee?
Question 8:	So, what I'm trying to get at next is a particular example. Could you think of a time when you send one of your staff for either a training course or talk to them about their development that you thought was particularly successful?

Appendix F

Use and usefulness of activities

Question 9:	For you in your managerial role what kind of activities, by far and large, do you find most useful then? (...) In terms of training and development.
Question 10:	So in summary what do you think are the factors that are most likely to make training and development effective?
Question 11:	So just to round of I've got some really quite specific questions. Do you happen to know what's the most commonly used training activities are in [name of the organisation]? Whether its internal courses or external courses or development on the job (...)
Question 12:	Could you think of an example when for instance an employee had a request for training or development and that wasn't possible? Or is it usually something be agreed quite easily?
Question 13:	Yes, yes that makes sense. And do you happen to know whether actually [name of the organisation] monitors training and development across the employees, in terms of who does what but also in terms of whether is has worked or not?

Method

An employee attitude survey collected data over the Internet, using mailing labels (Miles, 2001; Tracy et al., 2001) as well as e-mail lists. The research aimed at providing different categories of employees with regard to their perception of the development they had experienced within the organization, building on a framework provided by Miles and colleagues (1998; Miles, 2001), particularly with regard to:

- Development provided for employees (internal, external, on-the-job, and off-the-job)
- Development output, opportunities for training and development and employees' understanding of their role
- Development outcomes, employees' satisfaction with their experience

Regression analysis and factor analysis were used to explore the data.

Findings and Discussion

Results gave other significant findings in the employee's training needs, in particular regarding the development received and applied only the approved categories. Several explanations are possible. Firstly, differences could be due to the kind of process employed. There is a likely to be approval by a group in the organization which might have imposed the use of approved categories (e.g. Tracy, 2001; Miles & McHugh, 2001). Secondly, workers perceived the organizational learning climate as less favorable in their units (e.g. which did not have a "good" learning climate). Thirdly, it has been suggested that workers in general are relatively "unmotivated" to participate in "development activities" (e.g. Tracy, 2001).

Appendix F

1. Paper presented at Psychology of Women Conference, Northampton, 2003

McDowall, A. & Silvester, J. Employee Development – is it different for women?

Within the POW 2003 conference I would like to present a paper which broadly fits into the category of 'women at work', using a 30-minute time slot. To start, I would like to present findings from a study that I conducted as part of my PhD research. The findings show that women in a predominantly female organisation perceived their development at work more negatively than men did. Several possible explanations exist. I would like to facilitate a fruitful discussion with the audience and invite attendees to share their own experiences from their working environment.

Organizational context

The organisational setting was a UK office of an international publishing and advertising agency, fifty employees (64% response rate) took part in the survey in total, of which 32 were female.

Method

An employee attitude survey collected data over the internet, using existing scales (Mabey, 2001; Tracey et al, 2001) as well as bespoke items. The research looked at possible differences between groups of employees with regards to their perceptions of the development they had experienced within the organisation. Building on a framework conceived by Mabey and colleagues (1998; 2001; 2002), particular focus was on

- Development process: the appraisal interviews, the feedback received and rewards and recognition
- Development outputs: opportunities for training and development and employees' understanding of their role
- Development outcomes: employees' satisfaction with their experiences.

Regression analyses and between group comparisons were used to explore the data.

Findings and Discussion

Women gave more negative ratings on the majority of survey items, in particular regarding the development process and specifically the appraisal interviews. Several explanations are possible. Firstly, differences could be due to the actual process, as women were more likely to be appraised by a man in this organisation, which might have introduced bias into the appraisal interview (e.g. Eagly, Karau & Makhijani, 1995). Secondly, women perceived the organizational learning climate as less favourable than men did, which could point to a perceived 'glass ceiling'. Thirdly, it has been postulated that women in general are realistically more negative on self-evaluations ('depressive realism'; e.g. Beyer, 2002).

References

- Beyer, S. (2001). The Effects of Gender, Dysphoria, and Performance Feedback on the Accuracy of Self-Evaluations. *Sex roles*, 47, 702-714.
- Eagley, A.H., Karau, S.J. & Makhijani, M.G. (1995). Gender and the effectiveness of leaders: A meta-analysis. *Psychological Bulletin*, 110, 109-128.
- Mabey, C. (2001). Closing the circle: participant views of a 360-degree feedback programme. *Human Resource Management Journal*, 11, 1, 41-53.
- Mabey, C. & Thomson, A. (2000). The determinants of management development: the views of MBA graduates. *British Journal of Management*, Special Conference Issue, 11, S1-S15
- Mabey, C. & Thomson, A. Management development in the UK: A provider and participant perspective. Paper submitted to the *International Journal of Training and Development*
- Thomson, A., Mabey, C. and Storey, J. (1998). The determinants of management development: choice or circumstance. *International Studies of Management and Organisation*, 28, 1, 91-113.

2. Poster Presented at British Psychological Society Annual Conference, Stratford-upon-Avon, January 2004

McDowall, A. & Silvester, J. Are appraisals an effective development tool?

Introduction

Appraisals or reviews are perhaps the most prevalent of a whole range of techniques which are used by organisations to facilitate individual development (Fletcher, 1997). Appraisals usually comprise both the formal rating of past performance and the setting of future development goals. Much research has focused on the performance assessment aspect of appraisals (Mohrman, Resnick-West & Lawler, 1989), however the developmental aspect of appraisals has attracted far less attention from a research perspective. One way of investigating the effects of appraisal on development is by considering the participants' perspective. It has been argued that only the employees themselves can accurately report the current status quo of their development (e.g. Noe & Wilk, 1993; Maurer & Tarulli, 1994). Existing research on training effectiveness (e.g. Tannenbaum, Mathieu, Salas and Cannon-Bowers, 1991) and individual differences affecting participation in development and training (e.g. Tharenou, 2001; Maurer & Tarulli, 1994) offers a guidance tool for the study of appraisal. This study concentrated on a) self-efficacy, which refers to individuals' beliefs in their capabilities (Bandura, 1977), b) individuals' motivation operationalised as need to achieve (NAch) and c) demographic characteristics as predictors of development outcomes. Contrarily to Colquitt et al (2000) who postulated that achievement motivation moderates self-efficacy, it is postulated here that individuals' belief that they 'can do' (SE) is a pre-requisite of their belief that they 'will strive to do' (NAch). The hypotheses were:

H1: That self-efficacy moderates NAch, which in turn is a direct predictor of development outcomes (participation in development activities and development satisfaction), mediated by reactions to the development process (perceived utility).

H2: A further exploratory hypothesis tests demographic characteristics (age, gender, tenure, managerial rank) as significant correlates of the study measures (individual differences, perceived utility and development outcomes).

Design

Data from two cross-sectional studies was combined which had been collected via employee attitude surveys (pen and paper in Study 1, $n = 68$ and web-based for Study 2, $n = 50$) to study the impact of individual differences on development outcomes.

Measures

All scale responses were recorded using a Likert-type scale, ranging from one ("I strongly disagree") to seven ("I strongly agree"), the midpoint was four ("I neither agree nor disagree"). The measures were a two-item measure of development-specific self-efficacy (Maurer & Tarulli, 1994, $\alpha = .57$), a four item measure of NAch (Steers & Braunstein, 1976, $\alpha = .53$), a five-item measure of reactions to the perceived utility of the development process (adapted from Mabey, 2001, $\alpha = .80$). Demographic variables were age (years), sex, tenure and managerial level (defined here as responsibility to administering reviews). Development outcomes were recorded as the number of development activities (from no to five activities) employees had participated in during the last year, as well as overall development satisfaction (two items, $\alpha = .73$).

Sample

Average age was 37.4 (SD = 9.6) and average tenure just over 7 years (SD = 8). The gender ratio was 55.1 percent male, 44.1 percent female (8 % missing). Of the total respondents, 30 percent were in charge of administering appraisals and 66 percent were not (4 % missing). Just under eight percent had not taken part in any development activities, 35 percent in one activity, 33 percent in two activities, and 27 percent in more than two activities, such as the attendance of formal training or having a mentor.

Findings

Testing the first part of hypothesis one (self-efficacy as a moderator of nAch), participants were divided into those with high and low self-efficacy using a mean split following the recommendations by Baron and Kenny (1986). Analysis of variance established that the two groups differed significantly with regard to NAch ($F(1)=10.83$, $p<.01$), hence moderation was given. A series of regression analyses was run to test the second part of the hypothesis, whether perceptions of the process mediated the relationship between nAch and development outcomes. As the bivariate correlation matrix showed that the volume of development activities was not related to NAch or to the perceived utility of the appraisal process, only development satisfaction was used as an outcome. A dummy variable for organisational membership was entered in the first step in each analysis. Firstly, development satisfaction was regressed onto perceived utility of the process ($\beta = .70$). The model was highly significant, explaining 46 % (44 % adjusted) in development outcomes. Secondly, reactions to the process were regressed onto NAch ($\beta = .19$), the model was also significant explaining 10% (8% adjusted) of variance. Lastly, development satisfaction was regressed onto both the perceived utility of the process and nAch. The third model was overall significant (explaining 46% of the variance, 44% adjusted). The beta weight for NAch ($\beta = .04$) was not significant, but the perceived utility of the process was a significant independent predictor ($\beta = .69$). Thus, full mediation was established.

With regard to the second exploratory hypothesis, age was significantly and negatively correlated with self-efficacy ($r = -.22$) and with the perceived utility of the process ($r = -.22$, $p<.05$). Tenure was also negatively correlated with self-efficacy ($r = -.22$, $p<.05$). Gender was significantly and negatively correlated with participation in development activities ($r = -.18$, $p<.05$). Rank was significantly correlated with NAch ($r=.24$, $p<.01$) and satisfaction with development ($r = .22$, $p<.05$).

Discussion

Findings showed that self-efficacy moderated nAch in this context, showing that individuals' belief that they 'can do' might be a pre-requisite for their need to advance their careers. The perceived utility of the development process mediated the relationship between nAch and satisfaction with development. This is not surprising, given that ratings for the perceived utility were below average, whereas scores for nAch were above average. The second outcome measure, volume of development activities, was not considered in the multivariate analysis, as it had no relation to the other variables in the bivariate analysis. It is possible that the measure was too crude, as it did not distinguish between mandatory and non-mandatory development activities, as it had not been possible to make this distinction. Hence hypotheses one received partial support.

Exploring demographic variables as correlates of the study measures, both age and tenure were negatively related to self-efficacy, pointing to a possible 'disillusionment effect'. If this finding is replicated in other studies there are clear implications for best development practice, in view of the ageing UK workforce. Gender was significantly and negatively associated with participation in development activities, indicating that on average women participated less. Also, gender was significantly and negatively associated with rank, indicating that there was less scope for development and career progression for women in this context. If replicated, this finding also has implications for best practice, as lack of development might still be contributing to the glass ceiling.

Although the limitations of a cross-sectional design are acknowledged, as cause and effect cannot be inferred, the study may offer guidance for future research. It was established that models derived from training are a valid guidance tool for research into employee development. Here, reactions to the utility

of the appraisal process were a more important predictor of development outcomes than individual motivation. It has been argued that even the best designed intervention might not be effective for some (Maurer & Tarulli, 1994), but it appeared in this context that (negative) reactions to a development process might hinder development outcomes, regardless of individuals' belief in their capabilities and motivation, and that age, tenure and gender might also adversely affect employees' development.

References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, New York: Prentice Hall.
- Fletcher, C. (1997). *Appraisal. Routes to improved performance* (2nd. Ed). Institute of Personnel and Development: London.
- Mabey, C. (2001). Closing the circle: participant views of a 360-degree feedback programme. *Human Resource Management Journal*, 11, 1, 41-53.
- Maurer, T.J. & Tarulli, B. A. (1994), Investigation of Perceived Environment, Perceived Outcome, and Person Variables in Relationship to Voluntary Development Activity by Employees. *Journal of Applied Psychology*, 79, No. 1, pp.3-14
- Mohrmann, A.M., Resnick-West, S. & Lawler, E.E. (1989). *Designing Performance Appraisal Systems*. San Francisco: Jossey Bass.
- Nathan, B.R., Mohrmann, A. M. & Milliman, J. (1991). Interpersonal Relations as a Context for the Effects of Appraisal Interviews on Performance and Satisfaction: a Longitudinal Study. *Academy of Management Journal*, 34, 352-369.
- Noe, R.A. & Wilk, S.L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology*, 78, 291-302
- Steers, R. M. & Braunstein, D.N (1976). A Behaviorally-Based Measure of Manifest Needs in Work Settings. *Journal of Vocational Behavior*, 9, 251-266.
- Tannenbaum, S.I., Mathieu, J. E., Salas, E & Cannon-Bowers, J.A. (1991). Meeting Trainees' Expectations: The Influence of Training Fulfilment on the Development of Commitment, Self-Efficacy, and Motivation. *Journal of Applied Psychology*, 76, 759-769.
- Tharenou, P. (2001). The relationship of training motivation to participation in training and development. *Journal of Occupational and Organizational Psychology*, 74, 599-621.

3. Paper presented at BPS Division of Occupational Psychology Conference, Stratford-upon-Avon, January 2004

McDowall, A. & Silvester, J. A lesson from training research for the investigation of development outcomes

Development and training are conceptually linked but nevertheless different. Training is concerned with the acquisition of job specific knowledge, skills and attitudes (Goldstein, 1993). Many development techniques, such as appraisal or multi-source feedback in contrast serve a dual purpose. They a) constitute a diagnostic tool which assesses individual strengths and weaknesses through ratings on a priori defined dimensions and b) constitute a development intervention which helps individuals' to gain greater insight through appropriate feedback and the setting of future related goals. Therefore, employee development and related techniques and activities comprises a wider and more future directed perspective than training, that is concerned with both professional and personal growth and has a career-related element (Birdi, Allen & Warr, 1997). Thus, it could be expected that training minimises individual differences, whereas development accentuates individual differences in the long-term. Research into training effectiveness has shown that individual differences need to be considered both as predictors and outcomes when studying the effectiveness of training interventions (e.g. Tannenbaum, Mathieu, Salas, and Cannon-Bowers, 1991). Surely, the same holds for the study of employee development.

Appraisals are one of the most prevalent development techniques, which comprise the rating and discussion of past performance but also the setting of future directed development goals. Much research has concentrated on the rating aspect of appraisal. (Fletcher, 2001) thereby neglecting the context, as the effectiveness of appraisals is dependent on the system being used (Arvey & Murphey, 1997). One US model (Nathan, Mohrmann, & Milliman, 1991) predicts that the pre-review context and the content of the review (e.g. how much career related matters are discussed) interact to predict a) reactions to the review (e.g. perceived utility) and b) work outcomes (e.g. satisfaction with organisation). However, it is argued here that this model may be incomplete, as it neglects the influence of individual differences and does not consider the relationship between reactions and outcomes.

Research from the domain of training can be applied to formulate further predictions. Kirkpatrick's model (1976), which considers a) reactions, b) learning, c) behaviour and d) results, is the most prevalent for evaluating training effectiveness (Colquitt, LePine & Noe, 2000). Much research has concentrated on the first level, an immediate measure of whether or not trainees' liked the intervention. However, it has been critiqued that reactions are not necessarily related to subsequent changes in workplace behaviour (Alliger & Janak, 1989; Alliger et al, 1997). However, studies which have considered reactions more closely by differentiating between the perceived enjoyment, difficulty and usefulness (Warr & Bunce, 1995) found reactions to be predictive of subsequent behaviour change. A more recent review and meta-analysis by Colquitt, LePine and Noe (2000) draws together the influence of individual differences on training motivation and training outcomes. Drawing from these findings and earlier research by Tannenbaum, Mathieu, Salas and Cannon-Bowers (1991) and Nathan et al (1991) the following predictions were made to investigate the impact of appraisal on development outcomes:

H₁ That pre-intervention individual differences (demographic variables, motivation, self efficacy and organizational commitment) predict development outcomes (satisfaction with development [fulfilment], participation in follow up development activities and career movement), that this relationship is mediated by reactions to the review (perceived utility)

H₂ That fulfilment and participation in follow up development activities predict post-intervention individual differences (motivation, self efficacy and organizational commitment), these are expected to change significantly and positively from Time 1 to Time 2

H₃ That the pre-review context (defined here as the perceived psychological climate) interacts with the perceived utility of the review to predict development outcomes

Design

A quasi-experimental design was employed. Using an attitude survey, employees' views of their development were solicited prior to the introduction of a formalised appraisal system (Time 1). Follow up data are being collected 15 to 17 months after its initial introduction, at which stage all full-time employees were expected to have undergone an appraisal (Time 2).

Organisational Setting

The participating organisation is the housing department of a London Local Authority. In order to achieve IiP accreditation, the organisation had recently implemented a variety of development initiatives, including the introduction of an appraisal system which aimed to facilitate development in the organisation. The present data will be used as an in-house evaluation of the system's effectiveness.

Procedure

At Time 1, questionnaires were administered following in-house workshops introducing the new appraisal system. These will be used as the baseline measure. Participants were assured of confidentiality, as all completed surveys were collected to be forwarded to the external researcher. Participation in the survey was entirely voluntary. At Time 2 (follow up), questionnaires were administered following another series of workshops which briefed employees' on the outcomes of a recent IiP inspection.

All individual difference measures (self-efficacy, NACh, organisational commitment and demographic data) were collected at both time points in order to allow for a comparison, as were participation in development activities and career movement. Reactions to the utility of the appraisal process and satisfaction with development were recorded at Time 2 only.

Measures

All scale responses were recorded using a Likert-type scale, ranging from one ("I strongly disagree") to seven ("I strongly agree"), the midpoint was four ("I neither agree nor disagree"). In order to eliminate acquiescence effects, only positive items were included in the analyses. Thus, the scales were a two-item measure of development-specific self-efficacy (Maurer & Tarulli, 1994, $\alpha=.57$), a four item measure of need for achievement (Steers & Braunstein, 1976, $\alpha=.53$), a five item measure of Organizational Commitment (Mowday, Porter & Steers, 1979) and a five-item measure of reactions to the development process (adapted from Mabey, 2001, $\alpha=.80$). Demographic variables were age (years), sex, tenure and managerial level (defined here as responsibility to administering reviews). Development outcomes were recorded as the number of mandatory (e.g. training), non-mandatory (e.g. academic study) and career-related development activities (e.g. formulation of personal development plan) that employees had participated in (during the last year for Time 1, since participation in Time 1 survey for Time 2). Career movement (promotions and moves across departments) as well as overall participants' satisfaction with the development received (two items, $\alpha=.73$) served as further measures of development outcomes.

Interim Summary

Follow up data has been collected from 120 respondents so far, the last set will be available during August 2003. Only data from individuals who have replied at both time points will be used to test the predictions. Full results will be available in Autumn 2003. It is acknowledged here that the lack of a control group might make it difficult to infer whether observed changes are truly due to the introduction of the appraisal system, and not due to the influence of extraneous variables. Nevertheless, it is a strength of the study design that employees' reactions and development outcomes are tracked over time.

References

- Alliger, G.M., Tannenbaum, S.I., Bennet, J.R., Traver, H. & Shotland, A. (1997). A meta-analysis of the relations among training criteria. *Personnel Psychology*, 50, 341-358.
- Arvey, R.D and Murphy, K.R. Performance Evaluation in Work Settings. *Annual Review of Psychology*, 49, 141-168.
- Birdi, K, Allen, C. & Warr, P. (1997). Correlates and Perceived Outcomes of Four Types of Employee Development Activity. *Journal of Applied Psychology*, 82, 845-857.
- Colquitt, J.A., LePine, J.A, & Noe, R.A (2000). Toward an integrative theory of training motivation: A meta-analytic path of 20 years of research. *Journal of Applied Psychology*, 85, 678-707.
- Fletcher, C. (2001). Performance Appraisal and Management: The developing research agenda. *Journal of Occupational and Organizational Psychology*, 74, 473-487.
- Goldstein, I.L. (1993) *Training in organisations* (3rd ed). Pacific Grove, CA: Brooks Cole.
- Kirkpatrick, D.L. (1976). Evaluation of training. In R.L. Craig, (Ed.), *Training and Development Handbook*. (2nd. Ed, 301-319), New York: McGraw Hill
- Mowday, R.T., Steers, R. M. & Porter, L. W. (1979). The measurement of organisational commitment. *Journal of Vocational Behaviour*, 14, 224-247
- Nathan, B.R., Mohrmann, A. M. & Milliman, J. (1991). Interpersonal Relations as a Context for the Effects of Appraisal Interviews on Performance and Satisfaction: a Longitudinal Study. *Academy of Management Journal*, 34, 352-369.
- Steers, R. M. & Braunstein, D.N (1976). A Behaviorally-Based Measure of Manifest Needs in Work Settings. *Journal of Vocational Behavior*, 9, 251-266.
- Tannenbaum, S.I., Mathieu, J. E., Salas, E & Cannon-Bowers, J.A. (1991). Meeting Trainees' Expectations: The Influence of Training Fulfilment on the Development of Commitment, Self-Efficacy, and Motivation. *Journal of Applied Psychology*, 76, 759-769.
- Warr, P.& Bunce, D. (1995). Trainee Characteristics and the outcomes of open learning. *Personnel Psychology*, 48, 347-375.

4. Paper presented at European Congress of Work and Organizational Psychology, Istanbul, May 12th -15th 2005

McDowall, A. & Silvester, J. A New Framework for Employee Development.

There has been a tendency to make use of work-based development activities, such as multi-source feedback, long before corroborating research is available (Fletcher & Baldry, 1999). This is due to a) the absence of a coherent framework for development (Latham & Seijts, 1998) and b) the traditional split between training and development (Warr, 2002). As a result, learning from the sophisticated body of training research has not been transferred to the investigation of employee development. Some models for development activities exist; however these are largely to do with participation (Maurer, Weiss, & Barbeite, 2003; Maurer, Pierce, & Shore, 2002; Maurer & Tarulli, 1994; Noe & Wilk, 1993; Tharenou, 2001). Further investigation of development outcomes is clearly needed. We argue for the relevance of training effectiveness research (Colquitt, LePine, & Noe, 2000) to development due to its emphasis of individual differences and propose a framework that examines such differences and their association with a) reactions to activities, b) developmental ratings and c) engagement in follow up activities and career changes.

This guided two studies on two commonly used development activities, staff appraisals and development centres [DCs], using a longitudinal design. The results demonstrate that similar methods can be applied to different activities and that the association of individual differences and development outcomes varied between activities. The methods can be applied in future studies allowing greater cross-fertilization between training and development research. Thus, knowledge gained from the research of formal activities, such as training or DCs, could be transferred to activities on which empirical evidence is sparse (such as coaching or more informal activities). We add a cautionary note that emphasizes the necessity to supplement quantitative approaches with qualitative research, since our findings show that the initial framework may require expansion to comprise more specific process-related variables.

References

- Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path of 20 years of research. *Journal of Applied Psychology*, 85, 678-707.
- Fletcher, C., & Baldry, C. (1999). *Multi-Source Feedback Systems: A research Perspective*, International Review of Industrial and Organisational Psychology. London: John Wiley & Sons Ltd.
- Latham, G. P., & Seijts. (1998). Management Development. In T. Drenth (Ed.), *Handbook of Work and Organisational Psychology* (pp. 257-272): Psychology Press.
- Maurer, T., Weiss, E. M., & Barbeite, F. G. (2003). A Model of Involvement in Work-Related Learning and Development Activity. The Effects of Individual, Situational, Motivational, and Age Variables. *Journal of Applied Psychology*, 88(4), 707-724.
- Maurer, T. J., Pierce, H. R., & Shore, L. (2002). Perceived beneficiary of employee development activity: A three-dimensional social exchange model. *Academy of Management Review*, Vol 27(3), 432-444.
- Maurer, T. J., & Tarulli, B. A. (1994). Investigation of Perceived Environment, Perceived Outcome, and Person Variables in Relationship to Voluntary Development Activity by Employees. *Journal of Applied Psychology*, 79(1), 3-14.
- Noe, R. A., & Wilk, S. L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology*, 78, 291-302.

Tharenou, P. T. (2001). The relationship of training motivation to participation in training and development. *Journal of Occupational and Organizational Psychology*, 74, 599-621.

Warr, P. (2002). Learning and Training. In P. Warr (Ed.), *Psychology at Work* (5th ed.). London: Penguin Books.

5. Paper Presented at British Psychological Society, Division of Occupational Psychology Annual Conference, Glasgow, 11th-13th January 2006

A MCDOWALL, City University and Goldsmiths College & J SILVESTER, Goldsmiths College

Title: How Do Managers Conceptualise Employee Development and Training?

Content

Introduction - Development and Training Revisited

‘Transferable skills’ has become a buzzword and employees are purported to take charge of learning in an ever more transient job market. Do we actually understand such self-led employee development? Writers such as Peter Warr (2002) in the UK, and Donald Laird (1985) across the Atlantic have differentiated development from training with development activities being future-focused and wide ranging whereas training is aimed at a measurable short-term improvement in job-specific (removed first specific as used here) skills. It appears that training and development have been researched in different ways. Sophisticated models of training exist, from cycles that map out the entire process (‘how should training be implemented?’ e.g. Goldstein, 1993) through to training evaluation (‘did the training work?’, e.g. Kirkpatrick, 1955) and training effectiveness (‘for whom, and under what conditions did the training work?’, e.g. Colquitt et al, 2000). Research concerned with employee development has come from more diverse orientations, including the Human Resource Management Perspective (e.g. Thomson, Mabey et al. 1998), feedback effects (Ilgen, Fisher et al. 1979; Kluger and DeNisi 1996) and self-awareness (Atwater and Yammarino 1992; Atwater and Yammarino 1993; Halman and Fletcher 2000) as well as factors influencing participation in development (Maurer and Tarulli 1994; Tharenou 2001; Maurer, Pierce et al. 2002; Maurer, Weiss et al. 2003). However, Latham and Seijts (1998) noted that due to the diversity of research models for development there appeared little evidence for the enduring effectiveness of (management) development activities. In order to conduct such

research, we need a better understanding of the construct of employee development, and the activities and outcomes associated with it.

A Qualitative Approach to Studying Development

A literature search revealed that development and training appear to be different from each other in several ways; but there seemed less evidence for similarities and overlap. For instance, do individual differences (such as self-efficacy, or other motivational characteristics) that are associated with effective training also affect development, and can development outcomes be measured with similar approaches as used in the training literature? Any such differences and similarities between training and development have not yet been explored in a controlled manner. Therefore, this was the first study that investigated how training and development are conceptualised by managers in their personal accounts. A qualitative approach made it possible to compare differences and similarities between individuals. It was aimed at managers who are the 'gatekeepers' to development and training as they contribute to decisions on what kind of activities employees engage in. Specifically, this study sought to answer the following questions:

How do managers define and conceptualise effective development, does this differ from training, and if so, in what way?

How do managers make decisions about training and development, do they use different criteria for different activities?

How do managers measure successful outcomes for training and development, do they vary between different activities?

What makes training and development useful and successful in organizations from managers' points of view, and what are the potential barriers?

Methods

Sample

This study had a purposive sample (Silverman 2000) of 20 managers (12 male, 8 female) from 20 different organizations and industry sectors. Inclusion criteria were

that participants had responsibility for a) identifying development and training needs in employees and b) making decisions on taking appropriate action (e.g. recommending attendance of a particular course or activity following a staff appraisal).

Interview Schedule

Each interview lasted approximately 30 minutes and consisted of a series of open-ended questions around managers' definitions and experiences of development and training in a work context. Whilst conducting the first few interviews, it became apparent that participants found it much easier to define and talk about training, then to define and talk about development. As the managers had to be prompted, from there on development was usually mentioned first and probed for concrete examples with more direct questions where appropriate.

Template Analyses

The interview transcripts were analysed with Template Analysis (King 1998). By doing this we were able to code all segments of text which appeared relevant to the research questions. Following King's (1998) guidelines, this is done in a hierarchical manner, where broad codes encompass successively narrower and specific codes. The number of levels for these codes depends on the data and the research questions, but will generally range between two and four levels. To illustrate, an example for a first level code in this context was 'definitions'; this was used to group second level codes such as 'development activities', which in turn grouped third level codes such as 'feedback-based development'. Any codes that do not prove useful for the analysis are deleted, higher order codes can become lower order codes and categories of codes can also be collapsed to form a simpler structure. Each template is usually presented in the form of a table which guides the discussion of the data analyses.

A preliminary set of codes emerged from the initial analyses of six transcripts which was largely descriptive. Even at this preliminary stage, the transcripts seemed to show that managers were able to differentiate between the conceptualisation of training and development, since more differences than links or overlap appeared. As

recommended by King (1998) the preliminary template was then used to analyse all transcripts one by one, where the content was constantly compared to a working template, adding new codes and dropping redundant codes throughout. This process continued until no new codes emerged from the data, a process known as saturation (Patton 1980), resulting in a final template. The higher order codes were used to structure a detailed discussion of the data in detail, which follows in summary. The first set of codes was concerned with definitions of training and development, and respective differences and links. The second set of codes showed that managers appear to apply different decision criteria for deciding on either training or development activities for their employees. The last two sets were concerned with the quantification of outcomes, which differs between training and development, and the success factors for either type of activity. All quotes were inserted as transcribed without any corrections to the grammar.

Results

Definitions of Training and Development

Managers defined development and training in different ways. Development was seen as broader, and to do with the person rather than with the job. A manager from the emergency services summed this up as *“I think development is for me (...) I think training as one for the job”*. Training was about the provision of specific courses, whereas development was perceived as long-term, and occurred as part of individuals’ progress in their job: *“Training I would describe as a specific programme to address specific needs, development I would describe ultimately as the sort of long-term change in an individual as they work towards a specific target.”* Some, but not all, managers conveyed that development goes beyond the current job and links with employees’ personal life, whereas training is always confined to the job.

Links and Differences between Training and Development

Interestingly, two managers used the example of learning how to drive a car to describe the link between training and development. Training was compared to learning to drive in the first place, whereas development was compared to taking an

advanced driver course, where acquired skills are honed and practiced to a deeper level. Training was seen by several managers as a means for development; in other words training is a process and one available mechanism of improving someone's development, and development is the outcome and the umbrella term: *"Training I would see as something that feeds into development, I would not say that they are different (...) ultimately, training feeds into long-term development."*

Despite the agreement that development and training are linked, managers appeared to be able to differentiate clearly. Training was seen as skills-based, technical and focused on the current job, whereas development was seen as wider-ranging and relating to interpersonal skills. There was agreement that training is always planned and formal whereas development activities can be ad hoc, unplanned, sporadic and informal or pre-planned. Development can (but does not have to) entail a career-related element about a change in the person's job role, such as a move into a different job role or department or a promotion. Furthermore, training referred to the present, was seen as confined to a particular time period and has a distinct beginning and end whereas development is directed to the future, remains on-going and is open-ended. Training was provided by the organization in internal or external training courses, which may be generic or tailored to specific requirements. There were several ways of providing development. It could be provided or initiated by the line manager or take a collaborative approach that builds on two-way communication. However, one core theme was that development is not necessarily provided by anyone in particular, but it is up to the individual themselves to take their development forward.

Decision Criteria

It appeared that managers apply different decision making processes to a) training and b) development, which are contingent on the level of employees' level of skills. If employees are lacking key skills, they receive training which equips them to do the current job. Once an employee has been trained and the focus shifts beyond the current job role, development activities are more appropriate. The activity choice also depends on the definition of objectives (what kind of activity has to be learned). For clear and measurable objectives (such as improving technical skills) training is most

appropriate, whereas if employees need to learn about a different area of the business, shadowing or mentoring might be more appropriate. Several interviewees agreed that since training is more quantifiable and has more demonstrable benefits for the organization, it usually takes precedence over development; several relevant quotes are summarised in Table1¹.

Table 35: Why Training May Take Precedence over Development

<i>“If it was something that, a change, a person literally couldn’t perform their job without going, quite often that will happen as well, the legislative changes and that kind of thing. So basically I think that training sometimes would come out as the higher priority, if there was a need of that kind, so if there was very poor performance I think training would have to. So I think (...) development can sometimes be secondary”</i>
<i>“If you’re spending money on training then there’s got to be some demonstrable return for the company to make that investment”</i>
<i>“I think the actual training course would always take precedence over maybe a more esoteric development course... If you’re spending money on training then there’s got to be some demonstrable return for the company to make that investment. that there are going to be demonstrable benefits coming back to the company for spending that money”</i>
<i>“Whereas if it’s more personal development it’s very difficult to put any metrics on the benefits, it’s very difficult to say well ok we sent somebody away to develop this part of their personality and it’s difficult to say well fine, how do you measure the benefits?”</i>

1

Outcomes

In this sample of managers, there appeared to be agreement on training outcomes. As discussed above, training is skill-based and thus should result in observable behaviour changes on the job. Such outcomes are easy to measure, visible and linked to clear objectives, in other words they constitute a planned improvement of job-specific skills. In contrast, development outcomes were interpreted to be more varied, and likely to extend over a longer time period. Therefore, they will not be immediately visible following engagement in an activity, as one manager put it: “(....) *less easily measured, of a longer-term nature, in other words you don't go to another course to develop your interpersonal skills and come back with them wonderfully developed. It's something that you build up and develop over a period of time I think*”. Development outcomes may also be private to the individual, as coaching for instance is often a confidential process, which renders any outcomes less tangible and open to interpretation. Development outcomes were perceived as not only future-directed but also open-ended. As a result, they are potentially difficult to evaluate longitudinally, as people's insight into their strengths and weaknesses, and therefore their personal goals, may change halfway through any development process.

Success Factors

It was discussed earlier that combining training with development appears to result in more positive outcomes. One manager recounted a particular experience, when her organization had achieved great success by getting an underperforming employee to undergo a specific external training course, which was accompanied by coaching from a more experienced co-worker, who helped her to embed the learning in the workplace. However, some success factors for training or development may be spontaneous, and hard to plan. They can depend on the right mix of people, the right trainer or manager, or perhaps the right moment when everyone is willing to move forward. As one manager put it, “*it is not always totally scientific*”.

For training, the success factors identified were largely to do with what was interpreted here as the ‘administration’, in terms of pitching it at the right level;

Effective trainers who relate to their audience and crucially the provision of practical application in the job and resulting transfer of learning; which fits with Kirkpatrick's (1955) model. For effective development, it was interpreted that success had to with individuals' motivation, their 'buy in' for the process and openness about what needs to be changed, and employees' willingness to stretch themselves "out of their comfort zone". This is illustrated well by one manager who said: *"I think with development you are going to get nothing unless the person is really open to taking, to seizing an opportunity"*.

Summary and Implications for Future Research

Returning to the first research question, managers define training and development as interlinked, where training is one of the mechanisms that may lead to development. Indeed, training without development, which suggests deeper internalisation and reflection of individual strengths and weaknesses, is less valuable. There was clear agreement that training and development are different. The former is skill-based, specific and related to the present job, whereas development is about the person, open-ended and can transcend a job or career. In answer to the second question, these differences appear to guide managers' decision making. If an employee needs new skills, and/or is underperforming in the current job, training is chosen. If employees are ready to move on beyond the current role, and if there is a need to enhance interpersonal skills, then development activities, such as secondments or coaching, are the next step. Although several managers said that on-the-job development can be more time and cost effective, in general, managers still appear to prefer formal training. In relation to the third question (whether successful outcomes vary between activities, and how they are measured) this may be due to the specificity of the outcomes. Training outcomes are visible, measurable and quantitative, whereas development outcomes are subjective, can be private to the individual and not necessarily linked to specific objectives, or to objectives which are liable to change during the development process. For development, individuals' motivation to develop and their willingness to stretch themselves and to move out of their comfort zone emerged as the most important success factor. In contrast to training, which is

provided, the impetus for development always has to come from the individual itself, even if some of the learning could later occur through interaction with others.

The analyses appeared to show that success factors for development are at the individual level – employees have to be willing to ‘go the extra mile’ and go ‘beyond their comfort zone’. It needs to be investigated how such ‘motivation to develop’ can best be defined and measured. In answer to the fourth question (what managers see as hindrances and success factors for effective training and development), one barrier preventing effective development appears to be an (over-) emphasis on training. As development is less visible and outcomes are harder to quantify, development can take ‘second place’ because organisations appear less likely to fund development activities.

It therefore needs clarification, whether, and if so, how development outcomes can be measured and evaluated. Quantitative approaches may be inappropriate, as envisaged outcomes (e.g. to aim for a promotion; or a potential career change) may change half-way through (or are dependent on factors outside the individual which is inappropriate as the outcomes are focused within the individual. Qualitative approaches may be able to investigate differences that affect the process, and therefore contribute to successful outcomes by applying approaches such as the ‘change paradigm’ (Rice and Greenberg 1984) which has been used to identify process changes in counselling sessions. Another approach would be to use critical incidents, and perhaps use focus groups with dyads of managers and employees to discuss these, in order to draw up a list of examples of particularly successful outcomes, and map out contributory factors.

In summary then, this study serves to highlight both differences and commonalities between training and development, and thereby helps us to better understand the concept of development. It is clear from the findings that characteristics at the individual level are perhaps even more important for development than they are for training. What we now need are better measures to evaluate development. To develop these measures, we will need to investigate the development process, in order to facilitate our understanding of outcomes.

References

- Atwater, L. E. and F. J. Yammarino (1992). "Does Self-Other Agreement of Leadership Perceptions Moderate the Validity of Leadership and Performance Predictions?" Personnel Psychology 45: 141-163.
- Atwater, L. E. and F. J. Yammarino (1993). "Personal Attributes as predictors of superiors' and subordinates perceptions of military academy leadership." Human Relations 46: 645-68.
- Halman, F. and C. Fletcher (2000). "The Impact of Development Centre Participation and the Role of Individual Differences in Changing Self Assessments." Journal of Occupational and Organisational Psychology 73: 423-442.
- Ilgen, D. R., C. D. Fisher, et al. (1979). "Consequences of Individual Feedback on Behaviour in Organisations." Journal of Applied Psychology 64.
- King, N. (1998). Template Analysis. Qualitative Methods and Analysis in Organizational Research. A Practical Guide. C. Cassell. London, Sage Publications Ltd.
- Kluger, A. N. and A. DeNisi (1996). "The Effects of Feedback Interventions on Performance: A Historical review, a Meta-analysis and a Preliminary Feedback Intervention Theory." Psychological Bulletin 119: 254-284.
- Maurer, T., E. M. Weiss, et al. (2003). "A Model of Involvement in Work-Related Learning and Development Activity. The Effects of Individual, Situational, Motivational, and Age Variables." Journal of Applied Psychology 88(4): 707-724.
- Maurer, T. J., H. R. Pierce, et al. (2002). "Perceived beneficiary of employee development activity: A three-dimensional social exchange model." Academy of Management Review Vol 27(3): 432-444.
- Maurer, T. J. and B. A. Tarulli (1994). "Investigation of Perceived Environment, Perceived Outcome, and Person Variables in Relationship to Voluntary Development Activity by Employees." Journal of Applied Psychology 79(1): 3-14.
- Patton, M. Q. (1980). Qualitative Evaluation Methods. Newbury Park, CA, Sage.
- Rice, L. N. and L. S. Greenberg (1984). Patterns of Change. New York, Guildford.
- Silverman, D. (2000). Doing Qualitative Research. A Practical Handbook. London, Sage Publications.
- Tharenou, P. T. (2001). "The relationship of training motivation to participation in training and development." Journal of Occupational and Organizational Psychology 74: 599-621.
- Thomson, A., C. Mabey, et al. (1998). "The determinants of management development: choice or circumstance." International Studies of Management and Organisation 28(1): 91-113.