

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

**Determining the Effectiveness of the HERS-SA Academy using the  
Kirkpatrick Framework of Training Evaluation**

**Simone de Gersigny**

**DGRSIM001**

A dissertation submitted in partial fulfilment of the requirements for the award of the  
Degree of Master of Commerce in Organisational Psychology

Faculty of Commerce

University of Cape Town

2005

**COMPULSORY DECLARATION:**

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Signature:.....

Date: 09/06/2006.....

**ABSTRACT**

The research evaluated the outcomes of Higher Education Resource Service South Africa (HERS-SA) Academy using the Kirkpatrick (1996a) framework of training evaluation. The study used a three-stage research design to evaluate Academy outcomes in terms of the reactions, learning and behaviour levels of the Kirkpatrick (1996a) framework. Two main findings emerged from the research: (1) the reactions and learning outcomes of the Academy are successful while the behaviour outcomes are only partially successful, and (2) increased confidence and increased understanding of HE are by far the strongest outcomes of the Academy. Based on the major findings of the research, a number of recommendations were made primarily to improve the behaviour outcomes of the Academy.

University of Cape Town

## Table of Contents

<b>Chapter One: Introduction</b>	6
<b>Chapter Two: Review of the Kirkpatrick (1996a) Framework and Training Evaluation</b>	7
Training Evaluation Literature	7
<i>Defining Training Evaluation</i>	7
<i>The Efficacy of Training Evaluation</i>	8
The Kirkpatrick (1996a) Framework	8
<i>Reasons for Applying the Framework</i>	8
<i>Assumptions of the Framework</i>	8
<i>The Four Levels of the Kirkpatrick (1996a) Framework</i>	9
<i>Critiques of the Kirkpatrick (1996a) Framework</i>	10
Alternative Training Evaluation Models	14
<i>Extensions on the Kirkpatrick (1996a) Framework</i>	15
<i>Training Effectiveness and Learning Transfer Models</i>	16
<i>Summary of Alternative Training Evaluation Models</i>	17
Learning Transfer Literature	18
<i>Individual Factors Influencing Learning Transfer</i>	18
<i>Organisational Factors Influencing Learning Transfer</i>	19
<i>Training Design Factors Influencing Learning Transfer</i>	20
<i>Summary of Learning Transfer Theories</i>	21
Chapter Two Conclusion	22
<b>Chapter Three: Review of Women's Development Training Literature</b>	23
Part One: The HERS-SA Academy	23
<i>Brief description of the HERS-SA Academy</i>	23
<i>Principles and Goals of the HERS-SA Academy</i>	23
<i>Summary of Part One</i>	24
Part Two: Review of WDT	24
<i>The Position of Women in HE</i>	24
<i>Barriers to Women's Advancement in HE</i>	26
<i>Training as a Strategy for Helping Women's Position in HE</i>	29
<i>Justification for Evaluating the HERS-SA Academy</i>	31
Chapter Three Conclusion	32
<b>Chapter Four: Research Methods</b>	33
Section 1: Overview of the Research Design	33
<i>The Research Question</i>	33
<i>Features of the Research Design</i>	33
<i>Chronological Representation of the Three Stages of the Research</i>	34
<i>Overview of Stage One Evaluation: Quantitative Evaluation of Participant Reactions</i>	34
<i>Overview of Stage Two Evaluation: Evaluation of Responses to the Electronic Questionnaire</i>	35
<i>Overview of Stage Three Evaluation: Thematic</i>	

<i>Analysis of SCM Interviews</i>	36
<i>Diagrammatic Representation of the Research Design</i>	36
Section 2: Research Methods	37
<i>Stage One Evaluation: Quantitative Evaluation of Participant Reactions</i>	37
<i>Stage Two Evaluation: Evaluation of Responses to the Electronic Questionnaire</i>	40
<i>Stage Three Evaluation: Thematic Analysis of SCM Interviews</i>	44
3. Research Methods Limitations	45
<i>Limitations of the Research Design</i>	45
<i>Limitations of the Data Analysis</i>	46
<b>Chapter Five: Results and Discussion</b>	48
Stage One Evaluation: Results of the Evaluation of Participant Reactions	48
<i>Level One Reactions: Results and Discussion</i>	48
<i>Level Two Learning Outcomes for the 2003 and 2004 Academies</i>	50
<i>Level Three Behaviour Outcomes for the 2003 and 2004 Academies</i>	51
<i>Integrated Discussion of the Stage One Evaluation Results</i>	53
Stage Two Evaluation: Results of Participant Responses to Electronic Questionnaire	54
<i>Results of the Descriptive Analysis: Frequency Tables</i>	54
<i>Results of the Descriptive Analysis: Cronbach Alpha Item Analysis</i>	61
<i>Results of the Correlation Analysis</i>	61
<i>Integrated Discussion of Stage Two Evaluation Results</i>	64
Stage Three Evaluation: Results of SCM Interviews	65
<i>Theme 1: Valuable Elements of the Academy</i>	65
<i>Theme 2: Results Achieved due to Attending the Academy</i>	66
<i>Theme 3: Support for Implementation of Learning and Behaviour Outcomes</i>	67
<i>Theme 4: Suggestions for Improvement of the Academy</i>	68
<i>Integrated Discussion of Stage Three Evaluation Results</i>	69
Summary Discussion of Stage One, Two and Three Evaluation Results	70
<i>Main Findings of the Three Stages of the Research</i>	70
Results and Discussion Chapter Conclusion	72

<b>Chapter Six: Research Recommendations</b>	73
Recommendations for the Design of the Reactions Questionnaires	73
Recommendations for Academy Content	74
Recommendations for Academy Target Population	74
Recommendations for Addressing Institutional Barriers	74
<b>Chapter Seven: Conclusion</b>	76

Appendix A: Details of the HERS-SA Association and the Academy Format  
 Appendix B: Stage Two Evaluation Electronic Questionnaire

### List of Tables and Figures

Table 1: Stage One Reactions to the Overall Academy	48
Table 2: Stage One Positive Qualitative Reactions to the Academy	49
Table 3: Stage One Negative Qualitative Reactions to the Academy	49
Table 4: Stage One Learning Outcomes	50
Table 5: Stage One Behaviour Outcomes	51
Table 6: Stage Two Learning Outcomes	54-55
Table 7: Academy Factors Enabling Learning Outcomes	55
Table 8: Stage Two Behaviour Outcomes	56
Table 9: Academy Factors Enabling Behaviour Outcomes	57
Table 10: Factors Enabling Career Development	58
Table 11: Factors Preventing Career Development	59
Table 12: Cronbach Alpha Item Analysis Results	61
Table 13: Spearman Rank Order Correlations	62
Figure 1: Timeline Mapping the Chronological Process of the Research	34
Figure 2: Diagram Mapping the Three Stages of the Research	36
Figure 3: Lack of Career Opportunities Grouped by Age	60

## CHAPTER ONE: INTRODUCTION

Women are universally under-represented in higher education (HE) (Subotzky, 2001). In South African Higher Education Institutions (HEIs) women are concentrated in a narrow range of positions (de la Rey, 1998; Zulu, 2003), and the majority of women occupy positions of low rank with a small minority in senior leadership positions (de la Rey, 1998; Fourie, 1999; Greyvenstein, 2000; Howell & Subotzky, 2002; Mabokela, 2003; Mkabela, 1999; Subotzky, 2001; Walker, 1997; Zulu, 2003). South African research also shows that women's career advancement in HE has so far been slow (Greyvenstein, 2000; Perumal, 2003; Subotzky, 2001).

The literature above clearly demonstrates that the position of women in HE is far from ideal. The difficulties experienced by women employed in HE forms the rationale for this research, since the study's main objective is to evaluate the HERS-SA Academy, a training programme designed to address the slow progress of women's advancement in HEIs. The Academy therefore has important implications for improving gender equity in HE. This is confirmed by numerous South African studies (Chinsamy-Turan, 1999b; Mathipe & Tsoka, 2000, 2001; Norris, 2001; Peterson & Gravett, 2000) that find women's development training (WDT) an appropriate and important strategy for promoting women's progress in HE.

Since the potential results of HERS-SA Academy are highly significant, measuring the strengths and weakness of the Academy in achieving these results is also important. A review of the literature demonstrates that there are no evaluative studies on the outcomes of WDT in South Africa. This lack of evaluative research on WDT is also found internationally (Bagilhole, 2000; Eggins, 1997; Segall, 1993). Thus the significance of Academy outcomes and goals, and the lack of evaluative research in both South Africa and internationally; justify an evaluation of the HERS-SA Academy.

The following two chapters contain a review of relevant literature. Chapter four outlines the research methods, and chapter five examines the research results and discussion. Chapter six presents research recommendations and finally chapter seven concludes the research.

Two distinct bodies of knowledge form the theoretical foundation of the research. The first is the Kirkpatrick (1996a) framework and the theory of training evaluation; and the second is literature related to the context of the research, namely the HERS-SA Academy and WDT. This review is accordingly divided into two chapters. The first chapter examines training evaluation in general and the Kirkpatrick (1996a) framework, and the second focuses on WDT and the HERS-SA Academy.

## **CHAPTER TWO: REVIEW OF TRAINING EVALUATION AND THE KIRKPATRICK FRAMEWORK**

This review begins by defining training evaluation and examining the literature demonstrating the efficacy of training evaluation. Kirkpatrick (1996a) is the keystone author of this review since the research is based on his framework. Thus the review addresses the following issues and developments related to the Kirkpatrick (1996a) framework: reasons for applying the framework, the assumptions and features of the framework, and critiques of the framework. Alternative models for training evaluation are also reviewed to provide a realistic understanding of the strengths and limitations of the framework. Finally, since training evaluation is ultimately about learning transfer (Holton, 1996); the learning transfer theories are reviewed.

### **Training Evaluation Literature**

#### ***Defining Training Evaluation***

Training evaluation is defined as the systematic collection of data in order to determine the success of training programmes (Goldstein, 1993). Within the spectrum of training evaluation there are the learning outcomes approaches, such as the Kirkpatrick (1996a) framework, the training effectiveness approaches, and the learning transfer approaches. Each of these approaches emphasise different aspects of training evaluation, and these differences will become clear in the subsequent review of each approach.

### ***The Efficacy of Training Evaluation***

The literature demonstrates that for organisations engaging in training, evaluation is not only a critical issue (Holton, 1996; Mann & Robertson, 1996) but will increasingly continue to be a core concern in the future (Bennett, Alliger, Eddy, & Tannenbaum, 2003). Kirkpatrick (1996a) suggests that the following functions of training evaluation provide reasons for its significance: (1) it justifies the need for the training programme by showing how it adds value to organisational objectives, (2) it provides the basis for decisions such as whether or not training should be continued, and (3) it is an important tool for gathering information about improving training for future application.

### **The Kirkpatrick (1996a) Framework**

#### ***Reasons for Applying the Framework***

The first and main reason for applying the Kirkpatrick (1996a) framework is that it is one of the major contributions to the field of training evaluation (Kraiger, 2002). This framework is the first attempt at providing structure to training evaluation, and it has been the predominant approach for over forty years (Donovan, Hannigan, & Crowe, 2001; Holton, 1996; Kraiger, 2002). The framework is the most popular (Kraiger, Ford, & Salas, 1993) and influential (Quinones & Tonidanel, 2003), and is recognised as a standard in the field (Holton). The second reason is that the framework has gained extensive application, since it has been tested in both theoretical and practical research since its conception. This is to be confirmed in the following review of studies applying the framework. The third reason is that the framework is simple and practical (Kirkpatrick, 1996b) thereby providing a firm foundation for evaluation. The final reason is that the framework is intended as an evaluation guide (Kirkpatrick, 1996b), and is therefore flexible.

#### ***Assumptions of the Framework***

There are four levels to the Kirkpatrick (1996a) framework: reactions (level one), learning (level two), behaviour (level three), and results (level four). The framework does not permit skipping of levels, except in the case of level four when the objectives of the training do not include results (Kirkpatrick, 1996a). Each progressive level is more important,

difficult and meaningful than the last, and hence the framework is hierarchical (Kirkpatrick, 1996a). The framework is intended as an evaluation guide, thus choices about implementation and measurement are flexible (Kirkpatrick, 1996b). The framework is suited to quantitative measurement, but constraints such as time, the resources available or the expertise of the evaluator often determine the type of methods used (Kirkpatrick, 1996a).

### ***The Four Levels of the Kirkpatrick (1996a) Framework***

#### ***Level One***

Reactions concern the responses of trainees to the programme (Kirkpatrick, 1996a). The framework assumes positive reactions are key to an effective programme, because satisfied customers are more motivated to learn and apply what they have learnt (Kirkpatrick, 1996a; Phillips, 1992).

#### ***Level Two***

Learning occurs when knowledge is expanded, skills are increased and attitudes are changed (Kirkpatrick, 1996a).

#### ***Level Three***

Behaviour concerns the extent to which knowledge, skills and attitudes are transferred to behaviour on the job (Kirkpatrick, 1996a). Change only occurs if it is considered desirable, knowledge and skills of how and what to change exist, there is a favourable climate for change (peer and supervisor support), constraining variables are minimal (time and resources), and changes are rewarded either intrinsically or extrinsically (Kirkpatrick, 1996a).

#### ***Level Four***

Results are the broader more long-term training outcomes, such as return on investment (ROI) or reduced turnover (Kirkpatrick, 1996a).

### ***Critiques of the Kirkpatrick (1996a) Framework***

A review of the literature demonstrates that there are seven major critiques of the Kirkpatrick (1996a) framework. These are explored in the following section.

#### ***Critique 1: Framework Assumes Levels are Hierarchical***

The first criticism relates to the assumption that each successive level contributes more information than the last (Alliger & Janak, 1989). This criticism is based on the argument that the results level is not always a desirable training outcome (Alliger & Janak, 1989). This critique is flawed because although the results level is considered important, Kirkpatrick (1996a) argues that it may be skipped if results are not included in training goals.

#### ***Critique 2: Framework Assumes Causal Linkages***

The second criticism is that the hierarchy assumes there are causal linkages between the levels (Alliger & Janak, 1989; Bates, 2004; Hale, 2003; Holton, 1996). The assumption of causality is viewed as problematic for two reasons. It is considered problematic in the first instance because it assumes positive correlations exist between the levels (Alliger & Janak, 1989). The support for the first reason is based on the logic that because negative correlations can exist between level one and two, positive correlations therefore cannot necessarily exist at all levels (Alliger & Janak, 1989). Thus causality from level one to four is not linear and there is no accumulation of learning in the progression through the levels (Alliger & Janak, 1989).

Causality is considered problematic in the second instance specifically with regards to level one causing level two (Alliger & Janak, 1989; Bates, 2004; Hale, 2003; Holton, 1996), because it is found that correlations between reactions and learning are limited (Alliger & Janak, 1989; Alliger, Tannenbaum, Bennet, Trayer, & Shortland, 1997; Dixon, 1990; Mathieu, Tannenbaum, & Salas, 1992; Noe & Schmitt, 1986; Ruona, Leimbach, Holton, & Bates, 2002; Warr & Bunce, 1995).

The following studies focus on the issue of causality between the levels of the Kirkpatrick (1996a) framework. These studies are reviewed to address the two motives that

support the criticism of the assumption of causality. Three areas of research are reviewed regarding the assumption of causality: studies on the correlations between reactions and the other levels, studies that differentiate between different types of reactions, and studies that suggest ways to overcome poor correlations between reactions and the other levels.

Only three studies find correlations between all four levels of the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) hierarchy (Clement, 1982; Noe & Schmitt, 1986; Wexley & Baldwin, 1986), but these have limitations. Noe and Schmitt (1986) find that trainee satisfaction can not predict learning or behaviour change, because reactions are not linearly related to learning and are not primary outcomes of learning. They also find that relationships between the different variables are complex so the correlation is not necessarily straight forward (Noe & Schmitt, 1986). In a study conducted by Dixon (1990), findings show that enjoyment of training is not significantly related to post-test scores. Although Clement (1982) finds a relationship between reactions and learning, other variables such as trainee readiness, motivation, practice and feedback also affect learning. Mathieu et al. (1992) establish that reactions are important for training effectiveness, but only when trainees are also motivated to succeed. These studies show that reactions when understood as training satisfaction do not affect learning and behaviour.

When differentiating between affective reactions and utility reactions, Alliger et al. (1997) find a modest relationship with a mean of .07 between reactions, learning and transfer of learning. Warr and Bunce (1995) differentiate between reactions in terms of usefulness, enjoyment and perceived difficulty. They find no association between reported enjoyment and usefulness of learning, and even though they find a negative correlation between perceived difficulty and learning outcomes, this is not statistically significant (Warr & Bunce, 1995). Warr, Allan, and Birdi (1999) by differentiating between distinct reactions, also find that they are more closely associated with learning than previous findings. The above studies demonstrate that differentiating between types of reactions can create a stronger relationship between reactions and levels two and three.

A number of studies suggest strategies to overcome the weak correlations between reactions and the other levels of the Kirkpatrick (1996a) framework. Differentiating between different types of reactions is one such suggestion (Warr et al., 1999). Another suggestion is measuring utility rather than affective reactions, since it is found that the former are more powerful (Ruona et al., 2002). The learning transfer theories suggest including self-efficacy,

motivation to learn, motivation to transfer, and utility judgements in reactions measures (Haccoun & Saks, 1998).

The review of the literature related to the assumption of causality between the levels of the Kirkpatrick (1996a) framework demonstrate that implementing and measuring level one requires careful consideration. From this review it is clear that training evaluations measuring no more than level one are unacceptable (Haccoun & Saks, 1998). It is also clear that when measuring level one, reactions need to be differentiated, measurement should focus on utility reactions, and the findings of the learning transfer theories should be considered.

### ***Critique 3: Limited Success in Implementation***

The third criticism of the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) hierarchy is that it is rarely successfully implemented in practice (Holton, 1996), since the results level is generally found difficult to measure (Blanchard, Thacker, & Way, 2000; Bramely & Kitson, 1994; Dyer, 1994; Kirkpatrick, 1996a; Shelton & Alliger, 1993). Catalanello and Kirkpatrick (1967), Olsen (1998), and Blanchard et al. (2000) conducted studies predominantly in the United States (US) to determine the extent to which the four levels are applied in practice. These researchers find the following results respectively: 77%/92%/71% measure reactions, 50%/85%/17% measure learning, 54%/76%/37% measure behaviour, and 45%/31%/42% measure results. In light of these studies it is clear there are cases of successful level four evaluations, and hence Holton's (1996) critique is somewhat exaggerated.

### ***Critique 4: Ignores Learning Transfer Theory***

The fourth criticism of the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework is that it ignores the intervening variables that affect learning, such as motivation (Bates, 2004; Holton, 1996, Kraiger et al., 1993). This is an important point that should not be overlooked when applying the Kirkpatrick (1996a) framework; however there are two defences for this limitation. First, the learning transfer findings do not weaken the value of the Kirkpatrick (1996a) framework, because it is still relevant in providing criteria for training evaluation. Second, the framework acts as an evaluation guide (Kirkpatrick, 1996b).

therefore what is measured and how it is measured is left in the hands of the evaluator. Thus findings from the learning transfer theories can be applied to the framework.

#### ***Critique 5: Lacks Theoretical Foundation***

The fifth criticism of the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework is that it lacks a theoretical foundation (Holton, 1996; Kraiger, 2002). Since the Kirkpatrick (1996a) framework was devised before the cognitive learning theories of the 1970s and 1980s, it is not based on an understanding of how learning takes place (Kraiger). Although Kraiger (2002) argues that evaluation methodologies do not have to be based on theory to be useful, this limitation is still important and requires consideration when applying the framework.

The theoretical limitations of the Kirkpatrick (1996a) framework are also considered problematic, because it is argued that the framework cannot be universally generalised since not all the relationships and elements of learning are specified (Holton, 1996). Although it is important not to undermine this issue, there are two reasons why it is not as problematic as Holton (1996) implies. First, even if the framework cannot be universally applied in theory, in practice it is found useful in a variety of contexts (Kirkpatrick, 1996a), and one of the objectives of the framework is that it is useful in practice (Kirkpatrick, 1996b). Second, continued research in the field of training evaluation has served to theoretically validate most of the framework's assumptions. For example, Kirkpatrick (1959a, 1959b, 1960a, 1960b) argues that motivation influences learning effectiveness, and as the review of learning transfer studies will show this was later proved theoretically sound.

#### ***Critique 6: Too Focussed on Quantitative Methods***

The sixth criticism of the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework is that it implies quantitative methods prove the value of training (Abernathy, 1999; Hale, 2003). It is argued that quantitative methods are not necessarily appropriate for evaluations in organisations (Abernathy, 1999; Hale, 2003) as they lead to overlooking intangible outcomes (Abernathy, 1999). However Kirkpatrick (1996a) himself encourages the use of qualitative

methods, and continually stresses that best measure is the one that captures the most information under practical constraints.

### ***Critique 7: Ignores Trainee Responsibility for Learning***

The seventh criticism of the Kirkpatrick (1996a) framework is that it assumes learning is the responsibility of the trainer and ignores the role of trainees (Hale, 2003). Even though he emphasises trainer responsibility, Kirkpatrick (1996a) is aware of the trainee responsibility for learning. Kirkpatrick (1996a) suggests trainees and supervisors devise a written contract before commencing training explicitly stating trainee responsibility for learning.

### ***Summary of Critiques***

As the above critiques reveal, the Kirkpatrick (1996a) framework is not without its limitations. In spite of these criticisms the Kirkpatrick (1996a) framework still remains a robust (Kirkpatrick, 1996a; Phillips, 1996) and practical (Kirkpatrick, 1996b) tool for evaluating training, and is therefore still appropriate for this research. An awareness of the framework's criticisms and accounting for its limitations however remains important in executing this research. Since the framework was first introduced the field of training evaluation has made numerous developments. These advances are examined in the following sections of the review, beginning with the alternative training evaluation models, and followed by an exploration of the learning transfer theories.

## **Alternative Training Evaluation Models**

This section reviews the extensions on the Kirkpatrick (1959a, 1959b, 1960a, 1960b) framework, as well as the training effectiveness and learning transfer models. Alternative models are examined to assess the strengths and limitations of the framework in light of more recent developments in training evaluation.

### *Extensions on the Kirkpatrick (1996a) Framework*

In general, the evaluation models that extend on the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework only deviate slightly from the original approach, and are mostly responses to criticisms of the framework. These alterations or additions may be appropriate depending on the nature of the evaluation or the personal preferences of the evaluator. The main advantage of the Kirkpatrick (1996a) framework over the following models is that it is considered a standard in the field (Holton, 1996).

Warr, Bird, and Rackham (1970) developed the context, input, reactions and outcome (CIRO) model. Context and outcomes identify and assess reactions, learning, job behaviour, and organisational change; while inputs assess resources. The model improves on the Kirkpatrick (1959a, 1959b, 1960a, 1960b) hierarchy because it includes context, however it does not measure behavioural change, which is a critical issue.

Both Hamblin (1974) and Phillips (1992) add a fifth level to Kirkpatrick's (1959a, 1959b, 1960a, 1960b, 1996a) framework. Hamblin divides Kirkpatrick's (1996a) fourth level into organisational variables (non-economic such as productivity) and ultimate value variables (economic). This improves on the Kirkpatrick (1996a) framework since by separating objectives they are more easily identified. Phillips' (1992) model separates ROI from other results to form a fifth level. The advantage of separating ROI is that it prevents negative ROI from changing positive results to negative.

Brinkerhoff (1987) developed a six level model adding two formative stages to the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework: (1) needs and goals, and (2) Human Resource Development (HRD) design. The model is advantageous because it considers outcomes in relation to time by distinguishing between immediate, intermediate and ultimate outcomes. The model is also beneficial because it addresses both the process and the outcomes of evaluation, is not strictly linear, and considers both programme implementation and learning value (Brinkerhoff, 1987).

Bakken and Bernstein (1982) created the Systematic Evaluation of Training (SET) model. This model has the same four levels as the Kirkpatrick (1959a, 1959b, 1960a, 1960b) framework. SET however differs in that it has two steps: (1) determining relevant decision makers, and (2) determining training goals. The advantages of the model are that it is easier to select outcomes and not all levels need to be evaluated.

Bramely and Kitson (1994) suggest that methods such as cost-benefit analysis, impact analysis and Total Quality Management (TQM) are used in evaluation of level three and four of Kirkpatrick's (1959a, 1959b, 1960a, 1960b) framework. This approach is advantageous because it selects specific tools that can be applied to the levels that are most difficult to measure.

Mathieu et al. (1992) also extend on the Kirkpatrick (1959a, 1959b, 1960a, 1960b) framework. Their model measures the individual and situational influences on training effectiveness, and focuses on how reactions affect motivation. This model is valuable because it considers intervening variables and incorporates the findings of learning transfer research.

### *Training Effectiveness and Learning Transfer Models*

There are two reasons for reviewing the training effectiveness and learning transfer models. First, they demonstrate how learning transfer theories can be applied in practice. Second, they show how the levels of the framework operate from a learning transfer perspective. Models developed by the following researchers are reviewed: Kearsley and Compton (1981), Kraiger et al. (1993), Holton (1996), and Kraiger (2002).

#### *A Model for Effectiveness and Efficiency*

Kearsley and Compton's (1981) approach differs to the Kirkpatrick (1959a, 1959b, 1960a, 1960b) framework since the focus is predominantly on effectiveness (better results with same resources) and efficiency (same outcomes with fewer resources). Three models are proposed and the suitability of each depends on the training context and the resources available (Kearsley & Compton, 1981). This approach is beneficial when costs are an imperative.

#### *A Multidimensional Model of Learning*

Kraiger et al. (1993) developed a multidimensional model of learning outcomes, as well as a training process for establishing learning evaluation measures. Three outcomes are identified: cognitive, skill-based, and affective (attitude and motivation). The measurement of affective outcomes is the main difference between this model and the Kirkpatrick (1959a,

1959b, 1960a, 1960b) framework. The model is advantageous as it is extensive and holistic; however it is not very user-friendly since guidelines for application are limited.

### ***The Influences Model***

Holton's (1996) model identifies five elements: secondary influences, motivation, environmental, outcomes, and ability/enabling. The strengths of the model are that it is holistic; and unlike the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework includes a broad range of intervening variables, attempts to measure causes of outcomes, and shows direction of cause and effect (Donovan et al., 2001). The main limitations of the model are its complexity and its relatively limited application in research and practice.

### ***Decision Based Evaluation Model***

Kraiger's (2002) model takes a different perspective to the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework by specifically focusing on decision-making. In the model evaluation purpose is to linked evaluation target (training content and design, changes in learners, and organisational payoffs), evaluation method is separated from targets, and measurement methods are chosen depending on the type of change desired. The main advantage of this model is that it provides a rigorous system for decision making.

### ***Summary of Alternative Training Evaluation Models***

As the above review demonstrates, the extensions on the Kirkpatrick (1959a, 1959b, 1960a, 1960b, 1996a) framework more or less maintain the same approach as the framework; focussing on training outcomes in terms of levels. On the other hand, the training effectiveness models and learning transfer models centre on the impact of the individual, organisational, and training related factors on training transfer. Although both the extensions on the Kirkpatrick (1996a) framework and the training effectiveness models and learning transfer models each have specific advantages, the practicality (Kirkpatrick, 1996a), simplicity (Kirkpatrick, 1996a) and the fact that the framework is successfully "tried and tested" (Blanchard et al., 2000; Catalanello & Kirkpatrick, 1967; Olsen, 1998) make the framework suitable for this research. From the review of the training effectiveness models

and learning transfer models it is clear that learning transfer is a crucial element of training evaluation. Theories of learning transfer are therefore examined in the following section.

### **Learning Transfer Literature**

In this section the learning transfer variables are divided into the following categories: individual, organisational and training design.

#### ***Individual Factors Influencing Learning Transfer***

At the individual level the following studies reveal that cognitive ability, motivation, self-efficacy, general attitudes and commitment influence learning transfer in training.

##### ***Ability and Personality Dispositions***

At the individual level studies confirm that general cognitive ability has a significant impact on learning transfer and trainee success (Kanfer & Ackerman, 1989; Ree & Earles, 1991). Individuals with the ability to monitor their learning and make adjustments according to the environment have greater confidence and transfer learning more effectively (Ford, Smith, Weissbein, Gully, & Salas, 1998). Metacognitive ability is found to be a strong predictor of cognitive, affective and skill-based outcomes of training (Schmidt & Ford, 2003).

In terms of personality, it is found that higher levels of emotional stability and openness to change positively correlate with faster skill acquisition (Herold, Davies, Fedor, & Parsons, 2002). It is also found that high conscientiousness compensates for early learning difficulties (Herold et al., 2002), and emotional stability maintains good performance from the beginning to the application of training (Herold et al., 2002).

##### ***Motivation***

A number of studies examine the effects of motivation on learning transfer. It is found that motivation to learn positively influences learning transfer (Clement, 1982; Kanfer & Ackerman, 1989), and promotes both immediate and delayed learning (Warr et al., 1999). Entering training with a motivation to be successful is also found to increase the likelihood of developing other positive attitudes during training (Tannenbaum, Mathieu, Salas & Cannon

Bowers, 1991). Reactions to training (Mathieu et al., 1992; Seyler, Holton, Bates, Burnett, & Carvalho, 1998), organisational commitment (Facteau, Dobbins, Russell, Ladd, & Kudish, 1995, Seyler et al., 1998), supervisor and peer support (Seyler et al., 1998), attitudes towards training (Seyler et al., 1998), personality characteristics (Seyler et al., 1998), and trainees' perceptions of the environment (Seyler et al., 1998) are also found to influence motivation to transfer learning.

### ***Self-Efficacy***

Studies reveal that higher levels of self-efficacy positively influence learning transfer (Ford et al., 1998; Haccoun & Saks, 1998) especially when goal-setting strategies are used (Stevens & Gist, 1997). Related to self-efficacy is confidence, which is found to influence both immediate and delayed learning (Warr & Allan, 1999).

### ***Attitude and Commitment***

Studies find that general attitudes towards training influence learning transfer (Warr & Bunce, 1995), and that positive reactions to training affect positive post-training attitudes (Tannenbaum et al., 1991). Findings show that individuals who approach training with a view to master the learning content are better able to transfer learning (Ford et al., 1998). Research also demonstrates that expectations are related to training attitudes; since organisational commitment, training motivation and to a lesser degree self-efficacy; are positively related to trainee expectation fulfilment (Tannenbaum et al., 1991).

### ***Organisational Factors Influencing Learning Transfer***

At the organisational level the studies below reveal that feedback, support structures and organisational climate influence learning transfer.

### ***Feedback***

Clement (1982) finds that general feedback affects learning transfer. This is confirmed by other studies whereby positive feedback (Roullier & Goldstein, 1993), negative feedback

(Roullier & Goldstein, 1993), punishment feedback (Roullier & Goldstein, 1993), no feedback (Roullier & Goldstein, 1993), and frequency of feedback (Baldwin & Ford, 1988) are found to influence learning transfer.

### ***Support***

It is found that a culture supporting continuous learning positively influences the application of learnt behaviour after training (Tracey, Tannenbaum, & Kavanagh, 1995). Supervisor (Baldwin & Ford, 1988; Clement, 1982; Quinones, Segó, Ford, & Smith, 1995-96), peer (Baldwin & Ford, 1998; Bates, Holton, Seyler, & Carvalho, 2000; Clement, 1982; Ford et al., 1998; Quinones et al., 1992), subordinate (Bates et al., 2000.) and supervisor sanctions (Bates et al., 2000) are also found to influence learning transfer.

### ***Organisational Climate***

The following studies show that organisational climate is found to either enhance or constrain learning. General climate-based factors found to either enhance or limit learning transfer include: goal cues, social cues, task and structural cues, and self-control cues (Roullier & Goldstein, 1993). Opportunities to practice learning (Baldwin & Ford, 1988; Clement, 1982) and opportunities to use new knowledge (Baldwin & Ford, 1988) are found to positively affect learning transfer. Whereas group resistance (Bates et al., 2000), actual situational constraints (Baldwin & Ford, 1988; Mathieu et al., 1992) and a foreknowledge of situational constraints (Mathieu et al., 1988) are found to limit learning transfer.

### ***Training Design Factors Influencing Learning Transfer***

The review of the literature below reveals that the training design factors influencing learning transfer include: learning strategies and general training design characteristics.

### ***Learning Strategies***

It is found that the use of learning strategies influences both immediate and delayed learning (Warr & Allan, 1999). A number of studies examine the influence of goal setting strategies on learning transfer. They find that using goal setting strategies before and after

training (Werner, O'Leary-Kelly, Baldwin, & Wexley, 1994; Wexley & Baldwin, 1986), aligning goals with the steps required to achieve long-term career aspirations (Hesketh, 1997) and supplementing goal setting strategies with self-management training strategies (Gist, Bavetta, & Stevens, 1990) positively influences learning transfer.

Other learning strategies found to positively influence learning transfer include: Relapse Prevention (identifying problems and applying relevant solutions) (Tziner, Haccoun, & Kadish, 1991), open learning (learning at own pace and time) (Warr & Bunce, 1995) and analytic learning (Warr & Bunce, 1995). Error based learning, discovery based learning, and developing metacognitive skills (planning, monitoring, and self-evaluation) (Smith, Ford, & Kozlowski, as cited in Machin, 2002) are also found effective in influencing learning transfer.

### ***General Training Design Characteristics***

The following studies demonstrate that a number of factors related to training design influence learning transfer. Factors such as the size and composition of the training group, and the level of cooperative learning (Baldwin & Magjuka, 1991) are found to influence transfer. Findings also show that trainee readiness influences learning transfer (Clement, 1982; Hicks & Klimoski, 1987). It is found that trainees who receive realistic notice of training are more motivated to learn, more committed to attend, view the workshop as more appropriate, and expect to gain more from the training (Hicks & Klimoski, 1987).

Training programmes with positive reputation (Facteau et al., 1995), spanned over a number of sessions (Schmidt & Bjork, 1992), with optional attendance (Mathieu et al., 1992), that meet trainee expectations (Hicks & Klimoski, 1987), with higher levels of content validity (Bates et al., 2000) and a focus on the task level (Bennett et al., 2003) are found most successful in influencing learning transfer. On the other hand, lack of similarity between training and job settings is found to negatively influence training transfer (Clement, 1982).

### ***Summary of Learning Transfer Theories***

As demonstrated above; individual, organisational and training design factors have significant influence on the transfer of learning in training evaluation. It is therefore an essential imperative to account for these factors when conducting a training evaluation.

## Chapter Two Conclusion

Four important conclusions are established in chapters two. First, the review demonstrates the efficacy of training evaluation in light of the important functions it fulfils for organisations engaging in training. Second, the review confirms the nature, strengths and appropriateness of the Kirkpatrick (1996a) framework for this research. Third, the review establishes the areas of weakness that need to be considered when applying the framework through an examination of both critiques of the framework and alternative models of training evaluation. Fourth, the review demonstrates the importance of accounting for the factors affecting learning transfer when applying the framework. The following chapter reviews the literature related to the context of the research, namely the HERS-SA Academy and WDT.

University of Cape Town

## CHAPTER THREE: A REVIEW OF WDT LITERATURE

This chapter is concerned with the context of the evaluation, namely the HERS-SA Academy. The Academy is a training and development programme for women who hold or aspire to hold senior leadership positions in HE. WDT is therefore the contextual base for this research, and hence it is important to review literature related to this topic. The chapter is divided into two parts; the first describes the HERS-SA Academy and the second reviews WDT literature.

### **Part One: The HERS-SA Academy**

#### *Brief description of the HERS-SA Academy*

The Academy's target group includes professional women working in HE predominantly in South Africa, but also in other African countries. The Academy is an intensive programme running for seven consecutive days during September in Cape Town. To date three Academy programmes have been held in 2003, 2004 and 2005. The Academy is designed and managed by HERS-SA, a registered voluntary association. HERS-SA was born out of HERS Mid America, which has been involved in development of women in HE in the United States (US) since 1975. For more details of the Academy and the HERS-SA association please see Appendix A.

#### *Principles and Goals of the HERS-SA Academy*

The following principles adapted from Willis and Daisley (1992) form the basis of HERS-SA's approach: (1) women-only, (2) self-nomination, (3) holistic, (4) confidentiality, (5) equality, (6) experienced and expert facilitators, (7) role models, (8) participant ownership of content (based on participant input and experiences), (9) practical and participative, and (10) networking. The specific goals of the HERS-SA Academy include the following (HERS-SA, n.d.):

1. "To enable participants to hear from leaders in the sector who will address a number of important issues facing universities and technikons at the institutional level."
2. "To provide participants with the opportunity to debate strategic responses to a series of realistic challenges that arise in institutions of higher learning."

3. “To provide a facilitated opportunity for participants to reflect on their own personal professional growth.”
4. “To enable participants to engage with the other professional women who understand the employment dynamic of HE.”

### ***Summary of Part One***

As shown above, the HERS-SA Academy has both a clearly defined target group and explicit training aims and principles. Like most training programmes, the aims and principles of the training are designed to address the specific needs or problems of the target group (Rossi, Lipsey, & Freeman, 2004), and herein lies the significance of the training. The following section explores these needs and problems by reviewing the literature related to the current status of women in HE, the problems faced by women in HE, and the strategies proven successful in alleviating these problems. The main objective of this chapter is to demonstrate both the efficacy of the HERS-SA Academy as a strategy for helping women in HE, and the efficacy of an evaluation of the HERS-SA Academy.

### **Part Two: Review of WDT**

The following four elements of WDT are reviewed: (1) the position of women in HE, (2) barriers to women’s advancement in HE, (3) training as a strategy for helping women’s position in HE, and (4) the efficacy of evaluating WDT.

#### ***The Position of Women in HE***

This section reviews literature on the position of women in HE in terms of (1) the representation of women, (2) the progress of women’s advancement, (3) the types of institutions that attract women, (4) the relative status of women, and (5) the types of jobs occupied by women. The purpose of this section is to provide a realistic description of the position of women in HE both in South Africa and internationally, in order to establish the nature and significance of the needs of the Academy target group.

### ***The Under-Representation of Women in HE***

Research shows that the under-representation of women in HE is a universal trend (Subotzky, 2001). Women are found to be underrepresented in leadership positions in HE in the United Kingdom (UK) (Acker, 1992; Bagilhole, 2000; Bain & Cummings, 2000; Brown, 1997, 1999; El-Khawas, 1997; Forster, 2001; Goode & Bagilhole, 1998; Spurling, 1997; Wisker, 1994) and Ireland (O'Connor, 2000); Australia (Bain & Cummings, 2000; Eggins, 1997; McCall, Liddell, O'Neil, & Coman, 2000); the US (Bain & Cummings, 2000; Ebbers, Gallisath, Rockel, & Coyan, 2000; Johnson, 1993; "The Carnegie Commission on Higher Education (CCHE), 1973); Nordic countries (Reisby & Knudsen, 2001), specifically Norway (Rogg, 2001) and Sweden (Eliasson, Berggren, & Bonddestam, 2000); Brazil, Chile, Germany, Israel, Japan, Korea, and Mexico (Bain & Cummings, 2000); South Africa (de la Rey, 1998; Fourie, 1999; Greyvenstein, 2000; Howell & Subotzky, 2002; Mabokela, 2003; Mkabela, 1999; Subotzky, 2001; Walker, 1997; Zulu, 2003); and commonwealth countries (Teferra & Altbach, 2004).

The following data provided by the South African Department of Education (SADoE) (2003) on the proportion of staff in South African HEIs by gender, substantiates the findings of the literature reviewed above. In 2003, women constituted 42.57% of professional staff and 55.55% of non-professional staff (SADoE, 2003). In terms of senior professional positions, the proportion of women in academic positions is 40.72%, in managerial positions 25.92%, and in specialist/support positions 58.05% (SADoE, 2003). In terms of junior posts such as non-professional administration, women constituted 71.10% of all positions (SADoE, 2003).

### ***The Progress of Women's Advancement***

Research shows that the number of women leaders has increased but progress has so far been slow. This finding is evident in the UK (Acker, 1992; Brown, 1997, 1999), Norway (Rogg, 2001), the US (Johnson, 1993), Australia (Blackmore & Sachs, 2000), and South Africa (Greyvenstein, 2000; Perumal, 2003; Subotzky, 2001). These studies are supported by data from the SADoE (2003), where although the amount of women in senior professional positions increased by 56.74% in the period from 1994-2003, women still constituted only 42.57% of these positions in 2003.

***Institutions that Attract Women***

Research shows that institutions where women are in positions of leadership have relatively less prestige and power than institutions dominated by men. This is found in the US (Johnson, 1993; CCHE, 1973), UK (Brown, 1999), and South Africa (de la Rey, 1998).

***The Status of Women in HE***

The following literature demonstrates that women in HE also have lower status. A higher proportion of women are found in contract positions in the UK (Acker, 1992; Forster, 2001; Lahtinen & Wilson, 1994), Australia (McCall et al., 2000), and in SET in South Africa (Chinsamy-Turan, 1999a, 1999b). Women in HE also have generally lower salaries than men, specifically in the US and Australia (Poole & Bornholt, 1998), and the UK (Lahtinen & Wilson, 1994). In a study undertaken by de la Rey (1998) in South African universities, women are also promoted less often than men.

***Jobs Occupied by Women***

Research shows that not only are women concentrated in positions of lower rank and status, they are also concentrated in a narrow range positions; for example library, nursing, and health sciences. This trend is demonstrated in for example, the UK (Forster, 2001; Lahtinen & Wilson, 1994) and South Africa (de la Rey, 1998; Zulu, 2003).

***Summary of the Position of Women in HE***

As the above section demonstrates, the position of women in HE is far from ideal which justifies the HERS-SA Academy in addressing a real and significant need. The following section reviews the literature uncovering the reasons for women's current position, in other words the barriers to women's advancement.

***Barriers to Women's Advancement in HE***

In this section, barriers to women's advancement in HE are grouped into three categories: general barriers, individual barriers and institutional barriers.

### ***General Barriers to Women's Advancement in HE***

The following general barriers to women's advancement are found. Lack of mentors is found by Australian (Ehrich, 1994; McCall et al., 2000) and South African (Fourie, 1999; Swartz, 2002; Walker, 1997) studies.

Lack of role models is supported by studies undertaken in the UK (Coats, 1994; Cole, 2000; Poole & Bornholt, 1998), Australia (McCall et al., 2000) and South Africa (Fourie, 1999; Mathipe & Tsoka, 2001; Mkabela, 1999; Swartz, 2002; Zulu, 2003).

Limited networks is demonstrated by studies conducted in the US (Shakeshaft, 1993), UK (Brown, 2000; King, 1997), and South Africa (Chinsamy-Turan, 1999a, 1999b; de la Rey, 1998; Fourie, 1999; Mabokela, 2003; Mathipe & Tsoka, 2001; Swartz, 2002; Zulu, 2003).

Lack of institutional support is found by both UK (Spurling, 1997) and Australian (Ehrich, 1994) studies.

A lack of research about women in HE is found by a study conducted by Morely (2005) in commonwealth countries.

Limited training opportunities is found by research undertaken in the UK (Coats, 1994; Forster, 2001; Goode & Bagilhole, 1998; Willis & Daisley, 1992) and South Africa (Subotzky, 2001; Walker, 1997).

Gender stereotyping is supported by UK (Acker, 1992) and South African (de la Rey, 1998; Mathipe & Tsoka, 2000; Subotzky, 2001; Zulu, 2003) studies.

### ***Individual Barriers to Women's Advancement in HE***

The following individual barriers to women's advancement are found. Lack of confidence is supported by studies conducted in the US (Shakeshaft, 1993), the UK (Brown, 2000) and South Africa (Mathipe & Tsoka, 2001).

Lack of knowledge about institutional structures, norms for promotions and professional activities is found by studies conducted in the UK (Brown, 2000) and South Africa (de la Rey, 1998; Walker, 1997).

Lack of experience is found by studies undertaken in Australia, Brazil, Chile, Germany, Israel, Japan, Korea, Mexico, the UK, and the US (Bain & Cummings, 2000) and in South Africa (Mathipe & Tsoka, 2001; Walker, 1997).

Lack of career planning is supported by UK (Mclay & Brown, 2001) and South African (de la Rey, 1998; Mathipe & Tsoka, 2001) research.

Lack of assertiveness is found by a South African study (Mathipe & Tsoka, 2001).

### ***Institutional Barriers to Women's Advancement in HE***

The following institutional barriers to women's advancement are found. Work/family conflicts is found by studies conducted in the US (Bain & Cummings, 2000; Shakeshaft, 1993); the UK (Acker, 1992; Bain & Cummings, 2000; Forster, 2001); Australia (Bain & Cummings, 2000; Ehrich, 1994; McCall et al., 2000); Norway (Rogg, 2001); Brazil, Chile, Germany, Israel, Japan, Korea, and Mexico (Bain & Cummings, 2000); and South Africa (de la Rey, 1998; Morely, 2005; Peterson & Gravett, 2000; Zulu, 2003).

Lack of family friendly institutional practices and policies is supported by research undertaken in the UK (Acker, 1992), Australia (McCall et al., 2000), and South Africa (de la Rey, 1998).

Limited access to networks is a barrier found by UK (Acker, 1992), Australian (McCall et al., 2000) and South African (Peterson & Gravett, 2000) studies.

The domination of an institutional culture based on male values is found by studies conducted in the UK (Acker, 1992; Goode & Bagilhole, 1998), the US (Ebbers et al., 2000), Germany (Muller, 2000), Australia (Blackmore & Sachs, 2000), and South Africa (Chinsamy-Turan, 1999a; de la Rey, 1998; Mabokela, 2003; Mathipe & Tsoka, 2000, 2001; Morely, 2005; Peterson & Gravett, 2000; Subotzky, 2001; Walker, 1997).

Stereotyped job positions is found by US (Johnsrud & Heck, 1994; Park, 1996), Australian (Blackmore & Sachs, 2000) and South African (Mathipe & Tsoka, 2000) studies.

Prejudiced employment practices is found by studies undertaken in the US (Ebbers et al., 2000; Johnsrud & Heck, 1994; Hargens & Long, 2002), the UK (Acker, 1992; Forster, 2001; Goode & Bagilhole, 1998; Mclay & Brown, 2001), Germany (Muller, 2000), and South Africa (de la Rey, 1998; Mabokela, 2003; Mathipe & Tsoka, 2000, 2001; Peterson & Gravett, 2000; Subotzky, 2001; Walker, 1997; Zulu, 2003).

Sexual harassment is found by studies undertaken in the UK (Acker, 1992) and commonwealth countries (Morely, 2005).

Resistance to affirmative action is found by research conducted in commonwealth countries (Morely, 2005), Germany (Muller, 2000) and South Africa (Mabokela, 2003).

### ***Summary of the Barriers to Women's Advancement in HE***

This section highlighted the main barriers that impede women's advancement in HE. The objectives of the HERS-SA Academy are directly aligned with a number of these barriers, which validates the efficacy of the Academy in addressing the root problem of the target group. The following section examines the appropriateness of training as a strategy to address the situation faced by women in HE.

### ***Training as a Strategy for Helping Women's Position in HE***

This section reviews the following: (1) literature advocating WDT, (2) literature reporting the benefits of WDT, and (3) literature demonstrating the outcomes of WDT.

#### ***Literature Advocating WDT***

The literature demonstrates that WDT is universally recommended as a viable strategy for promoting women's progress in HE. This is demonstrated by research undertaken in the UK (Atchison, 1993; Bain & Cummings, 2000; Brown, 1997; Brown, 2000; Farish, McPake, Powney, & Weiner, 1995; Poole & Bornholt, 1998; Walton, 1997; Willis & Daisley, 1992; Wisker, 1994); Australia (Bain & Cummings, 2000; Eggins, 1997; McCall et al., 2000; Poole & Bornholt, 1998); South Africa (Chinsamy-Turan, 1999b; Mathipe & Tsoka, 2000, 2001; Norris, 2001; Peterson & Gravett, 2000); the US, Germany, Mexico, and Israel (Bain & Cummings, 2000; Poole & Bornhol, 1998); Brazil, Chile, Japan, and Korea (Bain & Cummings, 2000); Hong Kong (Poole & Bornhol, 1998); and Sweden (Eliasson et al., 2000; Poole & Bornholt, 1998).

#### ***Benefits of WDT***

UK studies find that WDT is valuable because it provides a safe and non-threatening environment (Atchison, 1993; Coats, 1994; Davidson & Cooper, 1992; Harrison & Williams, 1993; Willis & Daisley, 1992, 1997) and women are not dominated by men (Atchison, 1993; Davidson & Cooper, 1992; Willis & Daisley, 1992; Wisker, 1994). Both UK (Coats, 1994; Willis & Daisley, 1992) and US (Lewis & Fagenson, 1995) studies find that women only training is valuable because it allows shared experiences to emerge and it encourages group

support. It is found by UK studies that these factors enable the following benefits: enhanced learning (Willis & Daisley, 1997) and open communication (Willis & Daisley, 1992, 1997).

### *Outcomes of WDT*

The following studies demonstrate the outcomes of WDT in HE. The outcomes of UK studies on WDT classified as Kirkpatrick (1996a) level two outcomes include: increased positive attitudes (Atchison, 1993; Segall, 1993), increased assertiveness (Brown, 2000; Monks & Barker, 1999), increased motivation (Segall, 1993), reassurance about personal practices (Wisker, 1994), better understanding of the university system (Brown, 2000; Monks & Barker, 1999), accepting responsibility for own advancement (Willis & Daisley, 1992), realising problems experienced are shared (Monks & Barker, 1999), realisation of the value of networking (Monks & Barker, 1999), and knowledge of career development strategies and strategies to deal with career advancement barriers (Monks & Barker, 1999).

Outcomes common to both UK and US studies classified as Kirkpatrick (1996a) level two outcomes include: increased confidence (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994), clarification and validation of career goals (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Monks & Barker, 1999; Willis & Daisley, 1992), improved management skills (Brown, 2000; Harrison & Williams, 1993; Ouston, Gold, & Gosling, 1993; Segall, 1993; Shakeshaft, 1989), and encouragement to further educational qualifications (Ebbers et al., 2000).

The outcomes of UK studies on WDT classified as Kirkpatrick (1996a) level three outcomes include: forming support groups (Atchison, 1993), plans to develop training initiatives (Atchison; Harrison & Williams, 1993), changed careers (Brown, 2000), undergoing further training (Monks & Barker, 1999; Segall, 1993), alternative organisational behaviours (Segall, 1993; Wisker, 1994), better performance in the university system (Brown, 2000; Monks & Barker, 1999), expanded participation in the workplace (Brown, 2000; Wisker, 1994), increased involvement on decision-making bodies (Brown, 2000; Monks & Barker, 1999), intention to apply for a new position (Monks & Barker, 1999), and increased independence and productivity (Willis & Daisley, 1992).

Outcomes common to both UK and US studies classified as Kirkpatrick (1996a) level three outcomes include: increased networks (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Segall, 1993; Shakeshaft, 1989; Wisker, 1994), starting a new job and a changed

approach to work (Segall, 1993; Shakeshaft, 1989), promotion (Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993), personal and professional advancement (Ebbers et al., 2000; Willis & Daisley, 1992), changes in goals and values (Shakeshaft, 1989), and increased likelihood of applying for more senior positions (Ebbers et al., 2000; Shakeshaft, 1989).

### ***Summary of WDT***

This section demonstrates the following: (1) training is internationally advocated as a strategy for helping women's advancement in HE, (2) women only training has unique benefits over mixed sex training, (3) there are a broad range of positive outcomes directly associated with WDT, and (4) there are currently no cases of evaluative research on the outcomes of WDT in South Africa.

These conclusions are significant in two ways. First, they support the efficacy of the HERS-SA Academy as a solution for helping advance women in HE. Second, they confirm the efficacy of evaluating HERS-SA outcomes, specifically in the South Africa. The final section of this chapter reviews literature justifying the importance of evaluations of WDT.

### ***Justification for Evaluating the HERS-SA Academy***

This section aims reviews the following: literature advocating the efficacy of evaluating WDT and literature demonstrating the lack of evaluative research in WDT.

### ***Literature Advocating the Efficacy of Evaluation***

Studies in Australia (Eggs, 1997), the UK (Bagilhole, 2000; Gold, 1993; Segall, 1993; Willis & Daisley, 1992; Wisker, 1994), the US (Lewis & Fagenson, 1995), and South Africa (Fourie, 1999) find that evaluation is an integral part of WDT. Willis and Daisley (1992) find that evaluation of WDT is important because it reassures the organisation, silences the cynics, ensures continued support, and contributes to learning. Other UK studies find that it allows the participants to reflect on their training experiences and post-training behaviour (Willis & Daisley, 1992; Wisker, 1994), encourages implementation of the training (Willis & Daisley, 1992; Wisker, 1994) produces good practice and guidelines (Wisker, 1994), and makes women's successes widely known (Willis & Daisley, 1992).

### ***The Need for Evaluative Research in WDT***

Bagilhole (2000) finds that there is a general lack of evaluation of WDT. This is confirmed by Eggins (1997) who finds that research on the effects of WDT are limited, and a direct relationship between programme participation and career advancement has not been established. A number of studies, for example Bagilhole, Segall (1993), and Eggins (1997), emphasise the need for more evaluative research on WDT.

### ***Summary of the Justification of Evaluating the HERS-SA Academy***

This section supports the relevance and efficacy of an evaluation of the HERS-SA Academy through the following conclusions: (1) there is genuine lack of evaluative research on WDT in developed countries, (2) there are currently no documented cases of evaluations of WDT in South Africa, (3) there is a need for more evaluative research on WDT, and (4) evaluations of WDT are important.

## **Chapter Three Conclusion**

The first part of this chapter examined the nature and objectives of the HERS-SA Academy. This provides a contextual foundation for the second part of the chapter, namely the review of WDT. The review conducted in the second part focuses on four elements of WDT: (1) the position of women in HE, (2) barriers to women's advancement in HE, (3) training as a strategy for helping women's position in HE, and (4) the justification for evaluating WDT. In totality the review of these four elements provides a solid case for the efficacy of an evaluation of the HERS-SA Academy. The following chapter examines the research methods applied in this study.

## CHAPTER FOUR: RESEARCH METHODS

This research methods chapter is structured differently to the conventional methods format due to the nature the research (evaluative) and the type of the research design. The research design was a three staged approach, and thus the research methods are discussed separately under each of the three stages of the research. The three stages included the following: (1) quantitative evaluation of participant reactions, (2) quantitative evaluation of participant responses to the Electronic Questionnaire, and (3) thematic analysis of interviews using the Success Case Method (SCM) (Brinkerhoff, 2003).

There are three sections to this chapter. The first section provides a brief overview of the research design. The second section discusses the research methods for each stage of the research. The third section discusses the limitations of the research design and research methods.

### Section 1: Overview of the Research Design

#### *The Research Question*

The aim of the research was to evaluate the 2003 and 2004 HERS-SA Academies using the Kirkpatrick (1996a) framework of training evaluation. In meeting this aim the following questions were addressed:

1. To what extent are the objectives of the 2003 and 2004 Academies achieved in terms of the reactions, learning and behaviour outcomes of participants?
2. If the intended outcomes of each Academy are unsuccessful or only partially successful, what recommendations can be made for improvement?

#### *Features of the Research Design*

The stages of the research design were essentially mini-evaluations since their focus was narrow and specific. In totality the three stages formed the overall, more comprehensive

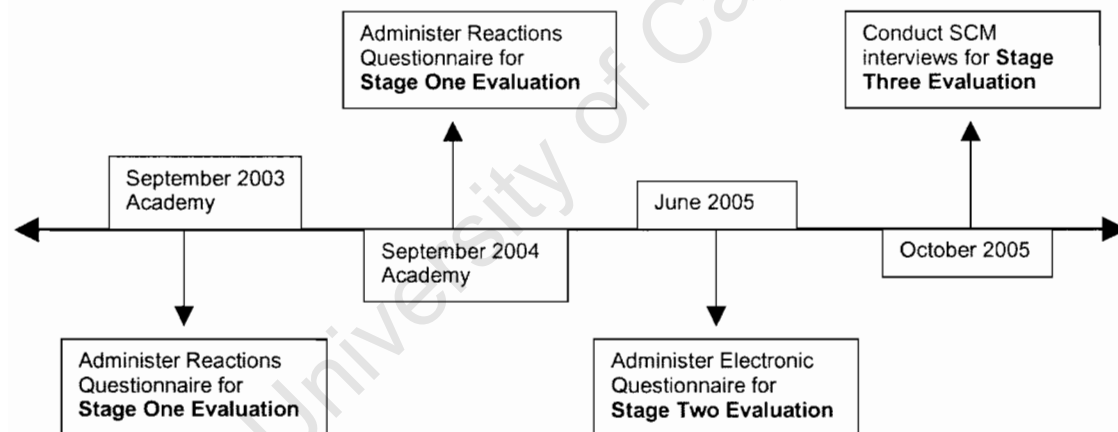
evaluation conducted for this research; measuring outcomes on a number of Kirkpatrick (1996a) levels over a relatively prolonged period of time. As demonstrated in the research objectives, level four of the framework was not measured in this research. There were two reasons for this: (1) it was not appropriate in view of the relatively recent establishment of the Academy and (2) it was not feasible considering the resources and time available for the evaluation. It is important to note that although outcomes were measured in this research, these were based on respondent perceptions, and hence they should not be confused with true causal outcomes of a pre-post test design. They were therefore termed outcomes simply for practical convenience and ease of understanding. The three stages of the research are briefly outlined and presented in diagrammatic format below.

### *Chronological Representation of the Three Stages of the Research*

Figure 1 outlines the chronological process of the research.

Figure 1

#### *Timeline Mapping the Chronological Process of the Research*



#### *Overview of Stage One Evaluation: Quantitative Evaluation of Participant Reactions*

The Stage One Evaluation was based on participant reactions gathered in mid-September 2003 and 2004 directly after each of the respective Academies. Hence, the Stage

One Evaluation measured immediate outcomes (Brinkerhoff & Dressler, 1990). Participant evaluations were measured through Reactions Questionnaires designed and implemented by the HERS-SA management board. The quantitative component of the Reactions Questionnaires were analysed descriptively and the qualitative component was analysed by summing the frequencies of common statements. The reactions level of the Kirkpatrick (1996a) framework was the primary focus in the Stage One Evaluation; however learning and behaviour outcomes emerged from the qualitative component of the questionnaire, and hence these levels were also examined.

With regards to reactions, only the overall reactions to the Academy were examined in the Stage One Evaluation for three reasons. First, HERS-SA already evaluated these questionnaires in order to improve the design and logistics of subsequent Academies, and hence re-evaluating these aspects of reactions was futile. Second, reactions is the least important level of the framework (Kirkpatrick, 1996a). Third, the reactions level has relatively little influence and consequence in terms of the other levels of the framework (Alliger & Janak, 1989; Alliger et al., 1997; Dixon, 1990; Mathieu et al., 1992; Noe & Schmitt, 1986; Ruona et al., 2002; Warr & Bunce, 1995).

#### ***Overview of Stage Two Evaluation: Evaluation of Responses to the Electronic Questionnaire***

The researcher developed an Electronic Questionnaire to measure the learning and behaviour levels of the Kirkpatrick (1996a) framework for both the 2003 and 2004 Academies in June 2005. Hence the Stage Two Evaluation measured intermediate outcomes (Brinkerhoff & Dressler, 1990). The Electronic Questionnaire was based on respondent perceptions of learning and behaviour outcomes, which means that statistical methods and the implications of results were limited. Due to low response rates, only the 2004 Academy was evaluated in the Stage Two Evaluation, and hence it was not possible to compare 2003 and 2004 outcomes in this stage. Since the questionnaire was based on participant perceptions and only evaluated the 2004 group, the analysis for the Stage Two Evaluation predominantly lent itself to descriptive statistics, but also correlation analysis.

**Overview of Stage Three Evaluation: Thematic Analysis of SCM Interviews**

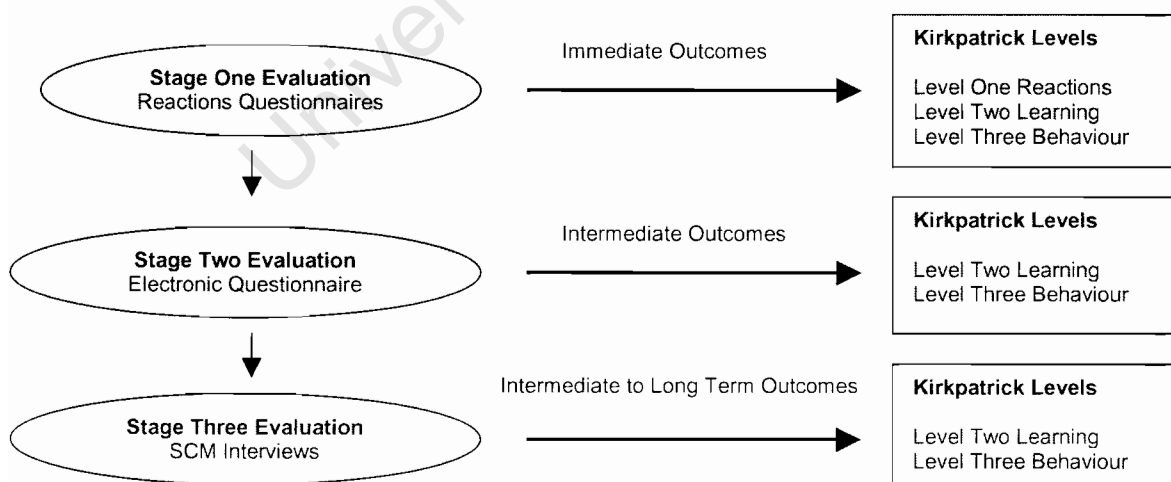
The Stage Three Evaluation involved a thematic analysis of interviews conducted according to the SCM (Brinkerhoff, 2003). Interviews took place in October 2005, and hence this stage measured intermediate to long term outcomes (Brinkerhoff & Dressler, 1990). The main assumption of the SCM is that training impact can best be measured by those trainees who have been most effective in applying their learning in their work, and also from those individuals who have been the least effective (Brinkerhoff, 2003). The main objective of this stage was to confirm and provide insight into the findings of stages one and two, and hence quantity of results *was not* the goal of the Stage Three Evaluation. The SCM was selected because it is designed specifically for training evaluations, and it is quick, easy, practical, accurate and trustworthy (Brinkerhoff, 2003). These advantages made the approach highly appropriate to the research, specifically in consideration of the aims of the stage (confirmatory rather than quantity), the nature of the research (evaluative), and the time constraints on the research.

**Diagrammatic Representation of the Research Design**

Figure 2 provides a diagrammatic representation of the three stages of the research process.

Figure 2

**Diagram Mapping the Three Stages of the Research**



## Section 2: Research Methods

This section examines in detail the different research methods used for the Stage One, Two and Three Evaluations.

### *Stage One Evaluation: Quantitative Evaluation of Participant Reactions*

#### *Sampling Methods*

**Description of Sampling Method.** The sampling method used in the Stage One Evaluation is based on the SCM (Brinkerhoff, 2003) approach to sampling. In this approach it is recommended that if the entire research population is less than 100, then the whole population should be included in the sample (Brinkerhoff, 2003). Thus sample selection is based on the judgement of the researcher (Brinkerhoff, 2003).

**The units of analysis.** The following characteristics pertain to the individuals under study:

- Female
- Attendees of either the 2003 or 2004 HERS-SA Academy
- Current or former employees of a HEIs
- Residents of African countries prior to attending the Academy
- Either held or had the potential to hold senior leadership positions in HEIs prior to attending the Academy.

**Target population and sample frame.** The target population for the Stage One Evaluation included all HERS-SA Academy delegates. The sample frame for the 2004 Academy was 62/82 (75.6%) and the sample frame for the 2003 Academy was 47/57 (82.5%).

### ***Data Gathering Methods***

Reactions Questionnaires constructed by the HERS-SA management board were used as the data gathering tool for the Stage One Evaluation. As the content for the 2003 and 2004 Academies differed slightly; a separate questionnaire was developed for each of the Academies. These questionnaires were typical of reactions level questionnaires (Kirkpatrick, 1996a); in that they asked participants to rate the extent to which each aspect of the training was personally valuable for them as trainees. Questionnaires of this nature are often termed “smile sheets” (Kirkpatrick, 1996a) since their main objective is to measure whether participants were satisfied with the training. Being ‘smile sheets’, it was not appropriate for HERS-SA to pilot the questionnaires nor to carry out validity and reliability testing

The general format of both the 2003 and 2004 Reactions Questionnaires was the same with quantitative rating scales, open-ended questions, and open-ended comments. A four-point Likert scale was used to prevent neutral responses (De Vaus, 2002). The rated items and open-ended comments related to all aspects of each Academy including: Academy organisation, Academy venue; and each workshop, formal presentation and evening speaker.

The Reactions Questionnaires were distributed by hand. All delegates were given an Academy file containing the Reactions Questionnaires at the start of each programme and were invited to complete the questionnaires before departing from the Academy. Participation in the research for the Stage One Evaluation was voluntary.

### ***Data Analysis Methods***

***Analysis of quantitative items.*** The response rate was relatively high for the Stage One Evaluations whereby for the 2004 Academy 62/82 (75.6%) of delegates responded, and for the 2003 Academy 47/57 (82.5%) of delegates responded. The questionnaires did not include any demographic information, and hence it was not possible to compare within group differences for the Stage One Evaluation. Since the content of the Academies were slightly different, and since questionnaire items were based on participant attitudes; it was also not possible to statistically compare results of the 2003 and 2004 groups. The analysis of the quantitative component of the questionnaires involved the following three steps:

1. Frequency tables were obtained for all quantitative items.
2. The frequencies of the most positive categories and most negative categories were summed. Thus, “Valuable” and “Very Valuable” were summed to create a positive category, and “Not Particularly Valuable” and “Not Valuable” were summed to create a negative category.
3. The summed positive and negative categories were assessed in terms of whether responses were in agreement or mixed. Responses were considered to be in agreement if the percentage of responses for either the positive or negative summed categories were over 70%. Responses were considered mixed if responses were more evenly spread (below 69%) between the positive and negative summed categories. Even though a result obtaining over 50% is commonly considered to be representative of the sample majority, a higher cut-off score of over 70% was selected to ensure greater accuracy of results.

***Analysis of open-ended items.*** Schmidt (2004) provides a five step guideline for qualitative analysis. These steps were used to direct the analysis of qualitative data in all three stages of the research. Methods for developing categories, coding and interpreting results were grounded on the suggestions of Miles and Huberman (1994). The qualitative data analysis process is described below.

1. Transcribed interview material was repeatedly read and all emerging themes and topics were noted.
2. Analytical categories were developed using three steps: (1) development of draft analytical categories based on emerging themes, (2) testing of draft categories to refine categories, and (3) development of final categories based on the testing process.
3. Every transcript was coded by placing particular passages of the text into the related category.
4. Results were presented in table form. The analysis resulted in statements commonly cited by respondents, and these were counted, summed and tabulated.
5. Results were interpreted according to the aims of the research stage. Frequency counts represented the total number of times a statement was cited for all questionnaires in totality. Thus a frequency count of six did not necessarily mean that six different

respondents made the same statement. It was therefore not possible to compare the frequencies of common statements for the 2003 and 2004 groups.

### ***Stage Two Evaluation: Evaluation of Responses to the Electronic Questionnaire***

#### ***Sampling Methods***

***Description of Sampling Method.*** Like the Stage One Evaluation, the Stage Two Evaluation also used the SCM approach to sampling (Brinkerhoff, 2003). Thus sampling was based on population size and researcher judgement (Brinkerhoff, 2003).

***The units of analysis.*** The units of analysis for the Stage Two Evaluation were the same as those for the Stage One Evaluation.

***Target population and sample frame.*** The intended target population of the Stage Two Evaluation included all participants of the 2003 and 2004 Academies. It was not possible to contact the entire target population, and hence the final total population was 53 for the 2003 group and 81 for the 2004 group. The sample frame was 6/53 (11.320%) for the 2003 Academy, and 31/81 (23.271%) for the 2004 Academy.

#### ***Description of the Data Gathering Tool***

The questionnaire was formatted into two versions: an electronic version and a Word document version. The Electronic Questionnaire was the primary data gathering tool, and the Word Document Questionnaire was developed as an alternative in the event of technical difficulties with the electronic version.

Electronic formatting was chosen over the traditional hardcopy formats for the following reasons: (1) increased accuracy (Brace, 2004) and efficiency (Lumsden & Morgan, 2005; Mertler, 2003; Nesbary, 2000; Shannon, Johnson, Searcy & Lott, 2002; Thomas, 2004) of data collection and distribution, (2) guaranteed completion of all items (Thomas, 2004), (3) aesthetically pleasing and easily readable formats (Soloman, 2001), (4) they are the preferred

format for university faculty members (Nesbary, 2000), (5) costs are reduced as there are no postage fees (Lumsden & Morgan; Nesbary, 2000; Shannon et al., 2002; Thomas, 2004), and (6) they allow for the possibility of including a wider geographical representation without increasing costs or difficulty (Thomas, 2004).

The questionnaire consisted of Likert scale items and three open-ended questions. A Likert scale was used because responses are standardised, weighted, and precise (Rust & Golombok, 1999). A five-option scale was used to obtain the most variance in responses (Rust & Golombok, 1999). For details of the questionnaire please see Appendix B.

### ***Construction of the Data Gathering Tools***

***Step 1: Questionnaire templates.*** The questionnaire was founded on evaluation questionnaire templates already proven valid and reliable (Kirkpatrick, 1996a; Willis & Daisley, 1992). The Kirkpatrick (1996a) templates are structured according to the four levels and hence they were used as a general guideline for questionnaire format. Willis and Daisley (1992) are experts in WDT, and their templates are designed specifically for evaluations of WDT. Thus these templates were used to guide both the content and format of the questionnaire.

***Step 2: Contextualisation of questionnaire.*** Data obtained from Academy documentation (HERS-SA records and the HERS-SA website) and interviews with HERS-SA management were used to contextualise the questionnaire. Contextualisation was important in light of content validity requirements and the unique outcomes of the HERS-SA Academy.

***Step 3: Piloting the questionnaire.*** The HERS-SA management board evaluated the face validity of the draft questionnaire. HERS-SA were selected to pilot the questionnaire since all members attended at least one Academy, some members facilitated and presented at the Academies, and above all since HERS-SA is responsible for designing and managing the Academy.

**Step 4: Develop final questionnaire.** Feedback from the HERS-SA management board was used to develop the final version of the questionnaire.

#### *Steps in the Questionnaire Distribution Process*

**Step 1: Pre-notification.** HERS-SA management sent an email nine days before distributing the questionnaire notifying potential participants of the study and introducing the researcher.

**Step 2: Notification.** The researcher sent an informational email two days before distributing the questionnaire, explaining the nature of the research and all ethical concerns including confidentiality, anonymity, and beneficence.

**Step 3: Distribution of Electronic Questionnaire.** Participation in the research was voluntary and hence the researcher sent an email inviting the sample members to respond to the Electronic Questionnaire. This email included instructions on how to access and complete the questionnaire.

**Step 4: Distribution of alternative questionnaire.** Some participants experienced problems accessing the Electronic Questionnaire because of system security settings. Hence, the Word document version of questionnaire was sent to the entire sample twelve days after distributing the Electronic Questionnaire. This questionnaire was sent as an email attachment, and participants were required to complete the questionnaire and email it back to the researcher.

**Step 5: Reminders to participate.** Three reminder emails were sent at ten day intervals to improve the response rate, with the first sent 25 days after the initial distribution of the questionnaire. The first and second were sent by the researcher and the third by HERS-SA. The first reminder increased the response rate from 15-20, the second from 20-30, and the third from 30-37. The final response rate for the 2003 group was 6/53 (11.320%) and for the 2004 group was 31/81 (38.271%).

### *Analysis of Quantitative Component of Questionnaire*

Due to the low response rate for the 2003 group (11.32%), it was not possible to evaluate this Academy in the Stage Two Evaluation. The quantitative analysis consisted of the following five steps:

1. Frequency tables were obtained for all quantitative items.
2. The frequencies of the most positive categories and most negative categories were summed as follows: “Strongly Agree” and “Agree” were summed to create a positive category, and “Disagree” and “Strongly Disagree” were summed to create a negative category.
3. As with the Stage One Evaluation, the summed positive and negative categories were assessed in terms of whether responses were in agreement or mixed using a 70% cut-off score as a basis for this decision.
4. The Cronbach’s Alpha item analysis test was applied to (1) all items related to learning outcomes, (2) all items related to behaviour outcomes and (3) all learning and behaviour items as a group. These items were tested with the Cronbach Alpha since it was important to determine their validity and meaningfulness before conducting correlation analysis on them.
5. Level two outcomes (items 1-7) were correlated with level three outcomes (items 11-22) using the Spearman rank R test, since this test is specifically designed for ordinal data. These items were correlated because the Kirkpatrick (1996a) framework assumes that learning leads to behaviour. As establishing causality is not within the scope of correlation analysis, it was the aim of this analysis to test whether the level two and three outcomes of the Academy were associated rather than causal.

### *Analysis of Open-Ended Items*

Except for the final step, the open-ended comments were analysed using the same process as the Stage One Evaluation. Unlike the Stage One Evaluation, in the final step the frequencies of statements represented single cases. In other words, if the frequency count for a statement was three, then three separate participants made this statement.

### *Stage Three Evaluation: Thematic Analysis of SCM Interviews*

#### *Sampling Methods*

**The units of analysis.** The units of analysis for the Stage Three Evaluation were the same as those for the Stage One and Two Evaluations.

**SCM sampling approach.** The SCM (Brinkerhoff, 2003) sampling approach was used, since the Stage Three Evaluation was based on this method. The main assumption of the SCM is that the training participants considered most successful in terms of meeting training outcomes are the best indicators of training success (Brinkerhoff, 2003). Thus the sample target population consisted of those participants identified as highly successful in applying the training.

HERS-SA management were consulted in order to help identify successful cases, as they are continuously updated with the progress of Academy graduates through the HERS-SA Academy alumni network.

In the SCM, the size of the sample depends on the purpose of the evaluation (Brinkerhoff, 2003). Five cases were considered sufficient since the aim of this evaluation was not to obtain quantity of information, but rather to confirm and provide insight into results obtained in the Stage One and Two Evaluations.

#### *Data Gathering Methods*

Semi-structured interviews were used for the Stage Three Evaluation, since these are the dominant tool for the SCM (Brinkerhoff, 2003). The interview schedule and format were constructed according to the SCM guidelines, as these were appropriate in terms of the aims of the qualitative evaluation. The interviews conducted for this research were short and highly focussed as dictated by the SCM approach.

Interviews were conducted telephonically and were recorded using both audio recorders and handwritten notes. Telephonic interviews were used for two reasons. First, cases were

widely dispersed in terms of geographical location. Second, the SCM recommends telephonic interviews over face-to-face interviews as they are easier to arrange, more convenient, equally productive and accurate, and more economical (Brinkerhoff, 2003).

### ***Data Analysis Methods***

In the SCM (Brinkerhoff, 2003), analysis methods are selected based their appropriateness to the purpose(s) of the research. Accordingly, a thematic analysis was selected for the Stage Three Evaluation. The Schmidt (2004) approach was used to guide the analysis process for this stage, and coding and interpretation techniques were based on suggestions by Miles and Huberman (1994). The analysis procedure was the same as the Stage One Evaluation except for the final two steps. In step four, each common theme was cited, defined and elaborated on using interview text. In step five, results were interpreted by comparing them to the findings of the previous stages to assess whether common results emerged from all three stages of the research.

## **3. Research Methods Limitations**

### ***Limitations of the Research Design***

The main limitation with the research design was that it did not conform to the traditional pre-test post-test design. Four factors determined the adoption of three staged design in this research. First, the evaluation took place when the HERS-SA Academy was at a relatively well established developmental stage, and two Academies had already taken place. Second, the research was undertaken for a master's degree and hence resources were limited. Third, the target population was dispersed over a broad geographical region. Fourth, the time period for the research was restricted to ten months.

The factors cited above meant that it was not logistically feasible to conduct a traditional pre-test post-test design for any of the Academies. Baseline data was not available for the 2003 and 2004 Academies, and the timeframe of the research did not permit a pre-test post-test evaluation of the 2005 Academy. In light of these factors, the research design was the best available given contextual constraints. Many evaluative researchers, for example Babbie and Mouton (2003) and Rose and Davidson (2003), support the view that the context of the evaluation often determines the appropriateness of evaluative research designs and

methods. As argued by Rose and Davidson (2003), “Standards of proof for any evaluation are completely context specific” (p. 14-15). Similarly Kirkpatrick (1996a) suggested that evaluators “be satisfied with evidence if proof is not possible to obtain” (p. 68).

As demonstrated above, more recent approaches to evaluative research, for example Rose and Davidson (2003), found the traditional experimental approach limited in terms of practicality. It was however still important to account for the limitations of a design based on participant estimates. According to the traditional experimental approach to evaluative research, the design has two main limitations. First, without pre-test data, it was not possible to establish strong statistical claims of causality in terms of Academy effects. Second, participant estimates were prone to validity and reliability threats such as social desirability response sets, selective memory, memory decay, and interpretation bias (Babbie & Mouton, 2003). These concerns were therefore considered and accounted for throughout the research process.

### *Limitations of the Data Analysis*

#### *Low Response Rates*

The response rates for the Electronic Questionnaire were relatively low, which confirms a general trend with these formats (Mertler, 2003; Soloman, 2001). The research population was however favourable for electronic questionnaires, since Nesbary (2000) found similar response rates for university faculty members when using both electronic and traditional questionnaire formats. A number of measures were taken in the research to prevent low response rates including: (1) personalised cover letters (Soloman, 2001), (2) pre-notification of the intent to survey (Shannon et al., 2004; Soloman, 2001), (3) follow-up reminders (Soloman, 2001), (4) a simple format (Shannon et al., 2004; Soloman, 2001), and (5) easy navigation (Brace, 2004). Therefore, since the research population was favourable and since both precautionary and reactionary measures were taken, low response rates were out of the control of the research.

Low response rates had two main negative consequences. First, it was not possible to evaluate the 2003 Academy, and hence compare the results of the 2003 and 2004 Academies. Thus the analysis was limited to descriptive and correlation statistics. Second, generalisability was fair but not exceptionally strong. Thus a low response was accounted for in all statistical analyses and conclusions thereof.

***Limitations of Smile Sheet Questionnaires***

The Stage One Evaluation was based on “smile sheet” types of questionnaires designed by the HERS-SA. These types of questionnaires were problematic for the following reasons: (1) demographic information was not included and hence it was not possible to make within group comparisons, and (2) the questionnaires referred to specific Academy content and hence the 2003 and 2004 Academies could not be compared against one another. These questionnaires were however the only available data on immediate outcomes, and hence their overall value outweighed the limitations of their design.

University of Cape Town

## CHAPTER FIVE: RESULTS AND DISCUSSION

Although results and discussion are traditionally reported in separate chapters, due to the nature of the research (evaluative) and the type of research design (a three-staged approach) it makes practical and conceptual sense to combine them. This chapter is divided into three sections in accordance with the three stages of the research design.

### **Stage One Evaluation: Results of the Evaluation of Participant Reactions**

The Stage One Evaluation results were based on qualitative and quantitative responses of the 2003 and 2004 Academy participants to the Reactions Questionnaires. Being “smile sheets” (Kirkpatrick 1996a) these questionnaires measured predominantly level one reactions. However level two learning outcomes and level three behaviour outcomes emerged from the qualitative component of the Reactions Questionnaires, and hence these levels were also measured.

#### *Level One Reactions: Results and Discussion*

##### *Overall Reactions to the HERS-SA Academy*

As mentioned earlier, for level one outcomes only the overall reactions to the Academy were examined to avoid repetitions of previous HERS-SA reactions evaluations.

*Responses to dichotomous questions.* As shown in Table 1 both 2003 and 2004 Academy respondents had overall positive reactions to the Academy.

Table 1

##### *Stage One Reactions to the Overall Academy*

Dichotomous questions	Positive responses: 2003	Positive responses: 2004
Do you think this Academy has been a worthwhile experience for you?	95.7%	96.6%
Would you recommend that some of your female colleagues attend the Academy next year?	89.1%	100%

The results above indicate that respondents were on the whole satisfied with the Academy with a slight improvement from 2003 to 2004. The implications of successful reactions are elaborated on in an ensuing discussion of reactions level results. In terms of the slight improvements from 2003 to 2004, a tentative explanation for these improvements is the impact of developments made by HERS-SA to the 2004 Academy. HERS-SA completely changed the structure of workshops and allowed more time for recreation in the 2004 Academy. Thus it makes intuitive sense that these developments had some influence on improved reactions to the Academy.

**Qualitative reactions.** Tables 2 and 3 indicate the frequencies of qualitative descriptive statements made by both 2003 and 2004 participants with regards to all aspects of the Academy namely; the Academy as a whole, workshops, and presentations.

Table 2

**Stage One Positive Qualitative Reactions to the Academy**

Positive reactions statements	Frequencies: 2003 Academy	Frequencies: 2004 Academy	Total Frequencies 2003 & 2004
Good	57	89	146
Excellent	38	56	94
Valuable	10	19	29
Enjoyable	12	14	26
Great	11	10	21
Brilliant	6	6	12
Beneficial	6	6	12
Entertaining	10	1	11
Wonderful	0	10	10
Impressed	5	3	8
Humorous	3	4	7
Lovely	0	4	4
<b>Total</b>	<b>158</b>	<b>222</b>	<b>380</b>

Table 3

**Stage One Negative Qualitative Reactions to the Academy**

Negative reactions statements	Frequencies: 2003 Academy	Frequencies: 2004 Academy	Total Frequencies 2003 & 2004
Disappointing	1	7	8
Poor	0	5	5
Not valuable	3	0	3
Could be better	1	2	3
Not beneficial	2	1	3
Not impressed	1	1	2
Did not meet expectations	2	0	2
Not effective	0	1	1
<b>Total</b>	<b>10</b>	<b>17</b>	<b>27</b>

As shown in the Tables 2 and 3, the total frequencies of positive statements far outnumbered the total frequencies of negative statements for both Academies. These findings demonstrate that respondents were on the whole satisfied with the Academy, which confirms the results of the responses to the dichotomous questions in Table 1.

### *Level Two Learning Outcomes for 2003 and 2004 Academies*

Although the Reactions Questionnaires were more specifically designed to measure reactions rather than learning, respondents stated learning outcomes in the qualitative component of the questionnaires. Table 4 demonstrates the frequency of respondent statements indicating learning level outcomes for both the 2003 and 2004 groups.

Table 4

#### *Stage One Learning Outcomes*

Intermediate learning outcomes statements	Frequencies: 2003 Academy	Frequencies: 2004 Academy	Total Frequencies 2003 & 2004
Inspired	28	48	76
Learnt	9	18	27
Gained practical tips	7	11	18
Learnt from other delegates	7	10	17
Motivated	8	9	17
Gained awareness	6	10	16
Eye Opening	3	13	16
Encouraged	5	8	13
Gained insight	5	8	13
Gained understanding	5	5	10
Gained knowledge	0	10	10
Enriched	5	4	9
Thought provoking	6	3	9
Touched	0	9	9
Increased confidence	4	4	8
Refreshed	2	5	7
Gained knowledge about career advancement	0	6	6
Self-reflection	3	3	6
Changed my viewpoint	0	4	4
Discovered I am not alone	3	0	3
<b>Total</b>	<b>106</b>	<b>188</b>	<b>294</b>

The statements in Table 4 above demonstrate that Academy respondents experienced learning outcomes immediately after participating in the training. Since the Reactions Questionnaires did not especially enquire about participant learning outcomes, respondents made these statements without being instructed to do so. The questionnaires assessed

participant perceptions of Academy value. Thus it makes intuitive sense that respondents associated Academy value with these outcomes.

A number of the Stage One Evaluation learning outcomes were also found in other research on WDT. These include: increased motivation (Segall, 1993), increased confidence (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994), increased knowledge about career advancement strategies (Monks & Barker, 1999), self-reflection (Wisker, 1994), and discovering that one is not alone in problems (Monks & Barker, 1999).

Some of these learning outcomes also relate to the principles of the Academy. The Academy principle of role models corresponds with “inspired”, “encouraged” and “motivated” (Willis & Daisley, 1992). The Academy principles of practical and participatory learning and participant ownership of content corresponds with “gained advice and practical tips” and “learnt from other delegates” respectively (Willis & Daisley, 1992).

By corresponding with the outcomes of other evaluative studies on WDT and the foundational principles of the Academy, the Academy learning outcomes serve to validate the efficacy and appropriateness of the Academy in meeting the needs of women in HE.

### *Level Three Behaviour Outcomes for the 2003 and 2004 Academies*

Measurement of behaviour outcomes was also not the intended goal of the Reactions Questionnaires; however respondents stated these outcomes in the qualitative component of the questionnaires. Table 5 demonstrates the frequency of respondent statements indicating both current and intended behaviour outcomes for both the 2003 and 2004 groups.

Table 5

#### *Stage One Behaviour Outcomes*

Immediate behaviour outcomes statements	Frequencies: 2003 Academy	Frequencies: 2004 Academy	Total Frequencies 2003 & 2004
Gained networks	3	6	9
Interacted and met new people	0	5	5
Empowered	3	1	4
Engaged in debate or discussion	3	1	4
Practiced a skill	0	3	3
Intend to help female colleagues	0	3	3
Intend to use gains at institution	0	3	3
Intend to implement a career plan	0	3	3
<b>Total</b>	<b>9</b>	<b>25</b>	<b>34</b>

The statements in Table 5 above demonstrate that Academy participants both engaged and intended to engage in behaviour outcomes immediately after participating in the training. These outcomes were possibly more superficial than “true” level three outcomes. Since strictly speaking, the types of behaviour outcomes cited by respondents did not meet Kirkpatrick’s (1996a) criteria for level three behaviour outcomes.

Behaviour outcomes are essentially learning outcomes that have been transformed into observable day-to-day behaviours (Kirkpatrick, 1996a). In this way, these outcomes usually require specific conditions such as sufficient time or an appropriate environment, and hence behaviour outcomes are not expected immediately after training (Kirkpatrick, 1996a). Thus although “gained networks” is a behaviour outcome, the hypothetical outcome “gained and used networks for career advancement”, is clearly a more appropriate outcome in terms of Kirkpatrick’s (1996a) definition of level three outcomes. Simply examining the total frequencies of learning and behaviour outcomes demonstrates that behaviour outcomes were outnumbered by learning outcomes. Since behaviour outcomes were not expected immediately after training, this provides a possible explanation for the relatively limited amount and variety of behaviour outcomes in comparison to learning outcomes.

Like learning outcomes, a number of the Stage One Evaluation behaviour outcomes corresponded with the principles of the Academy and were supported by other research on WDT. The behaviour outcome common to both Academies with the highest frequency of responses was “gained networks”, which is not surprising since one of the key principles of HERS-SA is building networking. This outcome was also found by other evaluative research on WDT (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Segall, 1993; Shakeshaft, 1989; Wisker, 1994), as is the outcome; intend to implement a career plan (Willis & Daisley, 1992). Since the behaviour outcomes of the Academy were similar to those of other WDT programmes, the efficacy and appropriateness of the Academy in addressing the needs of women in HE is confirmed.

The 2004 Academy respondents cited a greater number and more varying kinds of behaviour outcomes than the 2003 Academy respondents. They also listed intended behaviour outcomes and the 2003 Academy respondents did not. The original workshop structure of the 2003 Academy was reformatted in 2004. Thus since the workshops are concerned with developing skills; a possible explanation for the increase in the amount and variety of behaviour outcomes in 2004 is the improved format of workshops.

### *Integrated Discussion of the Stage One Evaluation Results*

#### *Level One Reactions*

According to Kirkpatrick (1996a), the main function of evaluating reactions is assessing the effectiveness of the programme in order to determine improvement possibilities.

Kirkpatrick (1996a) argues that positive reactions are important for ensuring motivation to learn. While he claims positive reactions do not ensure learning, he still maintains that negative reactions definitely reduce the likely success of learning (Kirkpatrick, 1996a). Many studies however found that the reactions level was limited in terms of its correlations with the other levels of the framework (Alliger & Janak, 1989; Alliger et al., 1997; Dixon, 1990; Mathieu et al., 1992; Noe & Schmitt, 1986; Ruona et al., 2002; Warr & Bunce, 1995).

In light of the limitations of reactions as demonstrated by the learning transfer theories, the meaning and significance of positive reactions in terms of their impact on learning and behaviour was accordingly treated with caution in this research. In this study reactions level outcomes were therefore assessed simply to ascertain overall participant satisfaction with the Academy, rather than to make predictions or draw conclusions about level two and three outcomes. Overall reactions to the Academy were generally very positive, and hence it is possible to assume that the Academy was successful in terms of meeting level one requirements.

#### *Level Two Learning and Level Three Behaviour*

Both the learning and behaviour outcomes of the Stage One Evaluation reflected the main principles of the Academy, and were supported by the literature on the outcomes of WDT. As a result, Stage One Evaluation findings validated the efficacy and appropriateness of the Academy in alleviating the problems of women in HE. Comparing the total frequencies of learning and behaviour outcomes demonstrated that Academy behaviour outcomes were outnumbered by learning outcomes. Thus it is possible to assume learning outcomes were stronger in this stage of the research.

## Stage Two Evaluation: Results of Participant Responses to Electronic Questionnaire

The Stage Two Evaluation measured 2004 participant responses to the Electronic Questionnaire in terms of level two learning outcomes and level three behaviour outcomes. The analysis conducted in the Stage Two Evaluation involved predominantly descriptive analysis, but also involved Cronbach Alpha item analysis and correlation analysis. Please note the following codes for Stage Two Evaluation results tables:

- M: Mean
- STD: Standard deviation
- SA: Percentage of strongly agree responses
- A: Percentage of agree responses
- NAND: Percentage of neither agree nor disagree responses
- D: Percentage of disagree responses
- SD: Percentage of strongly disagree responses
- Pos: Sum percentage of strongly agree and agree responses
- Neg: Sum percentage of disagree and strongly disagree responses

### *Results of the Descriptive Analysis: Frequency Tables*

#### *Level Two Learning Outcomes*

Table 6 demonstrates the perceived learning outcomes of respondents. Since outcomes were based on participant perceptions, it was not possible to scientifically establish direct causation between the Academy and learning outcomes.

Table 6

#### *Stage Two Learning Outcomes*

Item	Learning outcomes	M	STD	SA	A	NAND	D	SD	Pos	Neg
1	Improved ability to recognise external environment challenges	2.1	0.9	25.8	<b>51.6</b>	12.9	9.7	0	<b>77.4</b>	9.7
2	Improved ability to recognise internal environment challenges	1.7	0.7	38.7	<b>54.8</b>	3.2	3.2	0	<b>93.5</b>	3.2
3	Improved ability to recognise academic development challenges	1.9	0.8	<b>38.7</b>	<b>38.7</b>	19.4	3.2	0	<b>77.4</b>	3.2

Table 6 Continued

*Stage Two Learning Outcomes Continued*

Item	Learning outcomes	M	STD	SA	A	NAND	D	SD	Pos	Neg
4	Improved ability to recognise HE gender dynamics	2	0.9	32.3	<b>45.2</b>	16.1	6.5	0	<b>77.4</b>	6.5
5	Increased awareness of career advancement strategies	2	1	<b>35.5</b>	<b>35.5</b>	19.4	9.7	0	<b>71</b>	9.7
6	Increased motivation to pursue career advancement	2	1.1	<b>41.9</b>	29	19.4	6.5	3.2	<b>71</b>	9.7
7	Increased confidence in ability to advance career	2.1	1	32.3	<b>38.7</b>	22.6	3.2	3.2	<b>71</b>	6.5

As shown Table 6, all learning outcomes were rated positively by the majority of respondents with a relatively high range of responses (over 70%) for all items. Thus a high majority of respondents perceived their engagement with level one outcomes of the Academy as positive.

A number of these outcomes were supported by the Stage One Evaluation (Table 4) and other research on WDT. These include: increased understanding of HE (Brown, 2000; Monks & Barker, 1999), increased awareness of career advancement strategies (Monks & Barker, 1999), increased motivation (Segall, 1993), and increased confidence (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994). Since these outcomes emerged from both the Stage One and Two Evaluations and were also found by other research on WDT, this confirms the validity and efficacy of these outcomes, and also indicates that they are comparably strong Academy outcomes.

*Factors Contributing to Learning Outcomes*

Table 7 demonstrates Academy respondent perceptions regarding the influence of the different aspects of the Academy on the learning outcomes in Table 6. Again, these results reveal participant perceptions about Academy impact and do not assume causality.

Table 7

*Academy Factors Enabling Learning Outcomes*

Item	Learning outcomes due to:	M	STD	SA	A	NAND	D	SD	Pos	Neg
8	Formal presentations	1.8	0.6	29	<b>64.5</b>	6.5	0	0	<b>93.5</b>	0
9	Workshops	1.7	0.7	38.7	<b>54.8</b>	3.2	3.2	0	<b>93.5</b>	3.2
10	Role models	1.6	0.7	<b>48.4</b>	41.9	9.7	0	0	<b>90.3</b>	0

The results in Table 7 indicate that the majority of respondents (over 90%) perceived the formal presentations, workshops and role models as positively enabling their learning. Thus all aspects of the Academy were perceived to influence learning outcomes, which indicates the effectiveness of the Academy in achieving level two outcomes.

### ***Level Three Behaviour Outcomes***

Table 8 demonstrates the perceived behaviour outcomes of respondents. Again these results show participant perceptions of behaviour outcomes and do not indicate causation between the Academy and these outcomes.

Table 8

### ***Stage Two Behaviour Outcomes***

Item	Behaviour outcomes	M	STD	SA	A	NAND	D	SD	Pos	Neg
11	Increased effectiveness in current professional role	2.1	0.8	22.6	<b>54.8</b>	16.1	6.5	0	<b>77.4</b>	6.5
12	Increased professional networks	1.9	0.7	29	<b>54.8</b>	16.1	0	0	<b>83.9</b>	0
13	Engaged in a leadership role	2.3	1.0	<b>29</b>	<b>29</b>	<b>29</b>	13	0	<b>58.1</b>	13
14	Broadened participation in the workplace	2.2	0.9	22.6	<b>48.4</b>	16.1	13	0	<b>71</b>	13
15	Implemented strategies to address external environment challenges	2.5	1.0	16.1	32.3	<b>35.5</b>	16	0	<b>48.4</b>	16
16	Implemented strategies to address internal environment challenges	2.4	0.8	12.9	<b>45.2</b>	32.3	9.7	0	<b>58.1</b>	9.7
17	Implemented strategies to address academic environment challenges	2.5	1.2	22.6	<b>32.3</b>	22.6	16	6.5	<b>54.8</b>	23
18	Implemented interventions to address gender discrimination	2.4	0.9	16.1	<b>38.7</b>	35.5	9.7	0	<b>54.8</b>	9.7
19	Taken steps to remove advancement barriers	2.4	0.7	9.7	41.9	<b>45.2</b>	3.2	0	<b>51.6</b>	3.2
20	Implemented career advancement plan	3.1	1.0	6.5	19.4	<b>38.7</b>	29	6.5	25.8	<b>36</b>
21	Advanced into a more senior position	2.4	1.1	25.8	<b>29</b>	25.8	19	0	<b>54.8</b>	19
22	Assumed greater responsibility in the workplace	2.2	0.8	19.4	<b>48.4</b>	25.8	6.5	0	<b>67.7</b>	6.5

The results in Table 8 demonstrate that the majority of respondents perceived themselves as experiencing Academy behaviour outcomes. However, only a few outcomes were perceived to be experienced by a high majority of participants (over 70%). As shown in Table 6, *all* of the learning outcomes measured in the Electronic Questionnaire were perceived to be experienced by a high majority of respondents. Thus these results indicate that behaviour outcomes were comparably weaker in relation to learning outcomes. This is supported by results of the Stage One Evaluation where learning outcomes outnumbered

behaviour outcomes. Hence the relative strength of Academy learning outcomes over behaviour outcomes was a continually emerging theme of this research.

The behaviour outcomes experienced by a high majority of respondents were also found by other research on WDT; namely increased effectiveness in current role (Willis & Daisley, 1992), increased professional networks (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Segall, 1993; Shakeshaft, 1989; Wisker, 1994), and broadened participation in the workplace (Brown, 2000; Wisker, 1994). Increased networks were also found in the Stage One Evaluation. Since Academy outcomes were similar to other evaluative studies on WDT and were also found in other stages of the research; it is possible to assume that HERS-SA took an appropriate approach to WDT.

Results show that most participants did not engage in dramatic behaviour outcomes, such as advance into a senior position or implement a career plan, but rather improved their performance within their current role. Thus the majority of respondents engaged in more conservative rather than dramatic behaviour outcomes. This is further evidence of the weakness of Academy behaviour outcomes.

### *Factors Contributing to Behaviour Outcomes*

The items in Table 9 asked participants to rate the extent to which specific aspects of the Academy impacted their behaviour. Again these results show participant perceptions about Academy impacts and do not assume scientific causation. Respondents were asked to cite behaviour outcomes directly resulting from attending the Academy other than those listed in the questionnaire (Item 23). The only common outcome was “became a chairperson on a committee” cited by two respondents.

Table 9

#### *Academy Factors Enabling Behaviour Outcomes*

Item	Behaviour outcomes due to:	M	STD	SA	A	NAND	D	SD	Pos	Neg
24	Formal presentations	2.0	0.8	22.6	<b>58.1</b>	16.1	0	3.2	<b>80.6</b>	3.2
25	Workshops	2.0	0.9	29	<b>51.6</b>	16.1	0	3.2	<b>80.6</b>	3.2
26	Interaction with role models	2.1	0.9	22.6	<b>54.8</b>	19.4	0	3.2	<b>77.4</b>	3.2
27	Academy networking opportunities	2.2	0.9	22.6	<b>45.2</b>	25.8	3.2	3.2	<b>67.7</b>	6.5

As shown in Table 9 above, the majority of respondents perceived most aspects of the Academy as impacting their behaviour outcomes with only “Networking opportunities” (Item 27) receiving slightly mixed results (below 70%). However the percentage of responses for

formal presentations, workshops and role models were much higher for learning outcomes (Table 7) than behaviour outcomes (Table 9). This demonstrates that respondents perceived the Academy as having a greater impact on learning outcomes than behaviour outcomes, indicating that behaviour outcomes were comparably weaker than learning outcomes.

### ***Factors Enabling Career Development***

The results in Table 10 indicate the perceptions of respondents regarding the positive influence of different factors on their career development. Again results were based on participant perceptions and do not assume causation.

Table 10

### ***Factors Enabling Career Development***

Item	Career development enablers	M	STD	SA	A	NAND	D	SD	Pos	Neg
28	The HERS-SA Academy	2.6	1	16.1	25.8	<b>41.9</b>	16	0	<b>41.9</b>	16
29	Personal efforts	2	0.9	29	<b>48.4</b>	16.1	6.5	0	<b>77.4</b>	6.5
30	Institutional enablers	2.5	1.1	12.9	<b>45.2</b>	19.4	19	3.2	<b>58.1</b>	23

Results show that the HERS-SA Academy as a factor enabling career development (Item 28) received mixed results. A substantially greater number of respondents perceived personal efforts (Item 29) over the HERS-SA Academy as enabling career development. Thus respondents perceived personal efforts as having a stronger impact on career development than the HERS-SA Academy. Institutional enablers (Item 30) also received mixed results, indicating that a substantial percentage of respondents *did not* perceive HEIs as enabling career development.

### ***Factors Preventing Career Development***

Table 11 shows the perceptions of respondents with regards to possible factors preventing career development. Again, these results were based on participant perceptions and do not assume causation. Participants were also asked to cite factors preventing career development other than those listed in the questionnaire (Item 38). The factor receiving the highest frequency of responses was “the HE merger process” cited by three participants.

Table 11

**Factors Preventing Career Development**

Item	Career development barriers	M	STD	SA	A	NAND	D	SD	Pos	Neg
32	Satisfied with current position	3.7	1.2	0	23.3	16.7	30	30	23.3	60
33	Lack of motivation	4.4	0.6	0	0	6.7	43	50	0	93
34	Limited confidence	4.4	0.7	0	0	10	40	50	0	90
35	Institutional barriers	3.3	1.3	13.3	16.7	20	30	20	30	50
36	Family commitments	3.9	1.1	0	16.7	10	37	37	16.7	73
37	Lack of career opportunities	3.1	1.4	10	36.7	6.7	23	23	46.7	47

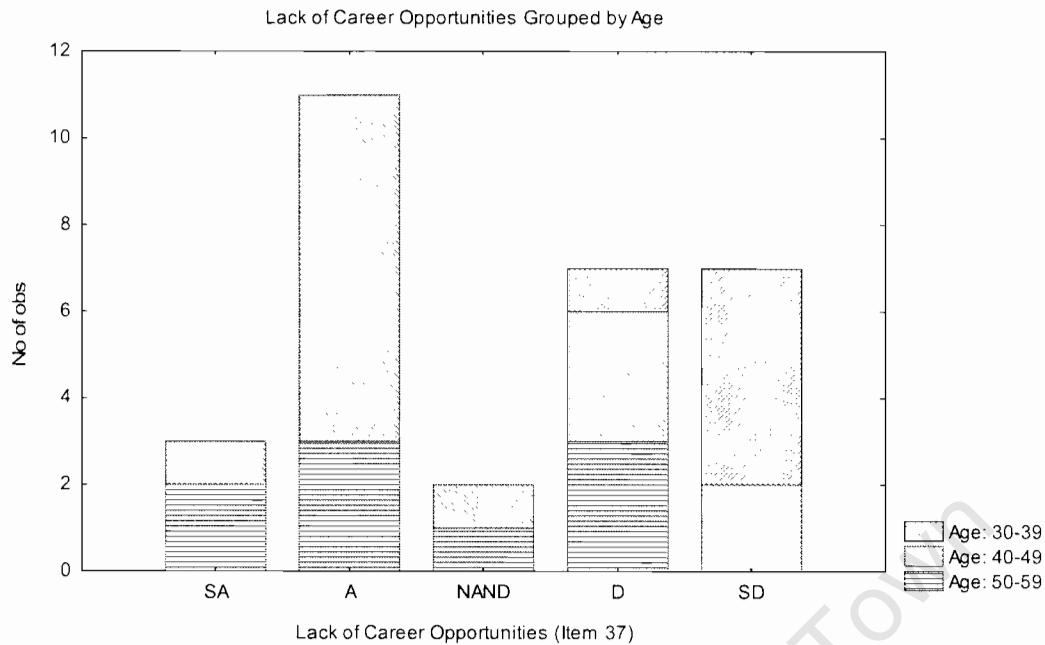
**Limited confidence and motivation (Items 33 & 34).** As demonstrated in Table 11, lack of confidence (Item 34) and lack of motivation (Item 33) were not perceived to prevent career development for a high majority of respondents. These results confirm findings of previous stages. Increased confidence and motivation were outcomes of both the Stage One (Table 4) and Stage Two Evaluations (Table 6), and were also found by other research evaluating WDT (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Segall, 1993; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994). Thus increased confidence and motivation were not only continually emerging outcomes, but were also perceived as career development enablers. This further illustrates the strength of these two outcomes in relation to other Academy outcomes.

**Possible barriers to career development.** Results in Table 11 demonstrate that institutional barriers (Item 35) and lack of career opportunities (Item 37) received mixed results. These results suggest that a substantial number of respondents faced barriers outside the control of the Academy that prevented their career development. It is not surprising that responses to institutional barriers were mixed, since this confirms a previous result of the Stage Two Evaluation, whereby institutional barriers also received mixed responses as a factor enabling career development (Item 30 in Table 10).

Lack of career opportunities is one possible way in which institutions acted as barriers, in that it is partly the institutions' responsibility for providing career advancement opportunities, which they have clearly failed to achieve. The HE merger process, cited by a number of respondents, is another possible way in which institutions acted as barriers to career development. On the whole these results show that a substantial percentage of respondents perceived institutions as having very little impact on enabling career development and also perceived them as direct barriers to development.

**Explanations for lack of career opportunities (Item 37).** The histogram below provides some explanation for how a lack of career opportunities acted as a barrier to career development.

Figure 3



As demonstrated in Figure 3 above, by grouping lack of career opportunities (Item 37) by age, it is clear that most older respondents (over 40 years old) and none of the younger respondents (39 years and below) experienced a lack of career opportunities. Research found that age was positively related seniority of job position (Poole & Bornholt, 1998). Thus it is plausible to assume that older respondents already occupied senior leadership positions and thereby experienced a lack of career opportunities (Poole & Bornholt, 1998).

It is possible to argue that younger women in less senior positions had more to benefit from the HERS-SA Academy than older more senior women, since (1) they did not lack career opportunities and (2) they had further to advance in terms of their careers. HERS-SA targets both women who hold and aspire to hold senior leadership positions. It is therefore recommended that HERS-SA focus to a greater extent on targeting women who aspire to obtain senior leadership positions, than women who have already obtained senior positions.

### *Results of the Descriptive Analysis: Cronbach Alpha Item Analysis*

As demonstrated in Table 12, the Cronbach Alpha item analysis test was applied to learning related items (Items 1-7) and behaviour related items (Items 11-22) separately, as well as both learning and behaviour items as a group. The test was applied to these items since it was important to establish the extent of their validity and meaningfulness before conducting correlation analysis on them.

Table 12

#### *Cronbach Alpha Item Analysis Results*

Item no.	Learning (Items 1-7) and behaviour (Items 11-22) outcomes	Learning Alpha scores	Behaviour Alpha scores	Group Alpha scores
1	Improved ability to recognise external environment challenges	0.85		0.91
2	Improved ability to recognise internal environment challenges	0.84		0.91
3	Improved ability to recognise academic environment challenges	0.81		0.91
4	Improved ability to recognise HE gender dynamics	0.84		0.92
5	Increased awareness of career advancement strategies	0.84		0.92
6	Increased motivation to advance career	0.83		0.91
7	Increased confidence in ability to advance career	0.81		0.91
11	Increased effectiveness in current professional role		0.86	0.91
12	Increased professional networks		0.87	0.91
13	Engaged in a leadership role within profession		0.86	0.91
14	Broadened participation in the workplace		0.86	0.91
15	Implemented external environment strategies		0.87	0.91
16	Implemented strategies in internal environment		0.87	0.92
17	Implemented strategies in academic environment		0.89	0.92
18	Implemented interventions to address gender discrimination		0.87	0.91
19	Taken steps to remove barriers to advancement		0.87	0.92
20	Implemented a plan for career advancement		0.88	0.92
21	Advanced into a more senior position		0.87	0.91
22	Assumed greater responsibility in the workplace		0.87	0.91

As revealed in Table 12, all learning and behaviour items received Alpha scores of over 0.8, thus indicating that they were in fact valid and meaningful. It was therefore appropriate to continue with the correlation analysis as discussed below.

#### *Results of the Correlation Analysis*

Results in Table 13 below demonstrate the correlations between learning and behaviour level outcomes of the Academy.

Table 13

***Spearman Rank Order Correlations***

Marked correlations are statistically significant at $p < .05000$								
		Level One Learning Outcomes						
		Improved ability to recognise challenges in external environment	Improved ability to recognise challenges in internal environment	Improved ability to recognise challenges in academic environment	Improved ability to recognise HE gender dynamics	Increased awareness of career advancement strategies	Increased motivation to advance career	Increased confidence in ability to advance career
Level Two Behaviour Outcomes	Increased effectiveness in current professional role	<b>0.74 (p = 0.00)</b>	<b>0.50 (p = 0.00)</b>	<b>0.57 (p = 0.00)</b>	<b>0.36 (p = 0.04)</b>	<b>0.35 (p = 0.05)</b>	<b>0.35 (p = 0.05)</b>	<b>0.64 (p = 0.00)</b>
	Increased professional networks	<b>0.64 (p = 0.00)</b>	<b>0.40 (p = 0.02)</b>	<b>0.50 (p = 0.00)</b>	0.29 (p = 0.11)	<b>0.37 (p = 0.04)</b>	<b>0.37 (p = 0.03)</b>	<b>0.50 (p = 0.00)</b>
	Engaged in a leadership role within profession	<b>0.74 (p = 0.00)</b>	0.34 (p = 0.06)	<b>0.55 (p = 0.00)</b>	0.24 (p = 0.19)	0.16 (p = 0.39)	<b>0.45 (p = 0.01)</b>	<b>0.57 (p = 0.00)</b>
	Broadened participation in the workplace	<b>0.80 (p = 0.00)</b>	<b>0.56 (p = 0.00)</b>	<b>0.55 (p = 0.00)</b>	0.10 (p = 0.60)	0.07 (p = 0.69)	0.24 (p = 0.19)	<b>0.41 (p = 0.02)</b>
	Implemented strategies to address challenges in the external environment	<b>0.51 (p = 0.00)</b>	<b>0.46 (p = 0.00)</b>	<b>0.43 (p = 0.01)</b>	0.256 (p = 0.15)	<b>0.36 (p = 0.04)</b>	0.32 (p = 0.08)	0.35 (p = 0.054)
	Implemented strategies to address challenges in the internal environment	<b>0.50 (p = 0.00)</b>	0.19 (p = 0.31)	0.19 (p = 0.31)	-0.04 (p = 0.83)	0.01 (p = 0.96)	-0.05 (p = 0.80)	0.20 (p = 0.26)
	Implemented strategies to address challenges in the academic environment	<b>0.48 (p = 0.00)</b>	<b>0.37 (p = 0.04)</b>	<b>0.68 (p = 0.00)</b>	<b>0.62 (p = 0.00)</b>	<b>0.51 (p = 0.00)</b>	<b>0.40 (p = 0.02)</b>	<b>0.50 (p = 0.00)</b>
	Implemented interventions to address gender discrimination	<b>0.45 (p = 0.01)</b>	<b>0.55 (p = 0.00)</b>	<b>0.48 (p = 0.00)</b>	0.33 (p = 0.07)	<b>0.41 (p = 0.02)</b>	<b>0.42 (p = 0.02)</b>	<b>0.46 (p = 0.00)</b>
	Taken steps to remove barriers to advancement	0.35 (p = 0.056)	<b>0.38 (p = 0.03)</b>	0.15 (p = 0.42)	0.10 (p = 0.59)	0.12 (p = 0.52)	0.33 (p = 0.06)	0.24 (p = 0.18)
	Implemented a plan for career advancement	0.34 (p = 0.059)	0.12 (p = 0.50)	0.07 (p = 0.69)	0.08 (p = 0.66)	0.20 (p = 0.27)	0.27 (p = 0.13)	<b>0.38 (p = 0.03)</b>
	Advanced into a more senior position	<b>0.60 (p = 0.00)</b>	<b>0.48 (p = 0.00)</b>	<b>0.56 (p = 0.00)</b>	0.14 (p = 0.46)	0.18 (p = 0.33)	0.18 (p = 0.33)	<b>0.38 (p = 0.03)</b>
	Assumed greater responsibility in the workplace	<b>0.48 (p = 0.00)</b>	0.33 (p = 0.06)	<b>0.38 (p = 0.03)</b>	0.13 (p = 0.48)	0.20 (p = 0.28)	0.21 (p = 0.24)	0.31 (p = 0.08)

### ***Discussion of Correlation Analysis Results***

The descriptive analysis was limited by only assessing the frequencies within each group of respondents. The correlation analysis examined in Table 13 looked at the pairs of answers of individuals, and were therefore much more powerful in revealing whether individual learning was related to behaviour. The Kirkpatrick (1996a) framework assumes that level two learning leads to level three behaviour. However since the correlation analysis does not determine causation, it was only possible to demonstrate associations rather than causality between learning and behaviour outcomes in this research. It was therefore maintained that items with statistically significant positive correlations demonstrated that learning was related to behaviour.

***Learning outcomes with the greatest associations with behaviour.*** As demonstrated in Table 13, knowledge about the three focus areas of the Academy; namely the external (Item 1), internal (Item 2), and academic (Item 3) environments of HE; and increased confidence (Item 7) were associated with the greatest number of behaviour outcomes.

Increased confidence and knowledge of HE were outcomes of both the Stage One (Table 4) and Stage Two Evaluations (Table 6), and were found by other research on WDT (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994). The Stage Two Evaluation also found that respondents *did not* perceive a lack of confidence (Item 37 in Table 11) as preventing career development. The learning transfer theories found that confidence had a positive influence on learning transfer (Warr & Allan, 1999).

As demonstrated above, knowledge of HE and confidence were supported by the literature, continually emerge from the research, and have the greatest number of relationships with Academy behaviour outcomes. This supports the argument that these outcomes were by far the strongest of all the Academy outcomes.

***Learning outcomes with the least associations with behaviour.*** Awareness of gender dynamics (Item 4) was the weakest of all the learning outcomes, since it was only associated with two behaviour outcomes namely; increased effectiveness in role (Item 11) and implementation of academic environment strategies (Item 17).

***Behaviour outcomes with most and least associations with learning.*** The behaviour outcome associated with the greatest number of learning outcomes was implementation of strategies in the academic environment (Item 3). This result makes intuitive sense, as most of the Academy participants were employed in the academic rather than management or administration faculties of HE. Thus the academic environment was a likely context for implementation of behaviour outcomes for most participants.

Results show that only increased confidence was associated with implementing a career advancement plan (Item 20), and knowledge of the internal environment (Item 2) was the only learning outcome associated with removing career advancement barriers (Item 19). This result was also expected for two reasons. First, the results of the descriptive analysis reveal that dramatic behaviour outcomes were experienced by relatively few respondents. Second, confidence and knowledge of HE were strong outcomes of the Academy since they emerged from multiple stages of the research and were supported by other evaluative studies on WDT.

### ***Integrated Discussion of Stage Two Evaluation Results***

Three main findings emerged from the Stage Two Evaluation. The first major finding is that on a whole the Academy was highly successful in enabling learning outcomes but less so in terms of behaviour outcomes. This is demonstrated in the results below.

Descriptive results reveal that a higher majority of participants experienced a greater number of learning outcomes than behaviour outcomes. In terms of participant perceptions of the different aspects of the Academy's (presentations, workshops and role models) impact on outcomes, results demonstrate that respondents perceived their influence to be much stronger for learning outcomes than behaviour outcomes. Results also show that the behaviour outcomes experienced by the majority of participants were more conservative rather than dramatic. The findings of the correlation analysis reveal that the learning outcomes of the Academy had fewer relationships with dramatic behaviour outcomes than conservative behaviour outcomes. Results also show that respondents perceived personal efforts to have a stronger impact on behaviour outcomes than the HERS-SA Academy.

The second major finding emerging from Stage Two Evaluation is that a substantial number of participants experienced barriers in the implementation of behaviour outcomes. These barriers provide some explanation for the perceived limited impact of the Academy on career development, and the perceived weakness of behaviour outcomes in relation to learning outcomes. HEIs emerged as one of the key possible barriers to career development.

It was found that few respondents perceived HEIs as impacting career development, and a substantial number of respondents perceived HEIs as direct barriers to advancement. Lack of career opportunities and the HE merger process emerged as some of the specific ways in which HEIs act as obstacles.

The third major finding emerging from the Stage Two Evaluation is that older respondents (over 40 years) rather than younger respondents (below 39 years) experienced lack of career opportunities as a barrier to career advancement (Poole & Bornholt, 1998). Based on relevant literature (Poole & Bornholt, 1998) it was assumed the older women experience this barrier because they already occupied senior positions. It is therefore recommended that HERS-SA place greater emphasis on recruiting those who aspire to hold rather than currently hold senior leadership positions.

### **Stage Three Evaluation: Results of SCM Interviews**

The Stage Three Evaluation results were based on a thematic analysis of interviews conducted according to the SCM (Brinkerhoff, 2003). Seven main themes emerged from the analysis and these were arranged in the following categories: (1) valuable elements of the Academy, (2) results of the Academy, (3) support for implementation of Academy learning and behaviour outcomes, and (4) suggestions for improvement of the Academy.

#### ***Theme 1: Valuable Elements of the Academy***

##### ***Academy is Valuable since it is for Women Only***

All respondents found the Academy valuable because it is for women only. As one respondent explained; *“A question that I asked was did it have to be all women. I think that yes it had to...I think that the Academy is particularly valuable as an all female group”*. Another respondent explained that a women only environment is valuable due to the *“freedom and support and encouragement that comes with being with a group of women”*. A number of studies found that women only training has unique benefits over mixed sex training (Atchison, 1993; Coats, 1994; Davidson & Cooper, 1992; Harrison & Williams, 1993; Willis & Daisley, 1992, 1997), specifically support and open communication (Willis & Daisley, 1992).

### ***Theme 2: Results Achieved due to Attending the Academy***

As the following results demonstrate, only level two learning outcomes emerged from the Stage Three Evaluation. Behaviour outcomes were found in this stage, however none of these outcomes were common and hence they were not reported. This further emphasises the results of the previous stages whereby learning outcomes were experienced more often than behaviour outcomes.

#### ***Increased Confidence***

The analysis of interview transcripts reveals that a valuable outcome of attending the Academy was increased confidence. As one respondent explained; *“It was valuable that I came away feeling very confident about who I am and what I think I have to offer my institution”*. Increased confidence was an outcome of both the Stage One (Table 4) and Two Evaluations (Table 6) and was supported by the literature on the outcomes of WDT (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Harrison & Williams, 1993; Monks & Barker, 1999; Shakeshaft, 1989; Willis & Daisley, 1992; Wisker, 1994). Increased confidence was also found to be significantly correlated with a broad range of behaviour outcomes in the Stage Two Evaluation (Table 13). Thus increased confidence emerged from all three stages of the research, was strongly associated with behaviour outcomes, and was confirmed by other evaluative studies on WDT, which further supports the strength of this outcome in relation to other Academy outcomes.

#### ***Increased Understanding of HE***

The analysis of interview transcripts reveals that attending the Academy provided participants with a broader understanding of HE. This result confirms findings of the Stage Two Evaluation (Table 6), whereby of all the learning outcomes, knowledge of the internal environment of HE received by far the highest positive rating in the frequency statistics, and knowledge of both the external and internal HE environments were significantly correlated with a broad range of behaviour outcomes. Increased understanding of HE was also supported by other research on WDT (Brown, 2000; Monks & Barker, 1999). Thus increased understanding of HE emerged from a number of stages of the research, was supported by other research on WDT and was correlated with a broad range of behaviour outcomes. This

confirms that increased understanding of HE and increased confidence were the strongest outcomes of the Academy.

### ***Increased Awareness of Capabilities***

The analysis of interview transcripts reveals that attending the Academy caused participants to realise the true potential of their capabilities for career advancement. As explained by one respondent; *“you realise that the big VCs, and DVCs are just normal people like you and me, and therefore it’s achievable, it removes the mystique, and you realise that you are capable, and that’s where the confidence comes from”*.

This result confirms findings of the Stage Two Evaluation (Table 10), whereby the majority of participants perceived interacting with role models as a factor impacting their career development outcomes. This outcome or at the least the way this outcome has been termed in this evaluation, was strictly speaking not found in other research on WDT. However a number of outcomes of WDT evaluations are similar to realising career advancement capabilities, and hence it is plausible to argue that this outcome was also supported by other research on WDT. Similar outcomes include; reassurance about personal practices (Wisker, 1994) and validation of career goals (Atchison, 1993; Brown, 2000; Ebbers et al., 2000; Monks & Barker, 1999; Willis & Daisley, 1992).

### ***Theme 3: Support for Implementation of Learning and Behaviour Outcomes***

#### ***Lack of Institutional Support***

All respondents felt they received limited support from their HEIs with regards to implementing Academy outcomes. They also claimed that the behaviour outcomes they experienced since attending the Academy mainly resulted from their own personal efforts. As one respondent explained; *“What you want you motivate and you fight for it, you’re lucky if you get it, but often they leave you in isolation”*.

Findings of the Stage Two Evaluation (Table 11) confirmed this result, whereby respondents perceived HEIs as a key barrier to career development, and personal efforts were perceived as the strongest factor enabling career development. Other evaluative studies also found that lack of institutional support (Acker, 1992; de la Rey, 1998; Peterson & Gravett, 2000) was a clear barrier to career advancement for women in HE.

According to Kirkpatrick (1996a), support structures are a necessary requirement for successful implementation of behaviour outcomes. Thus since lack of institutional support was found in both the Stage Two and Stage Three Evaluations and was supported by the literature, this provides a solid explanation for both the relative weakness of the Academy behaviour outcomes in relation to learning outcomes, and the perceived limitations of the Academy in impacting career development.

#### ***Theme 4: Suggestions for Improvement of the Academy***

##### ***Increased Focus on Skills Development***

The analysis of interview transcripts demonstrates that the Academy places too much emphasis on knowledge building through formal presentations rather than skills development in workshops. In the interview transcripts it was suggested that HERS-SA create better balance between developing knowledge and skills.

The Stage Two Evaluation (Table 10) found that the Academy's perceived impact on behaviour outcomes was limited, since a substantial number of respondents did not view the HERS-SA Academy as a factor enabling career development (Item 28). The results discussed above, whereby the Academy was found to be limited in terms of developing practical skills provides some explanation for the Academy's perceived weak impact on behaviour outcomes.

To elaborate, since skills are to a greater extent related to behaviour outcomes and knowledge to a greater extent learning outcomes (Kirkpatrick, 1996a), if the Academy emphasises knowledge over skills, then stronger learning outcomes and weaker behaviour outcomes are expected. Hence, by failing to balance knowledge and skills, the Academy played a role in restricting the behaviour outcomes of participants. In light of these findings, it is therefore suggested that HERS-SA take steps to improve the practical/skills development elements of the Academy.

##### ***Include Younger/Less Experienced Women in the Academy***

It was suggested in the interview transcripts that the Academy focus more on targeting younger less experienced women than women already occupying senior positions.

Respondents argued that less experienced women have more to gain from participating in the Academy than those already occupying senior ranked positions.

The Stage Two Evaluation (Table 11) found that only older participants experienced lack of career opportunities (Item 37) as a barrier to advancement. Based on relevant literature (Poole & Bornholt, 1998), it was assumed that the cause for this result was the likelihood that older women already occupied senior positions. It was also previously argued that younger women who aspire to hold leadership positions had a greater need for the Academy than those who already hold senior positions. Thus the researcher also made the same suggestion as Stage Three Evaluation respondents; specifically that the Academy place more emphasis on recruiting less experienced women who aspire to obtain leadership positions. Since this suggestion was supported by findings of both the Stage Two and Three Evaluations, it is therefore recommended that it be given due consideration.

### ***Integrated Discussion of Stage Three Evaluation Results***

The results of the Stage Three Evaluation generally consisted of the following: (1) confirmatory results that supported findings of previous stages and (2) suggestions for improving the Academy.

There are three ways in which the Stage Three Evaluation results confirmed findings of the previous stages of the research. First only learning outcomes were perceived in this stage. This supports results of both the Stage One and Two Evaluations, whereby Academy learning outcomes were found to outnumber behaviour outcomes. Second, a number of the Stage Three Evaluation learning outcomes, namely increased confidence and increased understanding of HE, were also found in the Stage One and Two Evaluations. Third, this stage found that lack of institutional support was a key barrier to implementation of behaviour outcomes. This confirms the results of the Stage Two Evaluation, whereby it was found that HEIs were perceived as a major obstacle to women's career development.

In terms of suggestions for improvement; two main areas for development emerged from the Stage Three Evaluation. First it was suggested that the Academy increase its emphasis on skills development, and it was accordingly argued that this was one of the possible ways in which the Academy itself limits behaviour outcomes. Second, it was suggested that the Academy focus more on recruiting women who aspire to hold senior leadership roles rather than women already occupying leadership positions. This suggestion was also supported by the results of the Stage Two Evaluation.

## Summary Discussion of Stage One, Two and Three Evaluation Results

### *Main Findings of the Three Stages of the Research*

Two major findings emerged from this research. The first major finding is that level one reactions and level two learning outcomes of the Academy were strong, while although level three behaviour outcomes were found these were comparably weak in relation to the other levels. The second major finding is that increased confidence and increased understanding of HE were clearly the strongest outcomes of the research. This was demonstrated wherein not only did they emerge from all stages of the research, but were also correlated with a large number of behaviour outcomes and were supported by other research evaluating WDT.

### *Explanation for Relatively Weak Behaviour Outcomes*

There are four possible explanations for relatively weak behaviour outcomes: (1) the intended learning outcomes of the Academy did not practically lead to intended behaviour outcomes, (2) time for implementation of dramatic behaviour outcomes was not sufficient, (3) the Academy was ineffective in enabling intended behaviour outcomes, or (4) participants faced barriers that prevented them from implementing Academy behaviour outcomes.

In terms of the first explanation, since the research design was neither experimental nor quasi-experimental, it was not possible to establish causation between learning and behaviour outcomes. However the Academy is based on the training principles of Willis and Daisley (1992), who found similar behaviour outcomes to the HERS-SA Academy. Therefore since the Academy is based on a training format found successful in leading to similar behaviour outcomes; it is possible to argue that the first explanation is unlikely.

There is also little support for the second explanation. This is because the timing for a level three evaluation was appropriate, whereby according to Kirkpatrick (1996a), level three behaviour results should be evaluated between three and twelve months after the training.

The following argument provides justification for the final two explanations. It is argued in this research that although the HERS-SA Academy in some ways limits behaviour outcomes, it is the perceived impact of barriers outside the control of the Academy that have the greatest influence on preventing behaviour outcomes. Since it was not possible to establish causal relationships in this research, the main basis for this argument is located in the Kirkpatrick (1996a) framework. According to the framework, level two learning

outcomes lead to level three behaviour outcomes. This means that since the Academy was perceived to be successful in enabling learning outcomes, it should *in theory* have success in enabling intended behaviour outcomes. Thus based on this assumption, it is more likely that external barriers hindered the transformation of learning outcomes into behaviour outcomes than extensive problems with the Academy itself.

Although this assumption suggests that achieving success in the first two levels means that the Academy is without limitations; a number of results from this research demonstrate otherwise. Hence, it is argued in this research that HEIs were the primary barrier, and the HERS-SA Academy was only a subsidiary barrier to implementation of behaviour outcomes. Details of both primary and subsidiary barriers are elaborated on below.

### ***The Possible Role of HEIs in Limiting Behaviour Outcomes***

Both the Stage Two and Three Evaluations found that the HEIs acted as career development barriers for women. In the Stage Two Evaluation, HEIs were perceived by only a relatively small majority of respondents to enable career development (Table 10), and for a substantial number of respondents HEIs were perceived to prevent career development (Table 11). It was also found in this stage that (1) failing to provide satisfactory career development opportunities and (2) the HE merger process were some of the ways in which HEIs acted as career development inhibitors (Table 11). In the Stage Three Evaluation it was found that none of the respondents received support from their institutions for the implementation of behaviour outcomes. According to Kirkpatrick (1996a), a supportive environment is a necessary requirement for implementation of level three behaviour outcomes. Thus by providing limited support, this was another way in which HEIs acted as obstacles to career development.

HEIs were found by studies in both South Africa and internationally to be an obstacle to women's advancement in HE. To elaborate: lack of family friendly institutional practices and policies (Acker, 1992; de la Rey, 1998; McCall et al., 2000), unsupportive work cultures (Acker, 1992; Goode & Bagilhole, 1998; Blackmore & Sachs, 2000; Chinsamy-Turan, 1999a; de la Rey, 1998; Ebbers et al., 2000; Mabokela, 2003; Mathipe & Tsoka, 2000, 2001; Morely, 2005; Muller, 2000; Peterson & Gravett, 2000; Subotzky, 2001; Walker, 1997), prejudiced employment practices (Acker, 1992; de la Rey, 1998; Ebbers et al., 2000; Forster, 2001; Goode & Bagilhole, 1998; Johnsrud & Heck, 1994; Hargens & Long, 2002; Mabokela, 2003; Mathipe & Tsoka, 2000; Mclay & Brown, 2001; Muller, 2000; Peterson & Gravett, 2000;

Subotzky, 2001; Walker, 1997; Zulu, 2003), and institutional resistance to Affirmative Action (Mabokela, 2003; Morely, 2005; Muller, 2000).

### *The Possible Role of the Academy in Limiting Behaviour Outcomes*

In the Stage Two Evaluation, relatively few respondents perceived the Academy as having an impact on career development (Table 10). Explanations for this result emerged from the Stage Three Evaluation, whereby it was found that the Academy was too focused on knowledge building rather than the elements of training primarily responsible for behaviour outcomes, namely skills development. It is thereby argued that by failing to adequately provide practical strategies and develop needed skills, the Academy played a role in limiting the behaviour outcomes of the Academy.

### **Results and Discussion Chapter Conclusion**

Two main results emerged from the research: (1) level one and level two Academy outcomes were successful while level three outcomes were only partially successful; and (2) increased confidence and increased understanding of HE were the strongest outcomes of the Academy. It is argued in this research that institutional barriers found in the Stage Two and Three Evaluations were the primary cause of the limited success of behaviour outcomes, and the Academy with its focus on knowledge building rather than skills development as found in the Stage Three Evaluation, was the subsidiary cause of unsatisfactory behaviour outcomes. This argument is founded on the Kirkpatrick (1996a) framework assumption that if learning outcomes have been found and behaviour outcomes have not, then external factors rather than the training itself are the cause of unsuccessful behaviour outcomes. The following chapter provides recommendations for improving the Academy based on the research findings.

## CHAPTER SIX: RESEARCH RECOMMENDATIONS

This chapter makes a number of recommendations for improving the effectiveness of the Academy, specifically Academy behaviour outcomes. Recommendations are an important part of the research since one of the key characteristics of evaluative research is useful and practical results (Babbie & Mouton, 2003). The recommendations are based on the results of the three stages of the research and relevant literature.

### Recommendations for the Design of the Reactions Questionnaires

The first recommendation is for HERS-SA to improve the instructions, scaling, focus and format of the Reactions Questionnaires. The Reactions Questionnaires have three main areas for improvement. First the questionnaires evaluate each workshop and presentation topic, but do not distinguish between the ratings of the actual topic and ratings of the presenter/facilitator of that topic. It was clear in the qualitative comments that some participants rated the topic, others simply the presenter and others a combination of both. This has the following consequences; if a presentation is rated negatively then it is not always possible to ascertain whether to exclude the topic or the presenter from future Academies. It is therefore recommended that the Reactions Questionnaires be redesigned in such a way that they are more specific about what they are evaluating.

Second, the Reactions Questionnaires used a four point Likert scale which prevents participants from providing neutral responses. It was clear that a substantial number of respondents felt restricted by the scale, since these respondents decided to devise their own rating scales by, for example providing 2.5 ratings. Although the questionnaires were intentionally designed to prevent neutral responses, in light of the number of incorrectly completed questionnaires, it is therefore recommended that at least a five point scale be considered for future evaluations.

Third, the layout and instructions of the questionnaires were such that a substantial number of respondents incorrectly completed the questionnaires. For example, many respondents provided ratings but did not indicate which workshops they were rating. As a result, it was not possible to use a significant amount of data. It is therefore recommended that the layout and clarity of instructions be improved.

### **Recommendations for Academy Content**

The second recommendation is for HERS-SA to increase Academy emphasis on skills development and improve the skills development elements of the Academy. In the Stage Three Evaluation, it was found that the Academy is somewhat limited in providing practical strategies and developing skills. It is argued that the practical/skills elements of training are important for behaviour outcomes, which provides some reasoning for the relative weakness of Academy behaviour outcomes. Thus in order to improve Academy behaviour outcomes; it is recommended that HERS-SA increase its emphasis on building skills and providing practical strategies in workshops.

### **Recommendations for Academy Target Population**

The third recommendation is for HERS-SA to increase its emphasis on recruiting women who aspire to hold rather than women who currently hold senior leadership positions in HE. In the Stage Two Evaluation, it was found that older participants experienced a lack of career opportunities but younger participants did not. Based on relevant literature (Poole & Bornholt, 1998) it was assumed that older women lack career opportunities because they generally already occupied more senior leadership positions. It is therefore argued that the younger less experienced women are the key target group the Academy since (1) they did not lack career opportunities and (2) they had further to advance in their careers. Like the respondents of the Stage Three Evaluation, it is therefore recommended that Academy place more emphasis on recruiting less experienced women who aspire to obtain leadership positions, than senior ranked women who already hold leadership positions.

### **Recommendations for Addressing Institutional Barriers**

The final recommendation is for HERS-SA to continue to strengthen HERS-SA projects and activities for addressing the barriers (specifically institutional barriers) to women's advancement in HE. In the Stage Two and Three Evaluations, it was found that HEIs were a major barrier to women's advancement in HE. Although it is beyond the scope of the Academy to address problems within the HEIs, a number of the HERS-SA's current projects

and activities can help alleviate these barriers. For example, the Academy alumni network and HERS-SA mentoring programmes are support structures that could possibly provide some compensation for the lack of institutional support. It is therefore recommended that HERS-SA continue to develop and strengthen these activities by making them widely available and easily accessible.

## CHAPTER SEVEN: CONCLUSION

Two main findings emerged from the three stages of the research. The first main finding is that the Academy was successful in terms of level one reactions and level two learning outcomes, but only partially successful with regards to level three behaviour outcomes. This research indicated that both institutional barriers and problems with the Academy itself impeded the behaviour outcomes of the Academy. It was however argued that institutional barriers were the primary barrier to career development and the Academy was only a subsidiary barrier. This argument was based on the Kirkpatrick (1996a) framework's assumption that if level one and two are successful then poor level three outcomes are external to the training, and institutional barriers are likely to be the main cause of poor behaviour outcomes.

The second main finding is that increased confidence and increased understanding of HE were the strongest outcomes of the Academy. These outcomes were the strongest since they emerged from all three stages of the research, were correlated with the highest frequency of behaviour outcomes, and were supported by other research on the outcomes of WDT.

Since this study found Academy behaviour outcomes limited, the research recommendations are primarily concerned with improving these outcomes. Four main recommendations are made: (1) improve the instructions, scaling, focus and format of the Reactions Questionnaires, (2) increase Academy emphasis on skills development and improve the skills development elements of the Academy, (3) increase emphasis on recruiting women who aspire to hold rather than currently hold senior leadership positions in HE, and (4) continue the development of HERS-SA projects and activities for addressing the barriers (specifically institutional barriers) to women's advancement in HE.

## REFERENCES

- Abernathy, D. J. (1999). Thinking outside the evaluation box. *Training and Development Journal*, 53 (2), 18-23. Retrieved March 15, 2005 from Academic Search Premier database.
- Acker, S. (1992). New perspectives on an old problem. The position of women academics in British higher society. *Higher Education*, 24, 57-75.
- Alliger, G. M., & Janak, E. A. (1989). Kirkpatrick's levels of training criteria: Thirty years later. *Personnel Psychology*, 42, 331-342. Retrieved March 15, 2005 from EBSCOhost database.
- Alliger, G. M., Tannenbaum, S. I., Bennet, W., Trayer, H., & Shotland, A. (1997). A meta-analysis of the relations among training criteria. *Personnel Psychology*, 50, 341-358. Retrieved March 15, 2005, from Academic Search Premier database.
- Atchison, H. (1993). Women and management training in the 1990s. In J. Ouston (Ed.), *Women in education management* (pp. 97-113). Essex, England: Longman.
- Babbie, E., & Mouton, J. (2003). *The practice of social research*. Cape Town: Oxford University Press.
- Bagilhole, B. (2000). Too little to late? An assessment of national initiatives for women academics in the British university system. *Higher Education in Europe*, 2, 139-145.
- Bain, O., & Cummings, W. (2000). Academe's glass ceiling: Societal, professional-organisational, and institutional barriers to the career advancement of academic women. *Comparative Education Review*, 44 (4), 493-514.
- Bakken, D., & Bernstein, A. L. (1982). A systematic approach to evaluation. *Training and Development Journal*, 36 (8) 14-16. Retrieved March 27, 2005, from Academic Search Premier database.
- Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology*, 41, 63-105. Retrieved March 26, 2005, from Academic Search Premier database.
- Baldwin, T. T., & Magjuka, R. J. (1991). Organizational training and signals of importance: Linking pre-training perceptions to intentions to transfer. *Human Resource Development Quarterly*, 2, 25-36.
- Bates, R. (2004). A critical analysis of evaluation practice: The Kirkpatrick model and the principle of beneficence. *Evaluation and Program Planning*, 27, 341-347. Retrieved March 15, 2005, from Emerald database.
- Bates, R. A., Holton, E. F., Seyler, D. L., & Carvalho, M. A. (2000). The role of interpersonal factors in the application of computer-based training in an industrial setting. *Human*

*Resource Development International*, 3 (1), 19-42. Retrieved April 11, 2005, from Business Source Premier database.

Bennet, W., Alliger, G.M., Eddy, E.R., & Tannenbaum, S.I. (2003). Expanding the training evaluation criterion space: Cross aircraft convergence and lessons learned from evaluation of the air force mission ready technician program. *Military Psychology*, 15 (1), 59-76. Retrieved March 28, 2005, from Academic Search Premier database.

Blackmore, J., & Sachs, J. (2000). Paradoxes of leadership and management in higher education in times of change: Some Australian reflections. *International Journal of Leadership in Education*, 3 (1), 1-16.

Blanchard, P. N., Thacker, J. W., & Way, S. A. (2000). Training evaluation: Perspectives and evidence from Canada. *International Journal of Training and Development*, 4 (4), 295-304. Retrieved March 14, 2005, from Academic Search Premier database.

Brace, I. (2004). *Questionnaire design: How to plan, structure and write survey material for effective market research*. London: Kogan Page.

Bramely, P., & Kitson, B. (1994). Evaluating training against business criteria. *Journal of European Industrial Training*, 18 (1), 10-14. Retrieved March 14, 2005, from Business Source database.

Brinkerhoff, R. O. (1987). *Achieving results from training*. San Francisco: Jossey-Bass.

Brinkerhoff, R. O., & Dressler, D. E. (1990). *Productivity measurement: A guide for managers and evaluators*. California: Sage.

Brinkerhoff, R.O. (2003). *The success case method. Find out quickly what's working and what's not* (1<sup>st</sup> ed.). San Francisco: Berrett-Koehler.

Brown, H. (1997). Equal opportunities policy. In H. Eggins (Ed.), *Women as leaders and managers in higher education* (pp. 109-124). Buckingham, England: The Society for Research into Higher Education and Open University Press.

Brown, L. (1999). Beyond the degree: Men and women at the decision-making levels in British higher education. *Gender and Education*, 11 (1), 5-25.

Brown, R. (2000). Personal and professional development programmes for women: Paradigm and paradox. *The International Journal for Academic Development*, 5 (1), 68-75.

Catalanello, R. F., & Kirkpatrick, D. L. (1967). Evaluating training programmes – the state of the art. *Training and Development Journal*, 5, 2-9. Retrieved March 15, 2005, from Academic Search Premier database.

Chinsamy-Turan, A. (1999a, December). *Status of women in science in South Africa*. Paper presented at the Pan-African workshop. Nairobi. Kenya.

Chinsamy-Turan, A. (1999b). *Policy and research: Women in science and technology*. Cape Town, South Africa: Human Sciences Research Council.

- Clement, R. W. (1982). Testing the hierarchy theory of training evaluation: An expanded role for trainee reactions. *Public Personnel Management Journal*, 11, 176-184. Retrieved March 14, 2005, from Business Source database.
- Coats, M. (1994). *Women's education*. Buckingham, England: The Society for Research in to Higher Education & Open University Press.
- Cole, P. (2000). Men, women and changing managements of further education. *Journal of Further and Higher Education*, 24 (2), 203-215.
- Davidson, M., & Cooper, C. (1992). *Shattering the glass ceiling*. London: Paul Chapman.
- de la Rey, C. (1998, October). *A review of the experiences of women in higher education in South Africa*. South Africa: Forum for African Women Educationalists South Africa (FAWESA).
- De Vaus, D. (2002). *Surveys in social research* (5<sup>th</sup> ed.). New South Wales: Routledge.
- Dixon, N. M. (1990). The relationship between trainee responses on participation reaction forms and posttest scores. *Human Resource Development Quarterly*, 1, 129-137.
- Donovan, P., Hannigan, K., & Crowe, D. (2001). The learning transfer system approach to estimating the benefits of training: Empirical evidence. *Journal of European Industrial Training* 25 (2), 221-228. Retrieved March 14, 2005, from Business Source database.
- Dyer, S. (1994). Kirkpatrick's mirror. *Journal of European Industrial Training and Development*, 18 (5), 31-32.
- Ebbers, L. H., Gallisath, G., Rockel, V., & Coyan, M. N. (2000). The leadership institute for a new century: LINCing women and minorities into tomorrow's community college leadership roles. *Community College Journal of Research and Practice*, 24, 375-382.
- Eggins, H. (1997). Reaching for equal opportunities: Models from Australia and the USA. In H. Eggins (Ed.), *Women as leaders and managers in higher education* (pp. 125-134). Buckingham, England: The Society for Research into Higher Education and Open University Press.
- Ehrich, L. C. (1994). Mentoring and networking for women educators. *Women in Management Review*, 9 (3), 4-10.
- Eliasson, M, Berggren, H., & Bonddestam, F. (2000). Mentor programmes – shortcut for women's academic careers. *Higher Education in Europe*, 2, 173-179.
- El-Khawas, E. (1997). Foreword. In H. Eggins (Ed.). *Women as leaders and managers in higher education* (pp. xi-xiii). Buckingham. England: The Society for Research into Higher Education and Open University Press.

- Facteau, J. D., Dobbins, G. H., Russell, J. E. A., Ladd, R. T., & Kudisch, J. D. (1995). The influence of general perceptions of the training environment on pre-training motivation and perceived training transfer. *Journal of Management*, 21 (1), 1-25. Retrieved March 15, 2005, from Business Source database.
- Farish, M., McPake, J., Powney, J., & Weiner, G. (1995). *Equal opportunities in colleges and universities. Towards better practices*. Buckingham, England: The Society for Research into Higher Education and Open University Press.
- Ford, K. J., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal orientation, metacognitive activity, and practice strategies with learning outcomes and transfer. *Journal of Applied Psychology*, 83 (2), 218-233. Retrieved April 11, 2005, from Business Source Premier database.
- Forster, N. (2001). A case study of women academics' views on equal opportunities, career prospects and work-family conflicts in a UK university. *Career Development International*, 6 (1), 28-38.
- Fourie, M. (1999). Institutional transformation at South African universities: Implications for academic staff. *Higher Education*, 38, 275-290.
- Gist, M. E., Bavetta, A. G., & Stevens, C. K. (1990). Transfer training method: Its influence on the skill generalization, skill repetition, and performance level. *Personnel Psychology*, 43, 501-523. Retrieved March 15, 2005, from Business Source database.
- Gold, A. (1993). "Women friendly" management development programmes. In J. Ouston (Ed), *Women in education management* (pp. 81-96). Essex, England: Longman.
- Goldstein, I. L. (1993). *Training in organizations: Needs assessment, development, and evaluation* (3<sup>rd</sup> ed.). California: Brooks/Cole.
- Goode, J., & Bagilhole, B. (1998). Gendering the management of change in higher education: A case study. *Gender, Work and Organization Change in Higher Education*, 5 (3), 148-164.
- Greyvenstein, L. A. (2000). The untapped human resource? An overview of women in educational management. *South African Journal of Education*, 20 (1), 30-34.
- Haccoun, R. R., & Saks, A. M. (1998). Training in the 21<sup>st</sup> century: Some lessons from the last one. *Canadian Psychology*, 39 (1-2), 33-51. Retrieved April 11, 2005, from Business Source Premier database.
- Hale, R. (2003). How training can add real value to the business: part 1. *Industrial and Commercial Training*, 35 (1), 29-32. Retrieved March 14, 2005, from Emerald database.
- Hamblin, A. C. (1974). *The design and evaluation of training*. New York: McGraw-Hill.

- Hargens, L. L., & Long, S. J. (2002). Demographic inertia and women's representation among faculty in higher education. *The Journal of Higher Education*, 73 (4), 494-517.
- Harrison, R., & Williams, J. (1993). A training initiative. In J. Ozga (Ed.), *Women in educational management* (pp. 97-105). Philadelphia: Open University Press.
- Herold, D. M., Davies, W., Fedor, D. B., & Parsons, C. K. (2002). Dispositional positions on the transfer of learning in multistage training programmes. *Personnel Psychology*, 55, 851-869. Retrieved April 11, 2005, from Business Source Premier database.
- HERS-SA (n.d.). *About HERS-SA*. Retrieved August 25, 2005, from [www.hers-sa.org.za](http://www.hers-sa.org.za)
- Hesketh, B. (1997). Dilemmas in training for transfer and retention. *Applied Psychology: An International Review*, 46, 317-339. Retrieved March 25, 2005, from Academic Search Premier database.
- Hicks, W. D., & Klimoski, R. J. (1987). Entry into training programmes and its effects on training outcomes: A field experiment. *Academy of Management Journal*, 30, 542-552. Retrieved March, 25, from Academic Search Premier database.
- Holton, E. F. (1996). The flawed four-level evaluation model. *Human Resources Development Quarterly*, 7 (1), 5-21. Retrieved March 25, 2005, from Academic Search database.
- Howell, C., & Subotzky, G. (2002, August). *Obstacles and strategies in pursuing staff equity: A regional study of the five Western Cape higher education institutions*. Paper presented at the WCHERP Seminar, Cape Town, South Africa.
- Johnson, F. L. (1993). Women's leadership in higher education: Is the agenda feminist? *College and University Personnel Association Journal*, 2, 9-14
- Johnsrud, L. K., & Heck, R. H. (1994). Administrative promotion within a university. The cumulative impact of gender. *Journal of Higher Education*, 65 (1), 23-44.
- Kanfer, R., & Ackerman, P. L. (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74, 657-690. Retrieved March, 25, from Academic Search Premier database.
- Kearsley, G., & Comptom, T. (1981). Assessing costs, benefits and productivity in training systems. *Training Development Journal*, 35 (1), 52-61. Retrieved March 27, 2005 from Academic Search Premier database.
- King, C. (1997). Through the glass ceiling: Networking by women managers in higher education. In H. Eggins (Ed.), *Women as leaders and managers in higher education* (pp. 91-100). Buckingham, England: The Society for Research into Higher Education and Open University Press.

- Kirkpatrick, D. L. (1959a). Techniques for evaluating training programs. *Journal of the American Society of Training and Development*, 13 (11), 3-9. Retrieved March 15, 2005, from Academic Search Premier database.
- Kirkpatrick, D. L. (1959b). Techniques for evaluating training programs: Part 2-learning. *Journal of American Society of Training and Development*, 13 (12), 21-36. Retrieved March 15, 2005, from Academic Search Premier database.
- Kirkpatrick, D. L. (1960a). Techniques for evaluating training programs: Part 3-behaviour. *Journal of American Society of Training and Development*, 14 (1), 13-18. Retrieved March 15, 2005, from Academic Search Premier database.
- Kirkpatrick, D. L. (1960b). Techniques for evaluating training programs: Part 4-results. *Journal of American Society of Training and Development*, 14 (2), 28-32. Retrieved March 15, 2005, from Academic Search Premier database.
- Kirkpatrick, D. L. (1996a). *Evaluating training programs: The four levels*. San Francisco: Berrett-Koehler.
- Kirkpatrick, D. L. (1996b). Great ideas revisited. *Training and Development Journal*, 1, 54-59. Retrieved March 15, 2005, from Academic Search Premier database.
- Kraiger, K. (2002). Decision-based evaluation. In K. Kraiger (Ed.), *Creating, implementing and managing effective training and development: State-of-the-art lessons for practice* (pp. 331-375). San Francisco: Jossey-Bass.
- Kraiger, K., Ford, J. 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. Retrieved March 15, 2005, from Academic Search Premier database.
- Lahtinen, H. K., & Wilson, F. M. (1994). Women and power in organizations. *Executive Development*, 7 (3), 16-23.
- Lewis, A. E., & Fagenson, E. A. (1995). Strategies for developing women managers: How well do they fulfil their objectives? *Journal of Management Development*, 14 (2), 39-53.
- Lumsden, J., & Morgan, W. (2005, May). *Online-questionnaire design: Establishing guidelines and evaluating existing support*. Presented at the 16<sup>th</sup> Annual International Conference of the Information Resources Management Association, San Diego, California.
- Mabokela, R. O. (2003). "Donkeys of the university": Organizational culture and its impact on South African women administrators. *Higher Education*, 46, 129-145.

- Machin, M. A. (2002). Planning, managing and optimizing transfer of training. In K. Kraiger (Ed.). *Creating, implementing and managing effective training and development: state-of-the-art lessons for practice*. San Francisco: Jossey-Bass.
- Mann, S., & Robertson, I. T. (1996). What should training evaluations evaluate? *Journal of European Industrial Training*, 20 (9), 14-21. Retrieved March, 15, 2005, from Business Source Premier database.
- Mathieu J. E., Tannenbaum, S. I., & Salas, E. (1992). Influences on individual and situational characteristics on measures of training effectiveness. *Academy of Management Journal*, 35, 828-847. Retrieved March 15, 2005, from Jstor database.
- Mathipe, E. R., & Tsoka, E. M. (2000). Possible barriers to the advancement of women to leadership positions in the education profession. *South African Journal of Higher Education*, 20 (2), 324-331.
- Mathipe, E. R., & Tsoka, E. M. (2001). Possible barriers to the advancement of women to leadership positions in the education profession. *South African Journal of Higher Education*, 21 (4), 324-331.
- McCall, L., Liddell, M., O'Neil, J., & Coman, G. (2000). Strategies to increase the representation of women on the academic staff at the Faculty of Medicine at Monash University. *Higher Education*, 39, 131-149.
- Mclay, M., & Brown, M. (2001). Preparation and training for school leadership: Case studies of nine women head teachers in the secondary independent sector. *School Leadership & Management*, 21 (1), 101-115.
- Mertler, C. A. (2003). Patterns of response and nonresponse from teachers to traditional and web surveys. *Practical Assessment, Research & Evaluation*, 8 (22). Retrieved June 22, 2005 from <http://PAREonline.net/getn.asp?v=8&n=22>
- Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook. Qualitative data analysis* (2<sup>nd</sup> ed.). Thousand Oaks: Sage.
- Mkabela, Q. (1999). Women in higher education: An account of women in KwaZulu-Natal Universities. *Perspectives in Education*, 18 (2), 91-96.
- Monks, K., & Barker, P. (1999). Management development for women academics and administrators. *The Journal of Management Development*, 18 (6), 531-542.
- Morely, L. (2005). Gender equity in commonwealth higher education. *Women's Studies International Forum*, 28 (2-3), 209-221.
- Muller, U. (2000). Gender equality programmes in German institutions of higher education – the North Rhine-Westphalia case. *Higher Education in Europe*, 2, 155-161.
- Nesbary, D. K. (2000). *Survey research and the World Wide Web*. Massachusetts: Allyn & Bacon.

- Noe, R.A., & Smidtt, N. (1986). The influence of trainee attitudes on training effectiveness: Test of a model. *Personnel Psychology*, 39, 497-523.
- Norris, B. D. (2001). Transformation, diversity and organisational change within institutions of higher education. *South African Journal of Higher Education*, 21 (4) 219-222.
- O'Connor, P. (2000). Resistance amongst faculty women in academe. *Higher Education in Europe*, 2, 213-219.
- Olsen, J.H. (1998). The evaluation and enhancement of training transfer. *European Journal of Industrial Training and Development*, 2 (1), 61-75.
- Ouston, J., Gold, A., & Gosling, P. (1993). The development of managers in education. In J. Ouston (Ed.), *Women in education management* (pp. 114-130). Essex, England: Longman.
- Park, S. M. (1996). Research, teaching, and service. Why shouldn't women's work count? *Journal of Higher Education*, 67 (1), 46-84.
- Perumal, J. (2003). Identifying and responding to barriers impacting women educators: Reflections by feminist educators on institutional constraints. *South African Journal of Higher Education*, 17 (1), 74-82.
- Peterson, N., & Gravett, S. (2000). The experiences of women academics at a South African university. *South African Journal of Higher Education*, 14 (3), 169-176.
- Phillips, J. J. (1992). *Handbook of training evaluation and measurement methods* (2<sup>nd</sup> ed.). Houston: Gulf Publishing.
- Poole, M., & Bornholt, L. (1998). Career development of academics: Cross-cultural and lifespan factors. *International Journal of Behavioural Development*, 22 (1), 103-126.
- Quinones, M. A., & Tonidanel, S. (2003). Conducting training evaluation. In J. E. Edwards, J. C. Scott, & N. S. Raju (Eds.). *The human resources program evaluation handbook*. California: Sage.
- Quinones, M. A., Segó, D. J., Ford, J. K., & Smith, E. M. (1995-96). The effects of individual and transfer environment characteristics on the opportunity to perform trained tasks. *Training Research Journal*, 1, 29-48. Retrieved March 14, 2005, from Academic Search Premier database.
- Ree, M. J., & Earles, J. A. (1991). Predicting training success: Not much more than g. *Personnel Psychology*, 44, 321-332. Retrieved March 14, 2005, from Business Source database.
- Reisby, K., & Knudsen, S. V. (2001). Gender in academia. *NORA*, 3 (9), 139-142.
- Rogg, E. (2001). Passion and pain in academia. *NORA*, 3 (9), 154-161.

- Rose, D. S., & Davidson, E. J. (2003). Overview of program evaluation. In J. Edwards, J. Scott, & N. Raju (Eds.). *The human resources program evaluation handbook* (pp. 3-26). Thousand Oaks, California: Sage.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation. A systematic approach* (7<sup>th</sup> ed.). Thousand Oaks, CA: Sage.
- Roullier, J.Z., & Goldstein, I.L. (1993). The relationship between organizational transfer climate and positive transfer of learning. *Human Resource Development Quarterly*, 4 (4), 377-390.
- Ruona, W. E. A., Leimbach, M., Holton, E. F., & Bates, R. (2002). The relationship between learner utility reactions and predicted learning transfer among trainees. *International Journal of Training and Development*, 6 (4), 218-228. Retrieved March 14, from [www.edholton.com](http://www.edholton.com).
- Rust, R., & Golombok, S. (1999). *Modern Psychometrics: The science of psychological assessment*. London: Routledge.
- Schmidt, A. M., & Ford, K. J. (2003). Learning within a learner control training environment: The interactive effects of goal orientation and metacognitive instruction on learning outcomes. *Personnel Psychology*, 56, 405-429. Retrieved April 11, 2005, from Business Source Premier database.
- Schmidt, C. (2004). The analysis of semi-structured interviews. In U. Flick, E. von Kardorff, & I. Steinke (Eds.) *A companion to qualitative research*. London: Sage.
- Schmidt, R. A., & Bjork, R. A. (1992). New conceptualizations of practice: Common principles in three paradigms suggest new concepts for training. *Psychological Science*, 3, 207-217. Retrieved March 28, 2005, from Academic Search Premier database.
- Segall, A. (1993). Management development for women in a non-educational setting – the BBC experience. In J. Ouston (Ed.), *Women in education management* (pp. 131-148). Essex, England: Longman.
- Seyler, D. L., Holton, E. F., Bates, R. A., Burnett, M. F., & Carvalho, M. A. (1998). Factors affecting motivation to transfer training. *International Journal of Training and Development*, 2 (1) 2-12. Retrieved March 14 2005, from Academic Search Premier database.
- Shakeshaft, C. (1989). *Women in educational administration*. California: Corwin Press.
- Shakeshaft, C. (1993). Women in educational management in the United States. In J. Ouston (Ed.), *Women in education management* (pp. 47-63). Essex, England: Longman.
- Shannon, D. M., Johnson, T. E., Searcy, S, & Lott, A. (2002). Using electronic surveys: Advice from survey professionals. *Practical Assessment, Research & Innovation*, 8 (1). Retrieved June 22, 2005 from <http://PAREonline.net/getn.asp?v=8&n=1>

- Shelton, S., & Alliger, G. (1993). Who's afraid of level 4 evaluation? A practical approach. *Training and Development Journal*, 6, 43-46. Retrieved March 15, 2005, from EBSCOhost database.
- Soloman, D. J. (2001). Conducting web-based surveys. *Practical Assessment, Research & Innovation*, 7 (19). Retrieved June 22, 2005 from <http://PAREonline.net/getn.asp?v=7&n=19>
- South African Department of Education. (2003). *Higher education planning*. Retrieved March 27, 2005, from [www.education.gov.za/content/document/](http://www.education.gov.za/content/document/)
- Spurling, A. (1997). Women and change in higher education. In H. Eggins (Ed.), *Women as leaders and managers in higher education* (pp. 37-48). Buckingham, England: The Society for Research into Higher Education and Open University Press.
- Stevens, C. K., & Gist, M. E. (1997). Effects of self-efficacy and goal orientation training on negotiation skill maintenance. What are the mechanisms? *Personnel Psychology*, 50, 955-978. Retrieved March 14 2005, from Academic Search Premier database.
- Subotzky, G. (2001). Addressing equity and excellence in relation to employment. What prospects for transformative change in South Africa. *Equity and Excellence in Education*, 34 (3), 56-69.
- Swartz, B. D. (2002). *A study exploring the career advancement of women librarians in South African institutions of higher education*. Unpublished manuscript, University of Cape Town, South Africa.
- 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, (6). Retrieved March 14, 2005, from PsychARTICLES database.
- Teferra, D., & Albach, P.G. (2004). African higher education: Challenges for the 21<sup>st</sup> century. *Higher Education*, 47, 21-50.
- The Carnegie Commission on Higher Education (1973, September). *Opportunities for women in higher education. Their current participation, prospects for the future, and recommendations for action*. New York: McGraw-Hill.
- Thomas, S. J. (2004). *Using web and paper questionnaires for data-based decision making*. Thousand Oaks, California: Corwin Press.
- Tracey, J. B., Tannenbaum, S. I., & Kavanagh, M. J. (1995). Applying trained skills on the job: The importance of work environment. *Journal of Applied Psychology*, 80, 239-252. Retrieved March 15, 2005, from PsychARTICLES database.
- Tziner, A., Haccoun, R. R., & Kadish, A. (1991). Personal and situational characteristics influencing the effectiveness of transfer of training improvement strategies. *Journal of Occupational Psychology*, 64, 167-177. Retrieved March 14, 2005, from Business Source Premier database.

- Walker, M. (1997). Women in the academy: Ambiguity and complexity in a South African university. *Gender & Education*, 9 (3), 365-381. Retrieved June 3, 2005 from Academic Search Premier database.
- Walton, K. D. (1997). UK women at the very top: An American assessment. In H. Eggins (Ed.), *Women as leaders and managers in higher education* (pp. 125-134). Buckingham, England: The Society for Research into Higher Education and Open University Press.
- Warr, P., Allan, C., & Birdi, K. (1999). Predicting three levels of training outcomes. *Journal of Occupational and Organizational Psychology*, 72, 351-375. Retrieved March 28, 2005, from Business Source Premier database.
- Warr, P., Bird, M., & Rackham, N. (1970). *Evaluation of management training*. Gower: Aldershot.
- Warr, P., & Bunce, D. (1995). Trainee characteristics and the outcomes of open learning, *Personnel Psychology*, 48, 347-375. Retrieved March 28, 2005, from Business Source Premier database.
- Werner, J. M., O'Leary-Kelly, A. M., Baldwin, T. T., & Wexley, K. N. (1994). Augmenting behavior modelling training: Testing the effects of pre and posttraining interventions. *Human Resource Quarterly*, 5, 169-183.
- Wexley, K. N., & Baldwin, T. T. (1986). Posttraining strategies for facilitating positive transfer: An empirical exploration. *Academy of Management Journal*, 29, 503-520. Retrieved March 14, 2005, from Business Source database.
- Willis, L., & Daisley, J. (1992). *Developing women through training. A practical handbook*. London: McGraw-Hill.
- Willis, L., & Daisley, J. (1997). Women's reactions to women only training. *Women in Management Review*, 12 (2), 56-60.
- Wisker, G. (1994). *Empowering women in higher education*. London: Kogan Page.
- Zulu, C. (2003). Gender representation patterns in higher education management in South Africa. *South African Journal of Higher Education*, 17 (1), 98-104.