

---

Electronic Theses and Dissertations, 2004-2019

---

2011

## Peak Performance Training

Matthew Gabriel Hallett  
*University of Central Florida*



Part of the [Education Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Masters Thesis (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2004-2019 by an authorized administrator of STARS. For more information, please contact [STARS@ucf.edu](mailto:STARS@ucf.edu).

---

### STARS Citation

Hallett, Matthew Gabriel, "Peak Performance Training" (2011). *Electronic Theses and Dissertations, 2004-2019*. 1741.

<https://stars.library.ucf.edu/etd/1741>



PEAK PERFORMANCE TRAINING

by

MATTHEW GABRIEL HALLETT  
B.S. University of Missouri – Columbia, 2005

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Arts  
in the Department of School of Teaching, Learning, and Leadership  
in the College of Education  
at the University of Central Florida  
Orlando, Florida

Fall Term  
2011

## **ABSTRACT**

Peak performance is defined as an “episode of superior functioning” where an individual performs up to (and sometimes exceeds) their full potential (Privette, 1983, p. 1361). Most individuals do not consistently experience episodes of peak performance. After accounting for biological factors, motivation, and external constraints, the inability to achieve peak performance consistently is due to the challenge of successfully selecting and accessing knowledge and skills on demand while under pressure (Brown, 2009). This thesis describes the psychology of peak performance and skill training for peak performance. A peak performance training program is designed specifically for business professionals. The program was delivered to business professionals and a focus group was conducted to gather data on how to improve the training program. Grounded theory was used as the method of inquiry during data analysis. Results indicated that participants reacted favorably to the training content, training design, variety of training activities, and the training’s applicability, but had unfavorable reactions to the training duration, comprehension of concepts, training materials, utility, and training conclusions.

## **ACKNOWLEDGMENTS**

I would like to express thanks to everyone who supported me throughout this thesis. Most importantly I'd like to thank God for all of His blessings upon me. I'd also like to thank my mother who provided me much needed support during the creation of this thesis. I'd also like to express gratitude towards the professors on my thesis committee: Dr. Bobby Hoffman, Dr. M. H. Clark, and Dr. Benjamin Rockmore. I'd also like to express special thanks to Dr. M. H. Clark for giving me the guidance and help I needed during the research portion of this thesis. Last but not least, I'd like to express thanks to all the other individuals who played a role in helping me with this thesis including my business mentor Pat, my friend and classmate Gian, my brother Mark, and of course Lisa, Seth, and Lauri. Thank you all.

## TABLE OF CONTENTS

LIST OF FIGURES .....	vii
LIST OF TABLES .....	viii
CHAPTER ONE: INTRODUCTION.....	1
CHAPTER TWO: LITERATURE REVIEW.....	9
The Nature of Performance.....	9
Peak Performance – An Ideal Psychological State of Mind .....	10
Attention .....	11
Affect .....	12
Arousal.....	13
The Importance of Awareness .....	15
Purpose.....	16
Ideal Performance State .....	16
Training for Peak Performance.....	17
Activation Management.....	18
Cognitive Restructuring/Self Talk .....	19
Imagery .....	19
Goal Setting .....	20
Attention/Concentration Training.....	22
Entering the Peak Performance State.....	23
Pre-performance.....	23
Performance .....	24
Post-Performance.....	24
Generalizability into Other Performance Domains.....	25
Business .....	27
Developing a Training Program for Peak Performance in Business.....	29
Purpose/Goals .....	30
Needs Assessment.....	30
Design/Development.....	31
CHAPTER THREE: METHODOLOGY .....	33

Data Collection .....	33
Participants.....	33
Instrument .....	34
Procedure .....	35
CHAPTER FOUR: RESULTS .....	38
The Coding Process .....	38
Open Coding .....	38
Axial Coding.....	41
Selective Coding .....	42
Final Categories .....	43
The Content is Simple to Understand, In-depth, and Easy to Relate to.....	43
The Training Design is Engaging and Supports Retention.....	44
The Variety Used in the Training Activities is Appealing.....	44
The Training is Applicable to Business Professionals.....	45
More Time is Needed for the Training Program.....	45
Three Concepts of the Training Program are Confusing .....	46
The Training Materials Lacked Instructions and Clear Organization.....	47
Creating a Tool, Giving Commands, and Resequencing Instruction will Increase Training Utility ..	47
The Conclusions Section is Weak.....	49
Three “Miscellaneous” Suggestions to Improve the Training Program .....	49
Summary of Results.....	49
CHAPTER FIVE: CONCLUSIONS .....	51
Themes.....	51
Themes on Training Appeal.....	51
Themes on Training Improvement.....	53
Implications.....	61
Limitations .....	63
Recommendations for Future Research .....	64
APPENDIX A: UNIT DESCRIPTORS AND TRAINING OBJECTIVES .....	65
APPENDIX B: THE PEAK PERFORMANCE TRAINING PROGRAM .....	67
APPENDIX C: PEAK PERFORMANCE TRAINING WORKBOOK .....	84

APPENDIX D: PEAK PERFORMANCE TRAINING HANDOUTS .....	91
APPENDIX E: FOCUS GROUP PROTOCOL.....	96
APPENDIX F: EXPLANATION OF RESEARCH .....	99
APPENDIX G: LETTER TO PARTICIPANTS .....	102
APPENDIX H: IRB APPROVAL - EXEMPT OF HUMAN RESEARCH .....	104
APPENDIX I: IRB APPROVAL OF MODIFICATIONS.....	106
REFERENCES .....	108

## **LIST OF FIGURES**

Figure 1: The Relationship between Arousal and Performance .....	14
Figure 2: Dimensions of Attention .....	22
Figure 3: Categories of Coded Concepts .....	42



## LIST OF TABLES

Table 1: Early List of Emerging Codes .....	39
Table 2: Provisional List of Categories and Sub Categories .....	40

## CHAPTER ONE: INTRODUCTION

A performance is an attempt to communicate and publish a private viewpoint. A performance can be defined as when an individual actively enacts a skill at a particular designated moment (Hays & Brown, 2004). Even when an individual has all the relevant skills and motivation to perform at their maximum level, the majority of individuals are inconsistent in their performances and often do not perform up to the potential they are capable of performing (Harung, Heaton, Graff, & Alexander, 1996). The more effective a performer is able to access and select the most relevant knowledge and skills on demand under pressure, the more effective they are at performing at their optimal potential (Brown, 2009).

Peak performance is a subjective state of mind that is rare and is often involuntary in occurrence (Privette, 1983; Wells, 2010). Peak performance is defined as “the superior use of human potential” (Privette, 1981, p. 51) where an individual experiences a strong sense of power and performs up to (and sometimes exceeds) their full potential at a particular task (Privette, 1983; Privette & Landsman, 1983). Many individuals report that peak performance is a holistic experience (Privette, 1983) and is transcendental in nature (Thornton et al., 1999). During episodes of peak performance, individuals are more efficient, creative, and productive than during habitual behaviors (Loehr & Schwartz, 2001; Privette, 1983). This results in exceptional accomplishments due to heightened human functioning (Thornton, Privette, & Bundrick, 1999). The problem is that peak performance is elusive and fleeting (Wells, 2010). The current challenge is to intentionally create episodes of peak performance through applying skill training techniques.

Researchers and theorists examined peak performance initially in the field of sports psychology because sport emphasizes “objective measures of excellence” (Harmison, 2006; Thornton, Privette, & Bundrick, 1999). By studying principles of peak performance, researchers and practitioners have been able to teach athletes skill training that enables them to perform mentally at the most optimal level of performance (Harmison, 2006). Performing at optimal levels of performance is often referred to as “being in the zone” (Harmison, 2006). Being in the zone is important, because when an athlete’s physical skills don’t differ much from competition to competition, it is significant that they consistently perform at their peak during each competition. Most athletes and coaches claim that at least 40-90% of success in sports is due to mental factors (Krane & Williams, 2006). Simply put, the higher the physical skill level, the more important mental skills become. However, athletes only perform “in the zone” only 10-20% of the time (Ravizza, 2006). The ability for an athlete to intentionally induce a peak performance state of mind has been extremely important over the past several decades (Weinberg & Williams, 2006).

The importance of consistently achieving a peak performance state of mind during performance have led researchers to investigate peak performance through a variety of qualitative methods such as: administering questionnaires, conducting interviews, and using various self-report instruments where athletes were asked to recall their thoughts, feelings, and perceptions during peak performances (Krane & Williams, 2006). Studies have demonstrated that similar psychological characteristics underlie peak performance, regardless of performance domain (Harmison, 2006; Hays & Brown, 2004; Thornton et al., 1999; Wells, 2010).

When Garfield and Bennett (1984) studied mental training techniques of the world's greatest athletes, they suggested that the application of peak performance can be applied in other performance domains that are non-sport related (Garfield, 1986; Thornton et al., 1999). Peak performance is important in any particular domain where an individual experiences stress during performance and where a significant outcome results from performance. This is not only relevant in sports but also has relevancy in occupations such as the performing arts, law, surgery, law enforcement, and business (Brown, 2009; Harmison, 2006). These are all professional occupations where the individual has "one shot" at their performance which results in a particular outcome. In performing arts, the outcome the performer may be seeking may simply be a positive experience for the audience. However in law, the ability for a lawyer to effectively convince a jury that their defendant is innocent can result in a defendant either being set free or in extreme cases, sentenced to death. The outcome of life or death is also especially relevant in areas such as law enforcement and surgery. In these professions, it is important for the performer to be able to perform at their maximum capability under stress. Performing less than optimally could (in the worst case scenario) result in death - whether it be a patient who loses their life on the operating table under the hands of a surgeon or a police officer who is distracted during a shoot-out and takes a fatal bullet wound to the chest. Peak performance, although not essential in every circumstance, is still clearly important in a variety of non-sport related domains (Brown, 2009).

Business is one of these professional occupations where peak performance is starting to gain more attention (Hays & Brown, 2004). In business activities such as training, consulting, sales, negotiating, supervising, and delivering an important presentation, the business

professional may or may not perform at their peak potential depending on their psychological state of mind. The similarities amongst all of these business activities is that there is an exchange of information from the business professional to the recipient(s) where the goal is either to convince, persuade, educate, or motivate the recipient to take action. Oftentimes high stakes are attached to the activity. Some common stakes of business performances include financial gains/losses, resource acquisition, reputation, promotion, pride, public embarrassment, and ego (Hays & Brown, 2004). Among these stakes, financial gains/losses is most critical in business. Large sums of money can be gained or lost as a result of one particular performance, such as a sales meeting for instance (Brown, 2009; Hays & Brown, 2004). Due to the high stakes involved in certain business performances, it is important for the business professional to try to perform at their peak potential during performance. Thus peak performance is significant in business as well.

Benefits of peak performance in business are not only monetary in nature. Other benefits realized include experiencing feelings of mastery, well being, and happiness for the business professional (Thornton et al., 1999). In fact, empirical studies consistently find a bond between peak performances and individual feelings of joy (Thornton et al., 1999). There are also benefits of peak performance to the organization as well. These organizational benefits include: financial gains, high employee morale, innovation, business growth, and increased productivity. The closer an individual is to performing at their peak potential, the more these benefits are realized (Brown, 2009).

In business, the ability to effectively communicate a viewpoint and convince, persuade, educate, or motivate the recipient(s) to take action is considered a verbal performance (Brown,

2009). Verbal performances take one of two forms – either “one-on-one” during a business meeting or “one-on-many” such as during the delivery of a presentation. One-on-one meetings typically involve activities such as sales, consulting, or negotiating. One-on-many performances involve tasks such as delivering a presentation to a boardroom of executives, training employees, or managing a team of employees. When a business professional is giving a verbal performance and performs less than optimally, their performance could result in a critical sale being lost, a team being mismanaged, or a significant presentation being “bombed” in front of key executives. Therefore it is important for business professionals to know how to achieve a psychological state of peak performance so they are most effective during performance.

There are many factors that can cause individuals to perform less than optimally. Stress, pressure, and placing too much importance on the outcome of performance are some of the most major factors that can debilitate performance (Brown, 2009; Hays & Brown, 2004). These factors often go unnoticed as many business professionals claim that they have the skills on what they need to say, they know what they intend to say when speaking in front of others, but when faced with the task of performance, they underperform. Underperformance is often the case even when the business professional is motivated to perform at peak potential (Brown, 2009; Hays & Brown, 2004).

Researchers and theorists found that there is a common set of psychological characteristics of peak performers. Psychological characteristics and mental attributes associated with peak performance include: high self-confidence and expectations of success, the ability to self-regulate arousal, feelings of control, total concentration, keen focus on the task-at-hand, viewing difficult situations as exciting and challenging, being productively a perfectionist,

having a positive attitude and positive thoughts about performance, and having a strong determination and commitment (Krane & Williams, 2006). Other characteristics reported include feelings of: effortless and automatic performances, the perception of time slowing down, supreme confidence, relaxation, being in “flow” and having no fear of failure (Wells, 2010).

Researchers have found that these psychological characteristics of peak performance can be developed through psychological skill training (Harmison, 2006; Krane & Williams, 2006; Wells, 2010) and also through organizational design principles (Robbins & Judge, 2009). In terms of organizational design, the job characteristics model (JCM) developed by Hackman and Oldham states that an individual’s performance will increase if the individual is working on jobs that provide the individual with a sense of variety, identity, significance, autonomy, and provide the individual with feedback. By designing jobs according to the JCM, organizations can increase performance within their employees (Robbins & Judge, 2009).

In terms of psychological skill training, sports psychologists and performance consultants have been designing and delivering psychological skill training programs for decades now in order to help athletes achieve peak performance (Weinberg & Williams, 2006). The principles and applications of these programs have recently been found to be generalizable to non-sport related performance domains as well (Andersen, 2009; Brown, 2009; Hays & Brown, 2004; Loehr & Schwartz, 2001; Wells, 2010). In fact, many studies demonstrate that there are many similarities between business professionals and sports professionals (Bianco, 2010; Hays & Brown, 2004; Loehr & Schwartz, 2001).

Practitioners in the real world have also demonstrated that many of the peak performance skills used in sports are extremely effective in the business world as well (Loehr & Schwartz,

2001; Murphy, 1997; Weinberg & Williams, 2006). Murphy (1997) went from working with athletes at the Olympic Training Center to working with performers in business. Murphy reports that his clients (whether in sports or in business) tell him that that psychological skill training helps them “achieve their best under pressure, allow them to stay focused during difficult tasks, and enables them to enjoy even the most challenging assignments” (Weinberg & Williams, 2006, p. 448). Loehr and Schwartz (2001) also argue that there are many similarities of high performers whether they are elite athletes or they are CEOs working for a Fortune 500 company. Loehr and his colleagues derived performance enhancement training which they currently use in business from performance enhancement techniques they used working with world class athletes (Loehr & Schwartz, 2001). Two of the main areas of their performance enhancement training include attention/concentration training and cognitive restructuring (i.e., self-talk) to develop positive thinking skills in their clients. Some of their techniques they train clients on are how to build and create rituals, deep breathing exercises, and visualization. This helps their clients perform more optimally by becoming more relaxed and confident when they are conducting activities such as delivering a presentation or simply trying to recover from the intense pressures of the business world. Loehr and Schwartz (2001) have worked with many business professionals including: a managing director for institutional sales at the New York investment firm Gruntal & Company, a managing director of Salomon Smith Barney, and the president and CEO of FootJoy (Loehr & Schwartz, 2001).

Peak performance training needs to be applied more throughout the business world. Current and past research shows peak performance skill training works well in business. The purpose of this research study was to conduct a thorough research of the literature on peak



performance, and then design and develop a Peak Performance Training Program that applies to professionals working in business who find it important to perform at their peak potential on a consistent basis. After the Peak Performance Training Program is developed, I delivered the program to a small group of business professionals. I then conducted a focus group after the training session in order to gather feedback on how to improve the peak performance training program. Data collected was analyzed using a grounded theory methodology and ten themes emerged from the analysis.

This thesis is divided into five chapters. Chapter one is the introduction. Chapter two is a literature review that discusses the nature of performance, peak performance, the psychology of peak performance, skill training for peak performance, and the transfer of peak performance principles from sports into the business domain. Chapter three describes the methodology of the research study. In chapter four, the results of the study are presented and in chapter five I discuss research findings, implications, limitations, and recommendations for future research.

## **CHAPTER TWO: LITERATURE REVIEW**

### The Nature of Performance

A performance is any time an individual must access knowledge and skills on demand while in the presence of others (Brown, 2009). During a performance an individual either effectively demonstrates their knowledge and skills or chokes under pressure. There are many instances when an individual fails to perform up to their full potentials for a given task (Beilock, 2010).

The inability to meet one's full potential during a performance can be attributable to stressors. Stressors include the presentation of self in front of others and the ability to demonstrate skills optimally under close scrutiny. Stressors manifest themselves in the form of external distractions and/or internal thoughts (Hays, 2004; Hays & Brown, 2004; Williams & Harris, 2006). Oftentimes, either actual or implicit competition is present during the performance and the performer feels much unneeded stress to control psychobiological processes needed for performance (Hays, 2009). To some extent, these psychobiological processes are significant to performance. Some theorists argue that these processes offer a mystical source of energy that creates an exciting performance (Hays, 2004).

Stressors can negatively impact the performer on cognitive, affective, and physiological levels. Stressors can cause the performer to forget simple tasks, decrease attention, lack concentration, create anxiety, and decrease confidence. Stressors can also be manifested by the performer; when the performer perceives the outcome of performance to be significant, they tend to put pressure on themselves (Brodbeck, 2007; Gould, 2006; Hays, 2004).

When a performer cannot handle existing pressure and stress during performance, the performer is unable to enter into and maintain a psychological state of peak performance. Researchers and theorists have unraveled the psychological state of peak performance and the components that accompany it (Harmison, 2006; Krane & Williams, 2006). After studying elite athletes and their mental processes during exceptional moments in sport, theorists and researchers agree that there is an internal state of mind responsible for exceptional moments of performance. This ideal state of mind has been labeled peak performance (Privette, 1983).

#### Peak Performance – An Ideal Psychological State of Mind

Some of the early evidence supporting a set of common psychological processes of peak performance involved a study by Privette (1983) where she studied groups of people and their performance in a variety of activities. Privette discovered a consistent pattern of psychological processes in peak performance. Her findings indicate that there is a psychological process that contains a *peak performance dyad: the full focus on object and on self*. Full focus with another object (i.e. a task, value, or person) promotes a strong sense of self which leads to a highly concentrated and interactive relationship between the self and object (Thornton et al., 1999). The resulting actions and behaviors that follow are unrestrained and flow from this interactive relationship. This is the essence of peak performance (Thornton et al., 1999).

Common characteristics of peak performance are also supported in a study by Loehr and Schwartz (2001) involving performances across a variety of different domains. Loehr and Schwartz (2001) asked corporate executives, surgeons, military personnel, and law enforcement officers to describe characteristics of their best performances. These groups of individuals used

similar words that athletes used to describe their peak performances. These words include: feeling calm, challenged, engaged, focused, optimistic, and confident (Loehr & Schwartz, 2001).

In business, Thornton et al. (1999) conducted a study where researchers asked 40 business leaders to describe their personal experiences in the Privette Experience Questionnaire. Results found that the peak performance dyad – a clear focus on self and object – was most notable in the business leaders. Other characteristics associated with peak performance from this study included feelings of joy, fulfillment, and significance experienced by business leaders.

Although the vast majority of research on peak performance initially centered on studying athletes, existing research on peak performance in non-sport related domains confirms that the same psychological characteristics of peak performers in sport are evident in peak performers from any performance related domain (Bianco, 2010; Hays & Brown, 2004). All of these characteristics that comprise peak performance can be classified into three primary areas: attention, affect, and arousal.

#### Attention

Having a full focus and total concentration is consistently found within the literature on peak performance (Brown, 2009; Harmison, 2006; Thornton et al., 1999). In order to achieve peak performance, individuals must have a keen focus on the task or activity (Harmison, 2006). The importance of attention in peak performance is highlighted in Privette's (1983) study involving the peak performance dyad. Thornton et al. (1999) also found that business leaders consistently endorsed the factor "full focus" as responsible for leading them to achieve peak performance.

## Affect

During interviews with performers from a variety of performance domains, the number one characteristic that every interviewee considered vital for excellent performance is confidence (Gould, 2009). Confidence is affective in nature and is linked to positive emotions, enhanced concentration, increased goal setting, increased effort, and psychological momentum (Gould, 2009). Wells (2010) stated that when athletes experience anxiety in sports, having high self confidence enables athletes to perceive their anxiety as being positive and facilitative of good performance, rather than debilitating.

Characteristics that affect confidence include self-efficacy, locus of control, and the degree of emotional attachment to the outcome. Self-efficacy is a situation-specific form of self-confidence and is defined as “those beliefs regarding individuals’ capabilities to produce performances that will lead to anticipated outcomes” (Gould, 2009, p. 57). There is an abundance of research that supports self-efficacy for individuals performing well (Gould, 2009). Locus of control refers to how the individual explains their successes or failures. This is also known as attribution theory (Robbins & Judge, 2009). Peak performers have an internal locus of control (rather than external) and believe that ultimately they have control over how well they perform under given circumstances. Peak performers believe success comes from effort, which in turn results in increased confidence and self-efficacy if the performer performs successfully (Zinsser, Bunker, & Williams, 2006). Finally, peak performers often report being emotionally detached from the outcome. Being emotionally detached from the outcome allows the performer to completely immerse themselves into the present moment and directs attention into the process of performing, of which they have direct control over. Performers have no direct control over

the outcome and focusing attention on the outcome, rather than the process leading to the outcome is detrimental for performance (Hays, 2004; Wells, 2010). Being too attached to a particular outcome often results in unneeded pressure and increased anxiety (Brodbeck, 2007; Hays, 2004; Wells, 2010).

### Arousal

Physiological arousal refers to the intensity level of behavior and ranges on a scale from a comatose lethargic state to a frenzied state of extreme energy and excitement (Landers & Arent, 2006). Arousal is often referred to as “activation” (Hays and Brown, 2004). A curvilinear relationship has been observed between arousal and performance across a variety of studies with considerable regularity (Landers & Arent, 2006). According to the Inverted-U Hypothesis of Arousal, as arousal levels increase from drowsiness to alertness, there is a progressive increase in performance. However once arousal increases beyond alertness and into a high level of excitement, there is a progressive decrease in task performance (See Figure 1) (Landers & Arent, 2006).

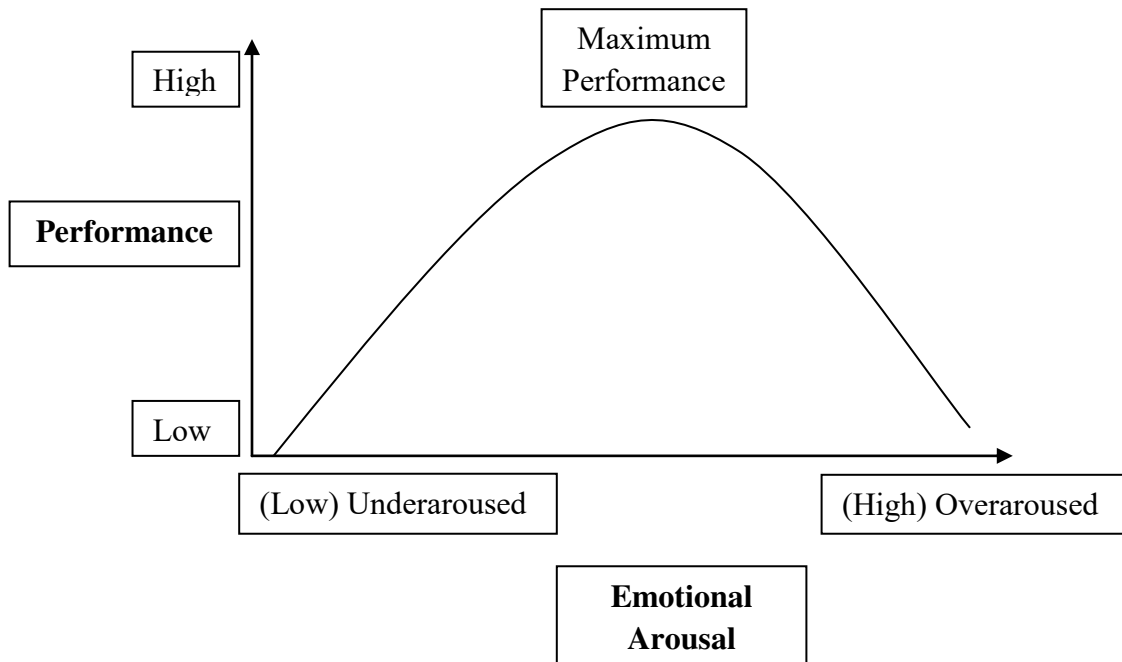


Figure 1: The Relationship between Arousal and Performance

Both over- and under-arousal affect performance. If an individual is under-aroused for a given performance, that performance is often labeled as being “flat”. Being in an over-aroused state is much more common (Hays & Brown, 2004). This is typically referred to as “stage fright” (Andersen, 2009). If an individual is over-aroused, panic can ensue which causes individuals to “choke” during performance (Hays & Brown, 2004). Over-arousal results in nervousness, worry, and anxiety. Symptoms of over-arousal include: rapid heart rate, increased blood pressure, quickened breathing, and sweating. Over-arousal also causes fine motor skills to suffer, difficulty with memory, lack of concentration, and the inability to shift attention (Landers & Arent, 2006).

Achieving the most optimal level of arousal for a given performance depends on the individual's arousal level and how well that level aligns with the expected arousal level demands of the task. Some tasks require lower levels of arousal than other tasks. An example of this is the arousal level needed to play golf at peak performance is much lower than the arousal level needed to lift weights at peak performance. Furthermore, every individual also has slightly different levels of arousal that they perform best at. For example, even though golf requires a low arousal state in general, some individuals perform better with having slightly higher arousal levels than the arousal demands of the task. These slight variations in individual arousal levels stems from personality differences. Knowing and being aware of one's unique individualized zone of optimal functioning (IZOF) and matching that to the arousal demands of the task is the most effective way to align arousal for peak performance (Harmison, 2006; Krane & Williams, 2006; Landers & Arent, 2006).

By discovering all of these psychological characteristics of peak performance, researchers and practitioners can then use proper skill training to increase episodes of peak performance. However before individuals can use skill training, they must first be aware of their own common psychological characteristics during performance and then be aware of in what way and to what degree their characteristics deviate from the psychological characteristics that make up peak performance. Thus, awareness is the first aspect towards the voluntary attainment of peak performance (Ravizza, 2006).

### The Importance of Awareness

Awareness means both recognizing the overall purpose behind one's performance, as well as recognizing one's individualized peak performance mental state and how it deviates from



the ideal state (Hays & Brown, 2004; Ravizza, 2006). Individuals must be skilled at “checking in” with themselves and be able to determine when they need to make cognitive, affective, or physiological adjustments to perform at their peak potential (Ravizza, 2006).

### Purpose

When interviewing performers, Hays and Brown (2004) found that having a coherent sense of self is essential to peak performance. Peak performers also reported that they feel a sense of purpose, direction, a clear sense of identity, and some performers even indicated that they experience a sense of destiny during performance (Brown, 2009; Hays & Brown, 2004). Psychologist Charles Garfield observed peak performers in business and found that peak business performers experienced a clear sense of inner direction and value during performance (Harung et al., 1996). Furthermore, Thornton et al. (1999) found that individuals who constantly performed at peak levels experienced episodes of meaningful achievement. From a philosophical level, being aware of one’s purpose and deriving significant meaning during performance promotes the peak performance state of mind (Harung et al., 1996; Hays and Brown, 2004; Thornton et al., 1999).

### Ideal Performance State

Performers also need to be aware of their ideal performance state of mind (Harmison, 2006). When elite performers and successful consultants were interviewed about their successful performances, the statement “know thyself” consistently was mentioned (Brown, 2009). “Knowing thyself” not only includes being aware of one’s purpose, but also includes being aware of what cognitive, affective, and physiological processes are affecting performance at any given time (Brown, 2009; Krane & Williams, 2006). Most performers are unconscious of how

these processes affect performance and performers often “tap into” a mental state of peak performance unconsciously and unintentionally (Krane & Williams, 2006).

Every individual also has their own individualized zone of optimal functioning (IZOF). Even though a set of common psychological characteristics of peak performance do exist for all performers, each performer has slight variations of these characteristics that promote peak performance. The more awareness individuals have of their IZOF, the more they know what type of skills they need to use to achieve their IZOF (Harmison, 2006; Krane & Williams, 2006).

### Training for Peak Performance

Psychological characteristics of peak performance can be induced through psychological skills training (Hays & Brown, 2004; Loehr & Schwartz, 2001). In interviews with 75 Olympians, Orlick and Partington discovered that elite athletes used mental skills such as setting daily goals, using internal imagery, and systematic mental preparation before competition (as cited by Wells, 2010). Mental skills need to be intentionally learned and practiced in order to be effective and available to the performer (Hays & Brown, 2004).

To achieve peak performance intentionally, performers need to learn skills such as effectively setting goals, planning strategies for goal achievement, handling stress, and maintaining confidence and attention under high pressure situations (Krane & Williams, 2006). Developing these skills directs attention, increases confidence, and enables performers to regulate their arousal levels (Krane & Williams, 2006). Practitioners have developed psychological skill training interventions to improve performance based on techniques from cognitive behavioral therapy (Hays, 2009). Five key areas of psychological skill training are used in almost every comprehensive psychological skill training intervention from sports. These

five areas are: activation management, cognitive restructuring (i.e., self-talk), imagery, goal setting, and attention/control training (Andersen, 2009). All five of these areas can be used in training to increase attention/concentration, achieve the desired level of affect, or regulate arousal levels (Andersen, 2009).

### Activation Management

Activation management is the ability to regulate levels of arousal through utilizing techniques that either increase or decrease arousal (Landers & Arent, 2006; Williams & Harris, 2006). In a study involving yoga, researchers found that yogis were voluntarily able to alter their brainwaves, heart rate, body pressure, breathing, and other bodily processes. Furthermore researchers found the ability to control these processes could be taught to others with ease in a relatively short period of time (Williams & Harris, 2006).

#### To Decrease Arousal.

To decrease arousal performers need to practice relaxation techniques (Andersen, 2009; Williams & Harris, 2006). Athletes have used a variety of relaxation techniques over the years to decrease arousal. Some of the most common relaxation techniques include deep diaphragmatic breathing, visualization, meditation, Benson's relaxation response, and autogenic training (Anderson, 2009; Hays, 2009; Williams & Harris, 2006). Other relaxation techniques such as body scans and the Alexander technique have been helpful to athletes due to the techniques' effectiveness in relaxing the body's muscles (Williams & Harris, 2006). However, since business performers are not as physical in nature as athletes are, these techniques are not as relevant for business professionals.

### To Increase Arousal

Although not as common as lowering arousal, there are still circumstances where the performer needs to increase arousal. Common techniques to increase arousal include rapid breathing, utilizing energizing imagery, utilizing energizing verbal cues (e.g. “explode”, “psych up”, etc.), using the environment, and listening to music that is upbeat and has a fast tempo. All of these techniques have helped athletes in sports increase their arousal levels (Williams & Harris, 2006). These techniques can be applied in business as well.

### Cognitive Restructuring/Self Talk

Cognitive restructuring is a way of modifying thoughts whenever they are unproductive and detrimental to performance (Andersen, 2009; Zinsser et al., 2006). There is much evidence that negative, self defeating thoughts impair performance (Hays & Brown, 2004). Cognitive restructuring can be used to increase confidence, increase competence, correct bad habits, prepare for performance, and increase attention. There are many cognitive restructuring strategies that have proved effective in sport and other domains as well (Zinsser et al., 2006). Some of the most common strategies include: thought stoppage, changing negative thoughts to positive ones, countering, reframing, ABC cognitive restructuring, and affirmation statements (Anderson, 2009; Hays & Brown, 2004; Zinsser et al., 2006).

### Imagery

Mental imagery is the most common psychological skill used in peak performance training (Hays & Brown, 2004). Imagery is the ability to use all the senses to create an experience in the mind. The brain often interprets images in the mind as identical to the actual situation (Vealey & Greenleaf, 2006). Mental imagery enhances performance and learning,

builds confidence, controls and regulates emotions, increases attention, and controls levels of arousal (Hays & Brown, 2004; Loehr & Schwartz, 2001). However, many performers become anxious about their upcoming performance and their anxieties cause them to mentally rehearse exactly what they hope not to happen (Andersen, 2009). Therefore it is important for performers to be skilled to consciously use imagery techniques to create the desired outcome, prepare for the unexpected, and improve performance (Foster, Lloyd, & Kamin, 2009; Vealey & Greenleaf, 2006).

Some of the common skills in imagery involve the ability to create vivid images, controlling images, and increasing self awareness. These skills can all be practiced through a variety of different exercises. When practicing imagery, performers should not try to practice too much too soon. Performers also should practice imagery in a controlled, systematic process through scheduled, organized sessions. Performers also should practice other techniques involved in imagery including practicing using all sensory modalities (visual, auditory, kinesthetic, etc.), adopting both an external and internal perspective, and practicing varying the intensity and duration of images (Hays & Brown, 2004; Vealey & Greenleaf, 2006).

### Goal Setting

It is evident that goal setting clearly and consistently improves performance (Gould, 2006). Setting goals directs attention, mobilizes effort, prolongs effort, and aids in the adoption of new learning strategies (Gould, 2006). Setting effective goals can also increase confidence, self-efficacy, satisfaction, motivation, and decrease anxiety (Bandura, 1977; Robbins & Judge, 2009).

Goal setting requires self-regulatory skills because performers first set goals, then strive to reach them, then proceed to evaluate performance feedback, and finally they must adjust goals appropriately (Mayer, 2007; Ravizza, 2006). According to goal-setting theory, when setting goals performers should make them positive and achievable: yet challenging, time limited, measurable, flexible, specific, and adjustable (Hays & Brown, 2004; Ravizza, 2006; Robbins & Judge, 2009). Furthermore performers can set goals that vary in duration from short term, intermediate, or long-range goals (Ravizza, 2006). From the sports literature, effective athletes set three different types of goals – some which are more effective than others (Gould, 2006).

Outcome, performance, and process goals are three types of goals individuals can use in goal setting. Outcome goals focus on the end results of the overall performance and can become psychologically destructive. Performers do not have much control over outcome goals and over-arousal often occurs, especially in cases where too much emphasis is placed on the outcome. Outcome goals are useful for peak performance in situations where the performer already is confident in the task and needs to increase his or her motivation levels. Performance goals are much more efficient than outcome goals because performance goals focus on improvements relative to one's own past performances. However the main disadvantage of performance goals is that they set perfection as the standard which often leads to stress (Gould, 2006; Hays & Brown, 2004). If performers set performance goals, they should make goals challenging yet achievable so goals do not produce undue stress (Robbins & Judge, 2009).

Process goals are the most effective for optimal performance. Process goals focus on the procedures the performer engages in during performance. Process goals direct attention to the present moment, which the performer has direct control over. Interviews with performers from

all different fields show that process goals are critical for performance excellence (Gould, 2006; Hays & Brown, 2004).

### Attention/Concentration Training

According to Nideffer's Theory on Attentional and Interpersonal Style, there are four dimensions of attention: assess, perform, rehearse, and analyze. These dimensions are based on width of attention (broad or narrow) and direction of attention (internal or external) (See Figure 2) (Nideffer & Sagal, 2006).

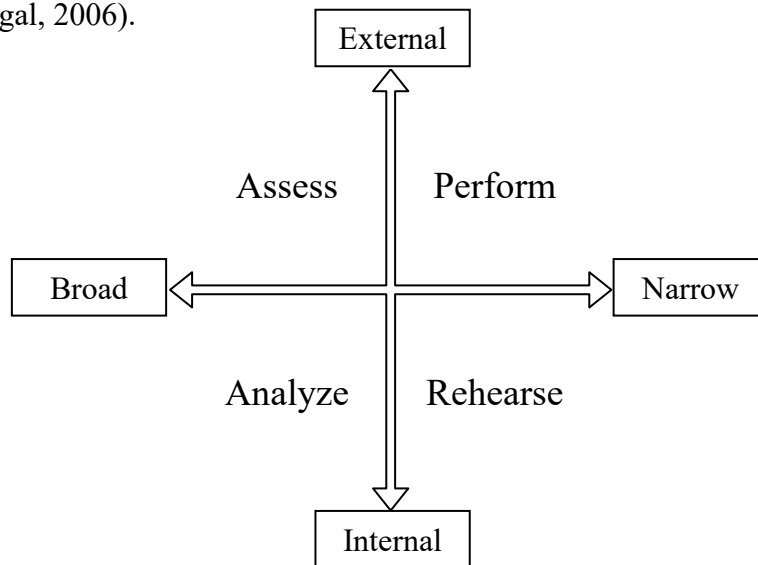


Figure 2: Dimensions of Attention

Performer's need to develop skills in being able to shift attention to the required dimension during performance, as well as concentration skills to keep them concentrated on the most relevant task at hand. Attention and concentration training improves focus which decreases overall anxiety levels and also results in increased confidence (Nideffer & Sagal, 2006).

Methods can be tailor made for individuals to delve into achieving full focus frequently and sustaining it (Thornton et al., 1999).

There are many techniques to control attention and increase concentration. Performers can utilize a variety of exercises that help them become more aware of each dimension of attention and focus on the dimension that is most relevant for their profession. Furthermore, performers can practice skills that direct attention to the process (process focus), rather than the outcome (outcome focus). Techniques to block out external and internal distractions are also critical for effective performance. Some of these techniques include: rehearsal, practicing for the worst case scenarios, utilizing cues, the “tic-toc” method, focus training, and developing a performance routine (Andersen, 2009; Hays & Brown, 2004; McCann, 2009; Wilson et al., 2006).

### Entering the Peak Performance State

After knowing *what* psychological skills increase characteristics of peak performance, it is important to know *when* to practice each psychological skill. There are three time periods when a performer can use skills to increase performance. These time periods are pre-performance, during performance, and post-performance (Hays & Brown, 2004; Krane & Williams, 2006; Vealey & Greenleaf, 2006).

#### Pre-performance

Pre-performance consists of the time during the weeks and months before the performance and the time immediately before actual performance (i.e. generally 5-30 minutes before the performance). During the weeks and months leading up to performance, performers should focus on rehearsing and practicing psychological skills until they become automatic. The goal of this time period is to go from being consciously competent of using each skill to becoming unconsciously competent.



During the time immediately before the actual performance, performers should perform a routine or a ritual. Rituals and routines are commonly used by performers in every performance domain to help put them into a state of mind of peak performance (Loehr & Schwartz, 2001; Hays & Brown, 2004). These routines can be physical, mental, or emotional in nature. Pre-performance rituals should encourage positive thinking and prepare the performer mentally for the performance (Loehr & Schwartz, 2001). Examples of rituals that performers have used to induce a peak performance mental state include systematic breathing, telling jokes, light physical activity, time alone in solitude, listening to music, practicing centering techniques, and using affirmations (Hays & Brown, 2004). Every performer needs to create a pre-performance routine or ritual that is individualized and unique to them (Vealey & Greenleaf, 2006).

#### Performance

During performance, skills should be automatic and performed unconsciously. The performer should stay focused on the present moment and focus on tasks they have immediate control over (e.g. process goals) (Gould, 2006; Wilson et al., 2006). Simple techniques such as utilizing cues, however, can be used to help the performer stay focused in the present moment and on controlling the processes involved with performance (Wilson et al., 2006).

#### Post-Performance

Immediately after performance, the performer should reflect on their performance in order to gain feedback that can be used for improvement purposes. The performer needs to be aware of what area(s) related to peak performance that they struggled with the most and then incorporate the right psychological skills in their skills training after the performance in order to

improve. Immediate reflection after the performance is important because this is the time where the performer is most aware of aspects of their performance (Vealey & Greenleaf, 2006).

### Generalizability into Other Performance Domains

Peak performance training interventions have been useful in helping athletes perform at their optimal potentials. Ever since the inception of peak performance in the sport psychology literature, the question of whether peak performance skill training applies to other performance domains has been thoroughly investigated (Andersen, 2009). Practitioners and researchers show strong evidence for the utility of peak performance training in domains such as business, law, surgery, the performing arts (Andersen, 2009), commodities brokers, Navy Seals (Gould, 2002), and law enforcement (Brown, 2009).

There are certain commonalities of all performances that provide support for skill training across performance domains. In a qualitative analysis of interviews, Hays and Brown found that that all peak performances includes certain features. These features include: a proper foundation, preparation, mental skills, the capacity to cope with stress, and the actual process of performance (Brown, 2009). Furthermore in the book “Performance Psychology in Action: A Casebook for Working With Athletes, Performing Artists, Business Leaders, and Professionals in High-Risk Occupation”, Kate Hays addresses the commonalities of performances from a variety of domains and also compiles a collection of prominent performance practitioners from a variety of backgrounds and orientations. Hays argues that performance psychology is relevant to many other domains other than sports and that “regardless of the domain in question, the core performance issues and challenges remain essentially the same” (Bianco, 2010, p. 213). In business, many sports psychology related skills have been found to transfer effectively. These

skills include: goal setting, mental imagery, performance routines/rituals, activation management, attention and focus control, mood and confidence boosting self-talk strategies, optimism training, and rational-emotive and cognitive behavioral therapies. All of these skills have been implemented successfully in business and have been found to have high face validity (Ievleva & Terry, 2008).

Even though there are many similarities across performance domains, there are still questions over which psychological skills of performance are generic enough to be generalized across domains. Andersen (2009) claims that the key to implementing psychological skill training across domains is to understand the general principles for enhancing performance in sports psychology and then to customize the integration of that psychological skill into the particular performance context one is working within (Hays and Brown, 2004). Hays and Brown (2004) examined the contextual differences of performances across domains and categorized performance domains into three areas:

1. Business (includes law, marketing, and sales).
2. High-risk professions (includes surgery, emergency room medicine, public safety officers, race car drivers, astronauts, nuclear engineers, and military personnel).
3. Performing arts (music, dance, and theater).

Each of these areas contains a set of unique aspects where they differ from the other areas in terms of cultural traditions, expectations, norms, histories, and meanings of performance situations (Andersen, 2009). Thus, in order to effectively utilize peak performance training in the business domain, it is important to understand the context and unique aspects of business and how those aspects differ from the sports domain (Hays & Brown, 2004).

## Business

Performance in business has substantially different demands and pressures than performances found in other domains (Andersen, 2009). The business domain and its differences from sport can be examined in terms of: the business context, the role functions of business, and the nature of performance in business (Hays & Brown, 2004).

### The Business Context

The business context differs from other performance domains in several ways. First, there is a rapid pace of change in business. Drastic changes can occur in an extremely short span of time (Hays & Brown, 2004) and the business world wrestles with expanding global markets (Brown, 2009). Because of this, certain psychological skills may become more relevant than others for peak performance training in business (Andersen, 2009; Hays & Brown, 2004). Secondly, the enticement of rapid monetary riches creates a special stress in the business world. In business, the stakes of performance are often extremely high and there exists the seductive power of wealth (Brown, 2009; Loehr & Schwartz, 2001). Large sums of money can either be gained or lost during very short periods of time (Hays & Brown, 2004). This can put added pressure on the performer and may cause the performer to focus too much attention on the outcome of performance (Loehr & Schwartz, 2001).

### The Role Functions of Business

The ultimate purpose (i.e. role function) of business is financial profitability. Other role functions in business consist of developing relationships and networking. These role functions differ from other domains, especially developing relationships and networking (Hays & Brown, 2004).

## The Nature of Business Performance

Another important aspect of business is the nature of performance in business. Typically skills such as memorization and physical skills are not as relevant in business as they are in other domains. Emotions, however, serve an important role in business. Emotions are critical in situations where a leader is managing a group to successfully accomplish a task, in a trial attorney who is presenting a case to a jury, in sales, or within executives in boardrooms to convince one another on the merits of one's position (Hays & Brown, 2004).

The nature of business performances are also more demanding mentally than physically. This differs greatly from sports performances (Hays & Brown, 2004; Loehr & Schwartz, 2001). Another way that business and sports differ is in time devoted to practice. Athletes spend most of their time practicing and only a small percentage of their time actually competing. In business, this is opposite – the typical executive devotes almost no time to training and must perform on demand 10-14 hours or more. Furthermore, athletes get several months off season and their average career spans only seven years. Business professionals, on the other hand, only get several weeks off at the most for vacation and their average career often spans 40 to 50 years (Loehr & Schwartz, 2001). Business people also tend to not get immediate feedback about their performance as athletes often do (Ievleva & Terry, 2008). This might mean that skills such as self-regulation are more important in business than in sport to intentionally achieve peak performance. All of these are critical differences that must be taken into consideration when generalizing peak performance training from sports into business (Hays & Brown, 2004).

Regardless of the unique aspects of performance in the business domain, business people continue to see the logical connection between athletic peak performance and business

excellence (Hays & Brown, 2004; Jones, 2002). During the past 20 years, the business community has focused on understanding the psychology of excellence (Hays & Brown, 2004; Weinberg & McDermott, 2002). Managers are trying to harness principles of peak performance and transfer it to the business setting (Torres & Bruxelles, 1989). There are definitely a set of parallels between sport and business. These parallels include: organizational constraints, stress that results from high visibility, the public nature of performance outcomes, transformational leadership, and the importance of team functioning (Hays & Brown, 2004). It is because of these parallels and other commonalities between sports and business which has allowed practitioners to create and use peak performance training interventions in business to increase results (Krane & Williams, 2006). According to Dr. Colin Cross, a consultant in business, the business world has no trouble using psychological skill training because business people see athletes as very practical, goal oriented, and achievement oriented people (Hays & Brown, 2004).

#### Developing a Training Program for Peak Performance in Business

Performance psychology utilizes a variety of different models for effective treatment of their clients. These models include cognitive-behavior therapy, solution-focused therapy, psychoanalysis, and family systems (Andersen, 2009; Hays & Brown, 2004). Cognitive behavior therapy methods offer relevant tools, solution focused and positive psychologies emphasize attention to constructive elements within individuals and situations, while consultation/coaching emphasize contextual and systematic knowledge (Hays & Brown, 2004). The model of treatment a practitioner chooses and implements determines how the collaboration between the client and the practitioner is constructed, executed, and evaluated (Andersen, 2009).

For the purposes of this thesis, a 90 minute training program has been designed and developed that is applicable to any business professional who must draw upon their verbal communication skills on demand during a business interaction. This training is applicable for any business professional that performs a role in sales, consulting, managing, training, or leadership and who performs activities such as conducting meetings, delivering presentations, or negotiating agreements – especially in “high stakes” situations.

#### Purpose/Goals

The Peak Performance Training Program provides training on applying psychological skills to induce a mental state of peak performance. The purpose of this program is for participants to develop a greater understanding of their own peak performance mental states and how to systematically use psychological skills to help them more optimally enter and sustain states of peak performance.

#### Needs Assessment

It is critical to understand the needs of training participants before designing any kind of training program. Conducting an effective needs assessment allows the trainer or instructional designer to design the training according to the specific needs of the client/potential client (Goldstein & Ford, 2002).

Trainees from the business world consist of adult learners who vary in age anywhere from 18 years old up until the age of retirement. In general, business people tend to be described as being determined, often greedy, competitive, having drive, and being afraid of failure (Hays & Brown, 2004). Some individuals in business (especially in advertising) tend to be creative and are driven by idealism (Hays & Brown, 2004). Attorneys are often described as being impatient,

skeptical, and having short attention spans. A reasonable degree of intelligence is considered a prerequisite in all areas of business (Hays & Brown, 2004). Furthermore, businesspeople often attach a negative stigma to “psychology” (Gould, 2009). All of this information must be considered when designing the training program in order to create receptivity and motivation in these adult learners (Dick, Carey, & Carey, 2009)

There are two areas between athletes and people in the business world that are especially worthy of observation. First, businesspeople tend to be extremely receptive to the strategies and techniques athletes use, especially the use of imagery to enhance performance. Many businesspeople are competitive in nature and come from an athletic background (Hays & Brown, 2004). Secondly, athletes realize the power of using mental training techniques both in and outside their profession. They realize the importance of making mental training techniques automatic (Hays & Brown, 2004). The majority of businesspeople do not yet understand the importance of automaticity and extra emphasis needs to be placed on practicing these skills outside of work until they become habitual (Hays & Brown, 2004).

#### Design/Development

The Peak Performance Training Program is designed for face-to-face instructional purposes. Gagne’s nine events of instruction were used as the main instructional strategy during training design. This program includes a variety in delivery methods consisting of lecture, group discussions, exercises, multimedia, handouts, and activities that appeal to social constructivist methods of learning.

The terminal learning objective of this training is: given knowledge of characteristics that comprise peak performance, apply psychological skills to more consistently increase episodes of



peak performance (See Appendix A - Unit Descriptors and Training Objectives). There are no prerequisites for this particular training program. This program is approximately 90 minutes of training material (See Appendix B - Peak Performance Training Program). A workbook was also designed to supplement the training program (See Appendix C Peak Performance Training Workbook). Training participants will be given this workbook at the beginning of the training program. Furthermore, handouts will accompany the training program as well and these will be distributed to participants throughout the training program (See Appendix D – Peak Performance Training Handouts).

## CHAPTER THREE: METHODOLOGY

### Data Collection

A focus group was selected as the method of data collection in this research study because they provide understanding and insight into a particular issue, rather than seeking to control or predict it (Gay, Mills, & Airasian, 2009; Krueger & Casey, 2000). By conducting a focus group, I was able to understand what participants think about the training program and their reactions to the program through self-disclosure. Delivery of the training program and the focus group lasted approximately two hours to avoid physical and psychological discomfort to participants (Krueger & Casey, 2000).

### Participants

Five participants who worked either in management roles or in training and development positions took part in the focus group. By working either in management or training and development positions, participants were seen as being “information rich” where they were able to provide quality data needed for this particular study (Krueger & Casey, 2000). A small focus group was chosen because a smaller focus group would allow more in-depth insights into how I could improve this training program (Knodel, 1993).

The selection process involved purposeful selection where participants were selected because of their occupation and their desire to perform at peak potential more frequently throughout their occupation. To be included in this study, participants had to be at least 21 years in age and must have had at least three years experience working in management or working in a training and development position.

Job positions of participants selected for the study included: consultant, instructional designer, manager, public speaker, and business owner (manager). Participants ranged in age from 26 years up to 63 years and participants consisted of three males and two females. All participants held at least a bachelor's degree and two of the five participants held a master's degree. All participants had at least four years of experience and two participants had over 20 years of experience. Participants were initially screened to make sure they could provide quality data needed for this study. The recruitment process took place through telephone and email conversations.

### Instrument

A protocol was used during the focus group which addressed key points and important ground rules before beginning the focus group (See Appendix E - Focus Group Protocol). This protocol was also designed to provide an outline of objective, non-assumptive questions to guide the focus group discussion. The protocol helped the moderator refrain from subjectivity and bias during the questioning process by following a pre-prepared questioning route, which is recommended for academic research (Krueger & Casey, 2000).

The protocol consisted of six questions - one opening question, four key questions, and one closing question. The opening question was designed to stimulate general thoughts of the training program. The key questions were designed to explore participants' reactions to the comprehension, applicability, and interest levels of the training program. The closing question was designed to capture the number one "thing" of how the training program can be improved. The six questions on the focus group protocol were:

- What were your general impressions of the training program? What did you like? What did you not like? (Opening Question)
- Can this training program be improved? If so, how? (Key Question)
- Do you feel like you understood the content of the Peak Performance Training Program? Can this area be improved? If so, how? (Key Question)
- Do you feel like you can apply this in your lives? How can this training be made more applicable and more useful? (Key Question)
- Were you motivated and interested in the content of today's training session? Can the content be made more interesting? If so, how? (Key Question)
- Of all the things we've discussed today, what is the number one thing you can offer as far as feedback on how to improve the training program? (Closing Question)

#### Procedure

After participants were recruited, each of them had to review the "Explanations of Research" form as part of the consent process (See Appendix F - Explanations of Research). This form was sent to participants through email after the recruitment process. I contacted each participant by telephone to make sure they understood the form and to address any questions they had. After participants went through the consent process, they received an email notifying them of the focus group date, time, and location (See Appendix G - Letter to Participants).

The focus group was scheduled at my residence. I scheduled the focus group at my residence because focus groups should take place in a permissive, non-judgmental environment in order to increase participation and self-disclosure (Krueger & Casey, 2000).

At the beginning of the focus group, all participants were reminded of the purpose of the research study. Then the 90 minute Peak Performance Training Program was delivered to participants. Following the training program, participants took part in a 40 minute focus group where they provided feedback about the training program. Field notes, memos, and an audio recording were all used to aid in the data collection process. As the focus group moderator, I listened carefully to participants, noting participants' nonverbal responses, and sought clarification to any ambiguous answers.

Immediately after the focus group ended, additional notes were taken and a summary of main points from the discussion was written up. Within three days of the focus group, the audio recording was transcribed into a written document, which was analyzed and coded for results. Grounded theory was selected as the method of inquiry to analyze the data. Grounded theory was selected because grounded theory seeks to discover regularities in data through identifying elements and categorizing those elements by exploring their connections (Tesch, 1990). The selection of the method of inquiry for any research study should be based on the nature of the research question (Brown et al., 2002). The nature of the research question of this particular study was to gather participants' reactions on the Peak Performance Training Program and to use their reactions as formative evaluation to improve the Peak Performance Training Program. By classifying participants' reactions into categories, it provided me with a list of areas to focus on when making future changes to the training program.

During the analysis stage, I made sure I had prolonged engagement with participants to further establish credibility (Brown, Stevens, Troiano, & Schneider, 2002). Within 24 hours of the focus group, I called each participant to thank them for participating and to verify the

summary of main points from the focus group. A copy of the transcripts was sent to each of the five participants through email for participants to review and comment on its accuracy. All five participants replied back through email within ten days of the focus group, and all five participants indicated that the transcripts were accurate. Furthermore, drafts of the concepts and categories that emerged during analysis were shared with several participants. These participants commented that the drafts did provide an accurate description of the concepts discussed in the focus group.

## CHAPTER FOUR: RESULTS

In grounded theory, a theory is generated from the data by: segmenting the data into incidents, coding each incident by topic, and categorizing the topics by exploring connections among topics in order to form concepts (Tesch, 1990). After concepts form, the concepts are grouped together to create a grounded theory that best fits the data.

During the coding process of grounded theory, codes are constantly compared to previous codes through a process of constant comparison. By constantly comparing codes to previous codes, existing codes are modified or new codes are created in order to best fit the data. This process continues until all data are saturated. Topics, concepts, and categories emerge through regularities in the data, and not from a priori codes (Brown et al., 2002).

### The Coding Process

The coding process consisted of three types of coding procedures: open, axial, and selective (Brown et al., 2002). During each of the three coding procedures, I created a list of memos as a form of note-taking as codes were being compared. Memos were used to keep a running record of relationships amongst categories and to capture new insights, ideas, and thoughts as they occurred through constant comparison (Krueger & Casey, 2000; Tesch, 1990). Memos were continually referenced during the coding process as the grounded theory emerged from the data.

### Open Coding

During the open coding stage of analysis, transcripts were segmented into units of analysis called incidents. After the transcripts were segmented, each incident was examined for emerging features, themes, and regularities. Working definitions of inductive codes were written

in the margin of the transcript next to each incident (Brown et al., 2002; Tesch, 1990). To ensure accuracy in the coding process, as I examined each incident I continually asked myself the question – “What is this incident about and how does it contribute to the research question?” The following is an example of how one participant’s response (i.e. incident) was coded during the open coding process:

Very well done. First off you had my attention from the beginning with the video clip. The two video clips, I thought that was great. I loved how you used the visual with the powerpoint. I thought that was well done. Because sometimes I’ve seen poor presentations with the powerpoint but you did it really well.

The two codes – *appealing* and *type of exercise* – were assigned to this particular incident. These were only two codes amongst a list of many codes that emerged during the open coding process. Table 1 illustrates an early list of codes that emerged during open coding.

Table 1: Early List of Emerging Codes

<b>Code</b>
Appealing
Improvement area
General confusion
Retention
Content confusion
Self-reflection
Sequencing of instruction
Ease of understanding
Type of exercise
Agreement
Take-aways
Applicability
Applicability strategy
Practicality
Time



As the coding process continued, codes that were assigned to new incidents were compared to previous codes through a constant comparison process. During the constant comparison process I either: refined existing codes, created new codes, or verified existing codes. While going through this process:

1. Some codes clustered around a common theme and formed into general categories of codes.
2. Other codes formed into sub-categories which consisted of specific properties and dimensions of the general, abstract codes.
3. Some codes emerged high in frequency. These codes were hypothesized to form a core category which became the most general, abstract category.

At the end of the open coding stage, a provisional list of categories and sub-categories emerged (See Table 2).

Table 2: Provisional List of Categories and Sub Categories

<b>Possible Categories</b>	<b>Possible Sub Categories</b>
Appealing	Training content Overall training design Training activities Practical application Engagement Retention
Improvement area	Time Confusion – content Handouts Applicability Conclusion

### Axial Coding

During axial coding, each category was examined one at a time through an “intense” analysis in order to make connections between categories before putting the data back together (Brown et al., 2002). During this phase the following processes were performed:

1. Relationships were examined between each category and its sub-categories.
2. Each category was compared with other categories to make sure they had distinguishable characteristics.
3. The density of some categories was expanded by modifying its properties and dimensions and renaming some categories.
4. Variations in the categories were explored.

At the end of the axial coding process, the relationships amongst categories and other categories and sub-categories became evident (See Figure 3).

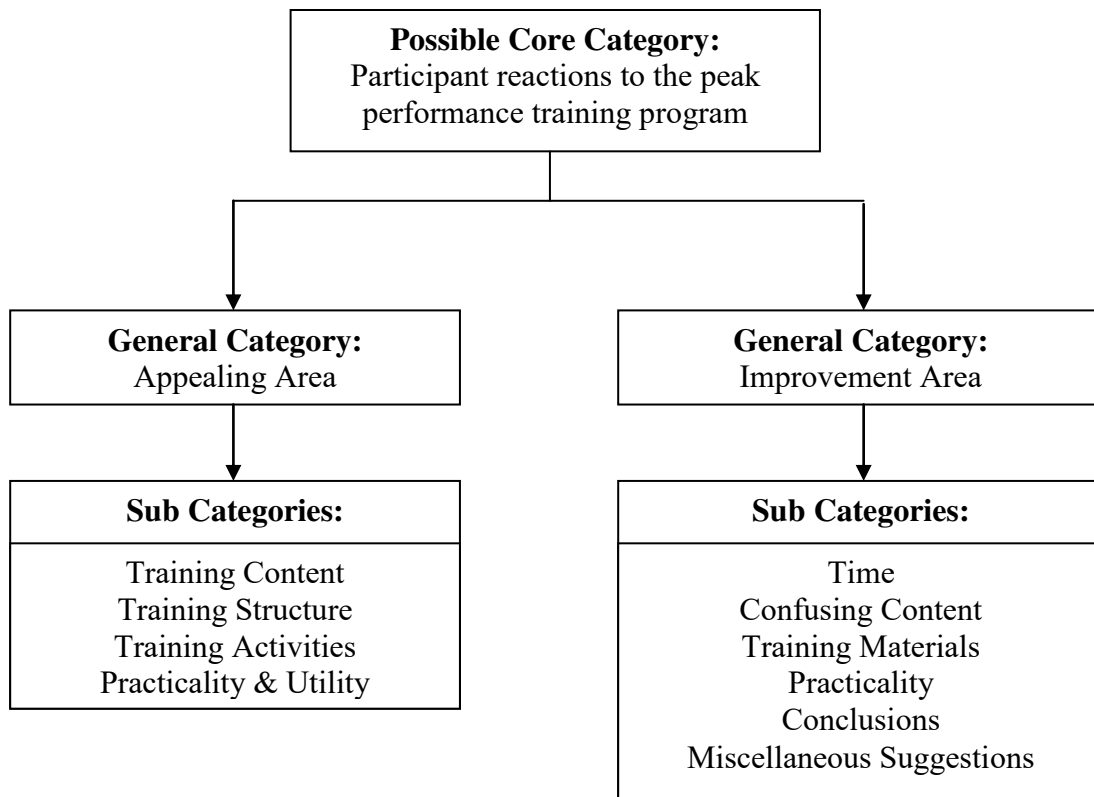


Figure 3: Categories of Coded Concepts

### Selective Coding

During selective coding, I selected the core category, related the core category to the general categories, related the general categories to sub-categories, examined the properties and dimensions of sub-categories, and filled in any categories that needed further development (Brown et al., 2002; Tesch, 1990). The purpose of selective coding is to make sure that the “storyline” (i.e., the grounded theory) is the best fit for the data (Tesch, 1990). During this stage, new incidents of data were selectively sampled (i.e., theoretical sampling) with the core guiding the coding process. During this process, three negative cases were found and these cases were

traced back to their origins in order to see if re-categorization was needed. After careful analysis of the characteristics of these negative cases, these three cases were grouped into an “outlier” category. I then went through and sampled new data to see if theoretical saturation had been reached.

After sampling the remainder of the transcripts, all incidents of data fit the grounded theory and theoretical saturation was reached. The grounded theory was sampled with field notes and memos from the study, and the grounded theory still showed that it had reached theoretical saturation. No new properties, dimensions, or relationships emerged during theoretical sampling, which is indicative of saturation (Brown et al., 2002).

#### Final Categories

Analysis of the data indicates that participants reacted favorably to the training content, training design, variety of training activities, and the training’s applicability, but also had a set of unfavorable reactions to the training duration, comprehension of concepts, training materials, utility, and training conclusions. Each of these areas was examined in terms of its properties and dimensions. A total of 10 themes emerged during data analysis: the first four on training appeal and the final six on training improvement.

#### The Content is Simple to Understand, In-depth, and Easy to Relate to

Participants found the content of the training program to have good depth and found the content to be simple to understand. The only aspect of the training program that participants were slightly unfamiliar with was the segment on “arousal”. Participants commented several times on how they could relate to the training content. When describing the skills of the training program, one participant commented on how “skills two, three, and four really hit home for me.”

### The Training Design is Engaging and Supports Retention

In terms of training design, participants found that the training program was simple to follow, which helped keep them engaged. Data analysis revealed that the training consisted of a good mix of media, contained appealing visuals, catered to different learning modalities of participants, and had a good degree of engagement. Participants also felt the training supported retention of material. One participant specifically commented on the alliteration of the 3 A's and how it supported learning retention:

Your alliteration was great. The 3 A's...I don't know if you (laughs)...you probably did that on purpose but I thought that was catchy and that's something I can take away with when I leave here. I can remember the 3 A's.

Another participant commented on the engagement of the training:

I think because the content is so personal to everyone who is going to hear it, you're going to have some sort of capture with it. The role playing...the balance was good to keep the attention.

### The Variety Used in the Training Activities is Appealing

Participants found the training activities highly appealing. Participants especially liked the use of videos, role playing, time dedicated for self-reflection, lecture, and group discussions. One participant commented, "I thought it was the right mix of media - the good videos on the front and the good solicitation of discussions that we got into." Amongst these activities participants placed the most emphasis on group discussions. Participants commented that they enjoyed learning about other participants' experiences involving peak performance throughout the group discussions. One participant stated:

I felt that the discussions among us were the most valuable to me (agreement from participant 2). I'm probably going to remember it more because I felt I was a part of it because I'm discussing it with you.

Another participant stated:

The discussions were awesome! I would love to have more of them, so that you get the chance to get everyone's perspective, because I think everyone has a very interesting perspective.

#### The Training is Applicable to Business Professionals

In terms of practical application and usefulness, participants mentioned that the training offered them good "take-aways" they could use in their business careers. One participant commented, "I think personally I could take this (training) and say okay...I'm going to go do a task and I'm gonna use this and just see the differences in my performance." Another participant stated:

I came here real excited and as you were talking more I thought, "I could use this on a daily basis with my job." And in fact, skills two, three, and four really hit home for me as far as reframing my thoughts and developing a routine and ritual.

Participants also made statements on how they enjoyed the worksheet and handouts, thought the information on the handouts was practical, and thought the training could be applied in their careers to help them improve their performance.

#### More Time is Needed for the Training Program

All participants commented that time was a major issue and indicated that they wished the training could have lasted longer. Furthermore one participant commented that she wished

we would have had more time so that, as a group, we could “go off and explore tangents that were relative”. Other participants commented on how they thought they would have understood the training material better if more time was devoted to certain segments of the training.

### Three Concepts of the Training Program are Confusing

There were three segments of the program that confused participants: process versus outcome, developing a cue, and worst case scenario. Among these three segments, process versus outcome caused the most confusion. One of the participants, who’s had over 30 years experience working in training, stated that: “I’m always focused on somewhat of the outcome and I think that’s good...having the outcome in mind has never gotten in the way of (me) being effective.” This participant stated that by focusing on the outcome, it served as a guiding framework to get him through his performance. Other participants agreed with his comment.

Another participant stated that he was confused on the training segments that discussed “how to develop a cue” and “preparing for the worst case scenario”. This participant stated that he did not understand how to develop a cue after the training program, and commented that the reason he thinks he didn’t understand it was because he was still trying to process the information from the previous skill. This same participant also stated that he was confused about the “worst case scenario” segment. When asked to elaborate about his confusion over the “worst case scenario” segment, this participant said, “Wouldn’t that (the worst case scenario) not now orient you to think about outcomes during performance?” This participant felt that by preparing for the worst case scenario during a performance, it contradicted the training segment on why it’s important to focus on the process rather than the outcome. Other participants agreed with his comment and felt this portion of the training program was contradictory as well.

### The Training Materials Lacked Instructions and Clear Organization

Participants made several comments that the training materials (i.e., the worksheet and handouts) were an area that could be improved. Many participants stated that there was a lack of instructions on what to do with the worksheet. One participant stated that he was confused about the activation management skills portion of the worksheet and said that “explicit guidance on what to do” would have helped. Participants also mentioned that they would have liked instructions on how to use the information in the worksheet and handouts as a “take-away”.

Participants also commented on the organization of the worksheet and handouts. One participant stated to “number your handouts”. Another participant stated that the boxes in the worksheet were confusing. All participants agreed that the organization of the worksheets and handouts could be improved.

### Creating a Tool, Giving Commands, and Resequencing Instruction will Increase Training Utility

Participants mentioned that improving the practical nature of the focus group was a key area for improvement. Participants stated that the creation of a “tool” would help trainees apply the training content in their careers. Participants provided a set of recommendations to follow when designing tools – make them tangible, simple, easy to access, and easy to remember. Participants mentioned that by using an acronym or clumping things together in “threes”, learning retention would be improved. One participant illustrated this point by describing how the military clumps things in “threes” to help soldiers remember information as in the case of “drop, lock, and load”. He stated:

The military does this (preparation for performance) really well. They clump things in threes like “drop, lock, and load” while you’re in performance and there’s a lot going on.



You don't need to be trying to access a whole two pages worth of stuff. You need the information (participant snaps fingers) right then.

Participants provided some suggestions for potential tools that could be created which included a condensed laminated guide, a one-page reference guide, and a dry-erase laminate.

Participants also commented that giving commands to trainees to apply the training material in their lives would help improve the training program. One participant mentioned an experience she had at a training session where the trainer told all the trainees to “go home and teach someone one thing that they learned from the training today”. This participant said that this command was effective in getting her to think about how to apply the training material she learned during that training session. Other participants also made recommendations that I should tell trainees simply to “go out and use the information”. Another participant shared his story of an accountability technique he uses to increase training transfer; he tells trainees to pair up with another trainee and hold one another accountable to use the information learned from the training program.

A final comment about the practicality of the training came from a participant who works in instructional design. He recommended that the instruction be sequenced according to the events of performance. When asked about his general thoughts of the training program, this participant commented, “I think one thing you talked about - pre-performance, during performance, and after performance - I think this training needs to fit in all three of those categories.” This participant felt that by sequencing instruction in this manner, it will improve training transfer.

### The Conclusions Section is Weak

Participants suggested the conclusions needed to be much stronger. One participant mentioned that I “rushed through it” and to give “just a few more take-aways”. Other participants agreed with this comment and all participants suggested a recap and summary at the end of the training program would improve the conclusions section. Other comments participants made about the conclusions section include: “Give us a one sentence summary of what you want us to take away from the training today” and “The training would be even better if there were more use of emotional videos....maybe even at the end”.

### Three “Miscellaneous” Suggestions to Improve the Training Program

Participants made three suggestions that did not fit in with any of the sub-categories related to improving the training program. One participant suggested using an activity where trainees are to perform a task several times throughout the training session and then see if trainees increase their performance each time they perform the task. Another participant suggested that when sequencing instruction simply, “Tell them (trainees) what you’re gonna tell them, tell them, and then tell them what you told them”. This participant was referring to the introduction, body, and conclusions section of the training program. Finally another participant commented that he would have liked to see more emotional videos throughout the training program.

### Summary of Results

During the coding stage of analysis, an early grounded theory emerged which hypothesized that the qualitative data collected was a representation of both favorable and unfavorable reactions participants had to the Peak Performance Training Program in the areas of:

content, training design, activities used, practical application, training duration, comprehension of concepts, training materials, utility, and training conclusions. This grounded theory was tested with new qualitative data from both the transcripts and through field notes by sampling new data against the grounded theory. During the sampling process, theoretical saturation was reached and the early grounded theory hypothesized was confirmed. A total of ten themes emerged from the data analysis.

## CHAPTER FIVE: CONCLUSIONS

The purpose of this thesis was to design a peak performance training program according to research from existing literature and then to gather feedback from business professionals on their reactions to the training program. The data analysis led to ten major themes about participants' reactions to the training program. These themes are discussed in the section that follows. Implications are then presented, as well as limitations of the study and recommendations for future research.

### Themes

After analyzing the data, 10 major themes emerged. Four themes relate to participants' reactions on training appeal, while six themes relate to an area where improvement is needed within the training program. Each theme provides feedback that can be used as formative evaluation to make changes to the Peak Performance Training Program.

#### Themes on Training Appeal

One of the main findings of the focus group was that participants thought the content is simple to understand, in-depth, and easy to relate to. This supports previous research findings on how business professionals have no trouble seeing the logical connections between peak performance and business excellence (Hays & Brown, 2004; Jones 2002; Thornton et al., 1999). This demonstrates that peak performance is simple to understand in business. Furthermore, participants' comments also supports previous literature that peak performance is easy to relate to, considering everyone has experienced episodes of peak performance throughout their lives (Brown, 2009; Privette, 1983).

A second major theme that emerged was that the training design and training structure is engaging and supports retention. To keep learners' engaged, a variety of mediums were used to present the content including videos, lecture, presentation graphics, and illustrated text. By using alliteration (e.g. the 3 A's: attention, affect, arousal), major concepts were grouped together to help support learning retention. When participants were asked about their general comments about the training program, one participant commented:

I thought it was the right mix of media, the good videos on the front and the good solicitation of discussions that we got into. It was good the way you were able to get us to talk and I think part of it was you but part of it was the way you constructed this thing too.

Other participants agreed with his comment and all participants thought that the structure of the training and the way the slides were constructed was well done.

A third major theme that emerged from the study was that the variety in the training activities is appealing. During the focus group, the participants commented on how they enjoyed the variety of instructional methods used in the training including: lecture, role playing, group discussions, group activities, videos, and time dedicated for self reflection. When participants were asked what their general reactions were to the training program, one participant commented:

Very well done! First off, you had my attention from the very beginning with the video clip. The two video clips, I thought that was great. I loved how you used the visual with the powerpoint. I thought that was well done....I liked the board. How you had us write

on it and talk about it. I liked the handouts...I mean you had EVERYTHING...so I thought that it was very well done.

Using a variety of instructional and training methods in training programs is recommended to increase engagement (Goldstein & Ford, 2002). The variety used in this particular training program is consistent with the variety of training activities in existing peak performance training interventions, especially in training interventions used for sport (Weinberg & Williams, 2006).

A fourth major theme related to training appeal is that the training is applicable to business professionals, especially in terms of practicality. The training provided participants with good, practical take-aways. When the training program was designed, a set of worksheets and handouts was created to make sure participants could have takeaways that would help them apply this information in their careers. During delivery of the training program, participants were encouraged to focus on the practical nature of peak performance during group discussions. By focusing on skill training, I demonstrated to participants that the psychological characteristics of peak performance could be created by simply applying the proper skills. Each of these skills appeared on a separate handout. Throughout the training session, participants showed high engagement and much enthusiasm when they discussed how the content of the program applied to their careers. Participants' reactions provided even further support that peak performance training is applicable to the business world (Andersen, 2009).

#### Themes on Training Improvement

From the 10 themes that emerged from this study, six themes related to ways on how the training program could be improved. One of the major themes that emerged was the issue of needing more time for the training program. Participants stated that there was simply too much

material condensed into 1 ½ hours of time. Several participants commented on how they needed more time to help them fully grasp certain concepts of the training program, while other participants wanted more time to talk about certain concepts in the training program that had great appeal. When participants were asked about their general impressions of the training program, one participant commented:

I wish I would've had more time. I would've loved to go in and explore some of the things you had to reduce and just go off and allow for some tangents that are relative...because I felt the discussions among us were the most valuable to me. I would love to have more of them so you get the chance to get everyone's perspective....cause I think we were holding back a little bit because we were pressed for time.

I found that this participant's comment was true for all participants. Even during the initial design and development of the Peak Performance Training Program, I felt time was an issue. One of the biggest challenges was to condense the content to fit into a 1 ½ hour time-frame. This was challenging because of the need to address the nature of performance (part 1 of the training program), the psychological characteristics of peak performance (part 2), and the skills needed for peak performance (part 3). The majority of peak performance training programs are longer than 1 ½ hours in duration. From the sport psychology literature, most peak performance training interventions last months and sometimes can even last years in order for athletes to realize the full effects of the training intervention (Weinberg & Williams, 2006).

During delivery of the training program, I felt that time was an issue as well. There were several instances where I felt that I needed to spend more time on a particular training segment because participants didn't fully grasp a concept. In the interest of time however, I had to keep

moving the training program forward. One of the competencies trainers need to have is to be aware of when they need to spend more time on certain segments of the training to clarify certain concepts, or when they need to move the training session forward due to irrelevant conversation topics that don't add any value to the training program (Goldstein & Ford, 2002). As a trainer, I felt that participants needed more time during the training program for comprehension purposes. The participants' reactions to time, as well as my own impressions, indicates that the program needs further condensing in order to fit into a 1 ½ hour time frame, or alternatively the program needs a longer time frame.

A second major finding related to training improvement was that three concepts of the training program are confusing. Among the three concepts, the concept on "process versus outcome" caused the most confusion for participants. During delivery of the training, participants asked many questions seeking clarification on why focusing on the outcome during performance is detrimental. One participant, who has over 30 years experience as a training professional, provided many instances where focusing on the outcome was actually helpful for performance. He commented:

I'm always focused on somewhat of the outcome and I think that's good. I never feel like I gotta dig deeper into the process here and forget the outcome. Having the outcome in mind has never gotten in the way of being effective.

Many of the other participants agreed with his comment which led to a discussion where each participant described instances where focusing on the outcome was actually helpful to performance as well. The participants' confusion of this concept indicated to me that more clarification is definitely needed on this segment of the training program.



The peak performance literature on “process versus outcome” clearly states that when an individual either lacks confidence or is performing poorly and *then* the individual thinks about the outcome during performance, attentional changes occur which interferes with performance (Nideffer & Sagal, 2006). This only occurs in cases where the individual has low confidence or is performing poorly. When an individual already has high confidence in the performance task or is performing well, focusing on the outcome can increase motivation (Nideffer & Sagal, 2006). In the Peak Performance Training Program, I realized that this is not clearly stated which created the confusion. Furthermore, there was also a semantical issue with the word “outcome”. Each participant had slightly different meanings of the word “outcome”. This feedback tells me that changes need to be made to “process versus outcome” training segment, and that the participants’ comments do not refute previous research but instead indicate that the problem is a design issue.

The other two concepts that created confusion were both said from the same participant. This participant stated that he was confused on “how to develop a cue” but then later commented that he thinks it was because he was still thinking about the earlier skill taught. None of the other participants were confused on how to develop a cue, so this particular comment was discounted.

The same participant also expressed that he was confused with the concept “preparing for the worst case scenario”. He made an interesting comment when he said, “Doesn’t preparing you for the worst case scenario make you think of the outcome? And isn’t thinking about the outcome detrimental to performance?” This comment generated a discussion with the entire group of participants which led into an even further discussion about “process versus outcome”.

This participant's comment demonstrated that the confusion from this segment of the training program originated out of confusion from the "process versus outcome" segment.

A third major theme on training improvement that emerged was that the training materials (i.e., the worksheet and handouts) lacked instructions and clear organization. This was something that was overlooked during the design process. Participants provided specific comments on how there is not a clear set of instructions on the training handouts, there are no page numbers, and the boxes can be confusing. I agree with all of these comments and these suggestions will be incorporated into a new version of the training program.

A fourth major theme related to training improvement that emerged during analysis was the discussion that creating a tool, giving trainees explicit commands, and re-sequencing instruction will increase training utility. During this discussion, participants claimed that they were already interested in applying the concepts of peak performance within their careers; they just felt that there were things that could be done from an instructional design standpoint to help increase training utility and transfer of training.

The way in which training is designed influences training transfer (Baldwin & Ford, 1988; Cheng & Hampson, 2008; Russ-Eft, 2002). Training transfer is the application and transfer of knowledge into on-the-job performance (Baldwin & Ford, 1988). Training professionals can increase training transfer through incorporating take-home materials and through sequencing instruction in a manner that closely resembles how they would use the training content within their jobs (Baldwin & Ford, 1988; Russ-Eft, 2002). One of the participants from the focus group emphasized this last point when he mentioned that the instruction should be sequenced according to the events of performance: pre-performance,

during performance, and post-performance. He stated that by sequencing instruction in this manner, trainees would be more likely to remember how to use the material and also when to use it (i.e., pre-performance, during performance, or post-performance). Current peak performance training interventions are typically sequenced where an educational phase of training is delivered initially, and then an implementation phase of training is delivered in the weeks and months following the educational phase (Weinberg & Williams, 2006). It is during the implementation phase of training when instruction is typically sequenced according to the events of performance (i.e. pre-performance, during performance, and post performance) (Weinberg & Williams, 2006). This participant's comment supported existing research on how best to sequence instruction during a peak performance training intervention.

Participants also commented that the creation of a "tool" will increase training utility. Participants stated that the tool should be tangible, simple, easy to access, and have any content arranged on the tool in a way so the content is easy to remember. Participants mentioned two ways to help increase comprehension of the content - use acronyms and clump information together in "threes" (e.g. "ready, set, go"). Participants also came up with an idea that the creation of a condensed, laminated, one-page reference guide that provides an overview of the contents of the training program will serve as a useful tool. They felt that a tool like this would help trainees apply information within their careers, because trainees would have a reference guide handy by their side and could access it periodically to remind them of important information. During the initial literature review I did not find any research pertaining to the usage or development of a tool that increases utility specifically for peak performance training. Nevertheless, the usage of tools and take home materials in training programs increases overall

utility and training transfer (Goldstein & Ford, 2002), and the comments made by participants during the focus group will be incorporated into changes made to the Peak Performance Training Program.

A final comment about increasing the practicality of the training program involves an instructional strategy. One participant mentioned that trainees should be explicitly told to “go out and apply” the information from this program in their lives. Giving trainees a direct command like this seems rather simple, but it was something that was overlooked during the design and delivery of the training program. Related to this idea, participants made several suggestions on how to tell trainees to directly start using this material in their lives. One participant stated:

One of the best things I have received on applying it (the training material) is that the trainer said, “Your assignment now is to go teach someone one thing you learned from this training.” And I thought... “Oh wow”! I’m thinking about it on the way home, I’m thinking about it all week...cause I still haven’t done my assignment, even though I’m never going to see this guy (the trainer) again!

Another participant suggested, “You should tell us...Okay now go use this in your practice! Even if that information is up there, just tell us to.” Another suggestion that was made was to have trainees “pair up” after the training session ends and tell trainees that they need to hold each other accountable. This participant stated that he used that technique for many years while he was working as a trainer to help increase training transfer. These suggestions on giving trainees explicit commands are rather simple suggestions and will all be incorporated as changes are made to the training program.

A fifth theme related to training improvement is that the conclusions section of the training program is weak. This finding is not surprising given that the conclusions section had to be rushed through in the interest of time. Participants did provide several comments on how to improve the conclusions section including: provide a recap of the training program, give trainees a one sentence summary of what they should take-away, talk more about how the material applies in their lives, and conclude the program with an “emotional video” that will help tie everything together. From the literature, there is no information that discusses how a peak performance training program should conclude. From the sports literature, peak performance training interventions are ongoing until the athlete either integrates the sought-after psychological skill or disinterest sets in and the athlete quits the training altogether (Weinberg & Williams, 2006).

Finally, the sixth theme about improving the training program that emerged took the form of three miscellaneous suggestions that would improve the training program – use a performance activity, sequence instruction, and use more videos. During the data analysis stage, when categories of the grounded theory were being formed, these three suggestions did not fit in with any of the other categories and were considered “outliers” of the data. However I felt that these outliers were important suggestions on how to improve the training program and included these outliers in the results of the study.

One of the outliers mentioned was the suggestion of using a performance- based activity during the training program where trainees go through a performance several times throughout the training program and to see if their performance increases each time. This suggestion provides a real-life demonstration of the applicability of peak performance skill training in action

and can increase favorable reactions to the training program. Finding an activity that is feasible, however, is a challenge. Also the skills practiced in the training session are meant to improve peak performance gradually over time rather than instantly. Nevertheless, this participant's suggestion could lead to other ideas on incorporating a performance-based activity into the training session.

The other two suggestions were simple in nature. One of the participants simply mentioned that when teaching this information to trainees I should just "tell them what you're going to tell them, tell them, and then tell them what you told them". I realized that he was referring to the introduction, body, and conclusions sections of the training program. The other suggestion was to use "more emotional videos". The emotional videos used at the beginning of the training program generated much initial engagement from participants. It is important to keep trainees engaged during the training session but not at the sacrifice of learning outcomes (Mayer, 2007).

### Implications

Current research on peak performance in business has mostly looked at how peak performance in business compares to peak performance in sports, in terms of the psychological characteristics of peak performers. There have not been many studies that discuss how business professionals react to a peak performance training program.

This study discovered that in general business professionals find peak performance training both appealing and applicable to their jobs in management or in training and development. Business professionals agree that peak performance is important to their careers. These findings provide more support for using peak performance training in business and are

also consistent with the existing literature on peak performance in business (Hays & Brown, 2004; Loehr & Schwartz, 2001; Wells, 2010). This study also adds to existing literature in that this study discovered:

- Business professionals have a strong preference for some sort of practical “tool” to help them apply peak performance in their jobs.
- Business professionals may not understand why focusing on the outcome is detrimental to performance as well as athletes do. Practitioners of peak performance training may need to spend more time on this concept with business professionals.
- The concept of arousal may be unfamiliar to the majority of business professionals. Practitioners may need to spend more time introducing this concept during peak performance training.

The ten themes that emerged during the grounded theory data analysis provide a useful framework to guide changes and improve the Peak Performance Training Program. After examining the ten themes that emerged, the following is a list of changes to the Peak Performance Training Program which I find most pressing at this time:

- Develop a tool to increase application and training transfer.
- Modify the worksheets and handouts so they are numbered and provide explicit instructions.
- Re-sequence instruction for “Part 3: Skills for Peak Performance” according to the events of performance (pre, during, and post).
- Provide clarity on “process versus outcome” in the training slides, worksheet, and handouts.

- Increase time requirements of the training program from 1 ½ hours to 2 hours.
- Improve the conclusions section by providing a recap, adding an emotional video, and including a one sentence summary of what trainees need to take away.
- Improve the general training program by adding more group discussions, including more videos, and by constantly telling trainees to use the training in their careers.

### Limitations

In light of research findings several limitations need to be considered. One of the major limitations of the study was that only one focus group was conducted. This was because the emphasis of this thesis was on the creation of a peak performance training program, rather than on its evaluation. Research on focus groups suggests that at least three to four focus groups should be conducted at a minimum in order to allow for saturation of information (Krueger & Casey, 2000). Saturation of data can occur with as few as 2-4 focus groups (Knodel, 1993) and even though it is possible that saturation was reached with just one focus group, it is unlikely.

The sample of participants selected for this study is also a limitation that needs to be considered. In focus group research, it is recommended that a focus group consists of participants that are homogeneous in nature but differ in terms of particular characteristics to prevent bias and undue influence on the focus group discussion (Krueger & Casey; 2000). The participants used in this study were homogenous in terms of occupation; however participants did vary in age and background in terms of skills and years of experience. This could have created a bias in the group discussion in that participants who had more years of experience and were older in age may have had undue influence on the discussion (Knodel, 1993; Krueger &



Casey, 2000). Even though as moderator I did not witness any biases during the focus group discussion, it still is a limitation that needs to be considered.

A third limitation is that my presence as moderator during the focus group could have affected participants' responses during the focus group discussion. All participants knew that I was the creator of the Peak Performance Training Program. I don't believe that my presence played a significant role nor affected the quality of responses; however it still is possible that participants of the focus group contributed more favorable comments than unfavorable comments because of this knowledge.

#### Recommendations for Future Research

This research study provided a set of feedback on participants' reactions to the Peak Performance Training Program, which will be used as formative evaluation to guide changes in the training program. Reactions, however, are just one area of training evaluation. According to Donald Kirkpatrick's levels of evaluation, training programs can be evaluated on four levels: reactions, learning, behavior, and results (as cited by Goldstein & Ford, 2002). Future studies could measure whether this training program caused learning to occur, produced new behaviors, or created the desired results.

## **APPENDIX A: UNIT DESCRIPTORS AND TRAINING OBJECTIVES**

**Course:** Peak Performance Training

**Prerequisites:** None

**Time Requirements:** Approximately 90 minutes

**Terminal Objective:**

- Given knowledge of characteristics that comprise peak performance, apply psychological skills to more consistently increase episodes of peak performance in business.

**Enabling Objectives:**

- Describe the characteristics that make up a performance.
- Describe the psychological characteristics of peak performance and the three components that make up peak performance.
- Use four skills to more effectively access a mental state of peak performance.

## **APPENDIX B: THE PEAK PERFORMANCE TRAINING PROGRAM**

Why do we sometimes fail to perform at our best when the stakes are high?

Why do we “bomb” important presentations in front of a boardroom of executives or in front of an important client?

Why do we have some days where we are “on” while others we can’t perform at all?




(Performing Well Under Pressure)

(Choking Under Pressure)



- ▶ You want to do well...you're motivated to do well...but you screw up. Why?

Too self conscious		Paralysis by Analysis
	Lack of confidence	Focused too hard on getting it right
		Can't focus
	<b>Pressure</b>	
I don't know why		Don't care
		Can't relax
Didn't practice enough	Too much going on	
		Feeling anxious



# Training Objective

Given knowledge of characteristics that comprise peak performance, apply four psychological skills to more consistently increase episodes of peak performance in your careers



## Today's Road Map

**Part 1:**  
**The Nature of  
Performance**

**Part 2:**  
**Peak Performance**



**Part 3:**  
**Skills for Peak  
Performance**

Chapter  
1

# The Nature of Performance



What are the differences between...

Successful studio musician

VS

Successful touring artist

Forensic pathologist

VS

Surgeon

Insurance actuary

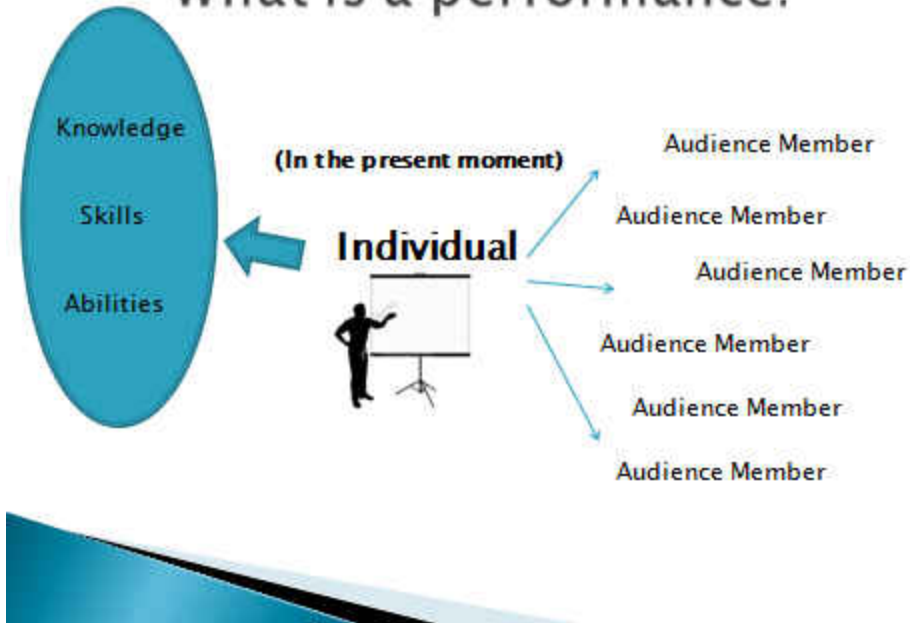
VS

Successful insurance salesperson





# What is a performance?



# Where are performances found?

**Athletes**



**Surgeons**



**Musicians**



**Lawyers**



**Law enforcement**



**Business**



## What activities must you give a verbal performance in business?

Sales

Training

Facilitating meetings

Consulting



Negotiating

Managing/Supervising



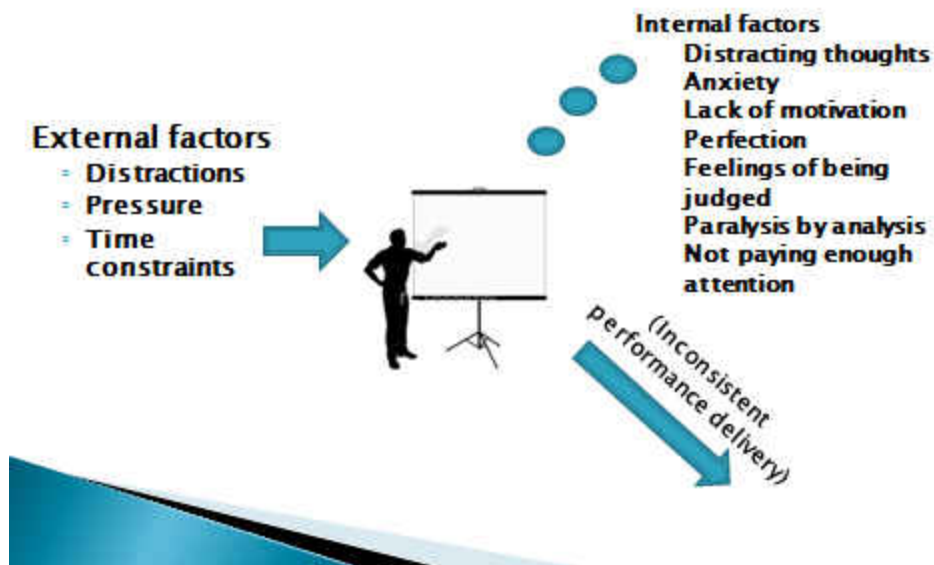
*Why is it important to perform well?*

### The outcomes of business performance

- \$\$\$
- Promotion
- Reputation
- Pride/Ego
- Self Esteem



## Why are we inconsistent sometimes during our performances?



## A Day on the Greens

- ▶ Who enjoys golf?
- ▶ Do you have some days where you tend to do better than others? Why is that?





## The Phenomenon Known as...

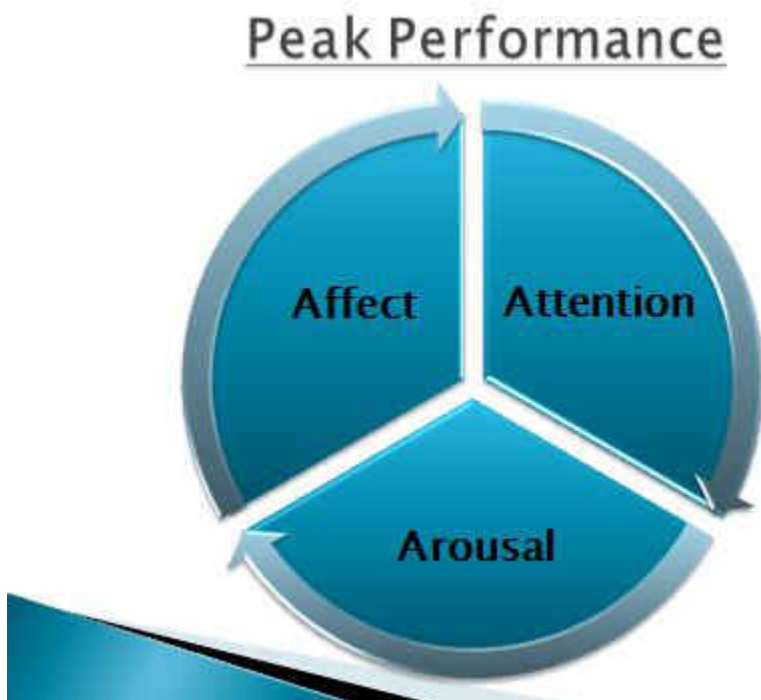
### ► Being in the Zone

- “The capacity to mobilize, control, and harness mental energy on demand” (Loehr & Schwartz)
- “The superior use of human potential” (Privette)
- “An episode of superior functioning” (Privette)



- ▶ Think back to the last time you had a peak performance.
  - What kind of task/activity was it?
  - What led you to perform optimally?

<u>Task</u>	<u>What led you to perform optimally</u>
	



### Attention

- Full focus in the present moment
- Total concentration

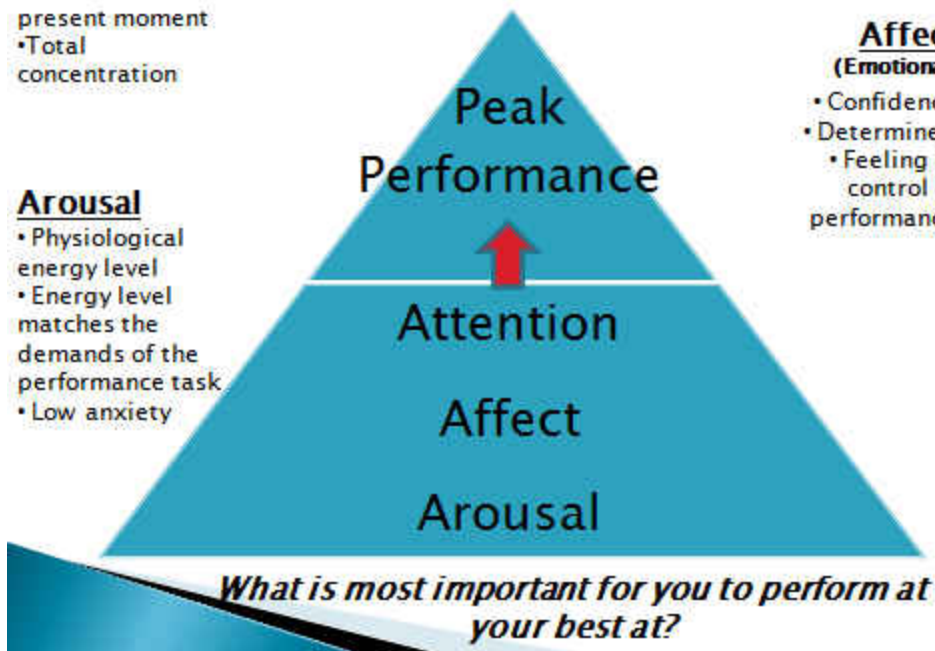
### Arousal

- Physiological energy level
- Energy level matches the demands of the performance task
- Low anxiety

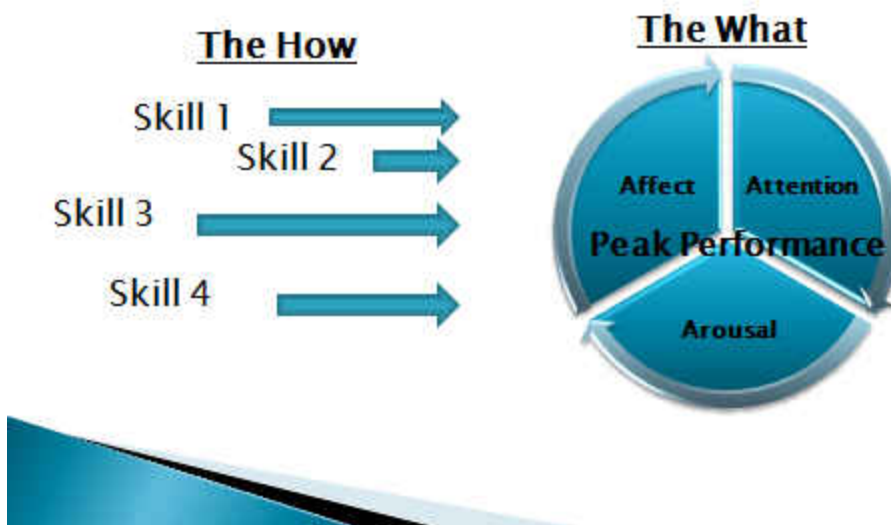
### Affect

(Emotional)

- Confidence
- Determined
- Feeling in control of performance



## This is “The How” Component!



## Attention & Concentration

### **Goal 1: Focus in the Present Moment During Performance**

- ▶ **Challenge: Too focused on the outcome**
  - What happens when you think too much about the outcome during performance?
    - If you're doing good → **Motivation**
    - If you're doing bad → **Choking** (2004 NY Yankees)

**Skill 1: Set process goals (rather than outcome goals) to direct attention into the present moment**

## Attention & Concentration

### **Goal 2: Maintain Total Concentration During Performance**

#### **Challenge: Getting distracted**

- What distracts you...

- Externally?
- Internally?

*(Walking the Plank)*

#### **Skill 2: Use a focusing/concentration skill to more effectively block out distractions**

- External distraction skills
  - Rehearsal, Worst case scenario
- Internal distraction skills
  - Cues, Performance routines

## Affect

### **Goal 3: To continuously use positive thoughts to increase/maintain confidence during performance**

#### **Challenge: Maintaining positive affect**

- What happens when you start screwing up?
- Thoughts are powerful!
  - 4 minute mile
  - Bench pressing 500 pounds
- Thoughts → Feelings → Behaviors

***"Whether you think you can or think you can't  
- you are right." -Henry Ford***





## Affect

### **Skill 3: Restructure thoughts to increase/maintain confidence during performance**

- Recognize thoughts
- Restructure thoughts
  - Strategies:
    - Reframing
    - ABC cognitive restructuring
- ▶ Role Play



## Arousal

**Goal 4: To match and maintain the most optimal arousal level for performance**

- ▶ **Challenge: Too much arousal leads to anxiety**
- ▶ Differences in arousal
- ▶ Why is arousal important for performance?
  - Golf vs. Weightlifting vs. Taking an exam

## Arousal

- ▶ *How do we control our levels of arousal?*
- ▶ **Skill 4: Use an activation management skill to match your arousal level to the arousal level most optimal for that performance task**
- ▶ Activation management handout





Questions?



## **APPENDIX C: PEAK PERFORMANCE TRAINING WORKBOOK**

## **CONFIDENTIAL**

**DATE: 11-29-2011**

**TO: All Training Participants**

**FROM: Matt Hallett, Peak Performance Trainer**

**SUBJECT: Creating and Accessing a Peak Performance State of Mind**

If you are sitting here reading this, it means you have been invited to this special training session. This training will help you more effectively access a mental state of peak performance in your jobs. This is the state of mind where you perform best at. Everything flows from this state of mind. Whether you speak in front of large audiences, manage employees, conduct sales or consulting meetings, play sports, or simply find it important to say the right things at the right times in your daily activities, this training session will help you accomplish this.

In this peak performance training session, you will have the following objectives:

- ▶ **Primary Objective:** Given characteristics that comprise peak performance, apply psychological skills to more consistently increase episodes of peak performance in your job
- ▶ **Secondary Objectives:**
  - ▶ Describe the characteristics that make up a “performance”
  - ▶ Describe the psychological characteristics of peak performance
  - ▶ Use four skills to more effectively access a mental state of peak performance

Should you wish to accept this mission, simply stay in your seats. The trainer will begin the session shortly. This message will self-destruct in T Minus 10 seconds. Welcome to Peak Performance Training.

Regards,

Matt Hallett, Peak Performance Trainer

## PEAK PERFORMANCE

I want Peak Performance in:

---

Possible Outcomes of Performance:

---

---

---

---

---



# Attention & Concentration

## SKILL 1: Setting Process Goals for Peak Performance

**Goal: Focus in the Present Moment During Performance**

Setting a Process Goal:

When do I get too focused on the outcome and what am I focused on?



# Attention & Concentration

## SKILL 2: Dealing with Distractions

### Goal: Maintain Total Concentration During Performance

External Distractions:

- 1) Rehearse your performance
- 2) Rehearse a worst case scenario

Internal Distractions:

My Strategy \_\_\_\_\_

Description of this strategy and how I will use it:

Common distractions during performance:

External –

Internal -

**Affect**

**SKILL 3: Thought Restructuring**

**Goal: To Continuously Use Positive Thoughts to Increase/Maintain Confidence  
During Performance**

My strategy \_\_\_\_\_

Thought Restructuring:

1.

2.

3.

Common things I say to myself  
when screwing up during a  
performance:

1.

2.

3.

# Arousal

## SKILL 4: Using an activation management skill to match my arousal level to the arousal level demands of the task

### Goal: To Match and Maintain the Most Optimal Arousal Level for My Performances

Activation Mgmt Skill \_\_\_\_\_

How I will use it:

\*The arousal demands for optimal performance in my task is typically:

(Low) 1 / 2 / 3 / 4 / 5 (High)

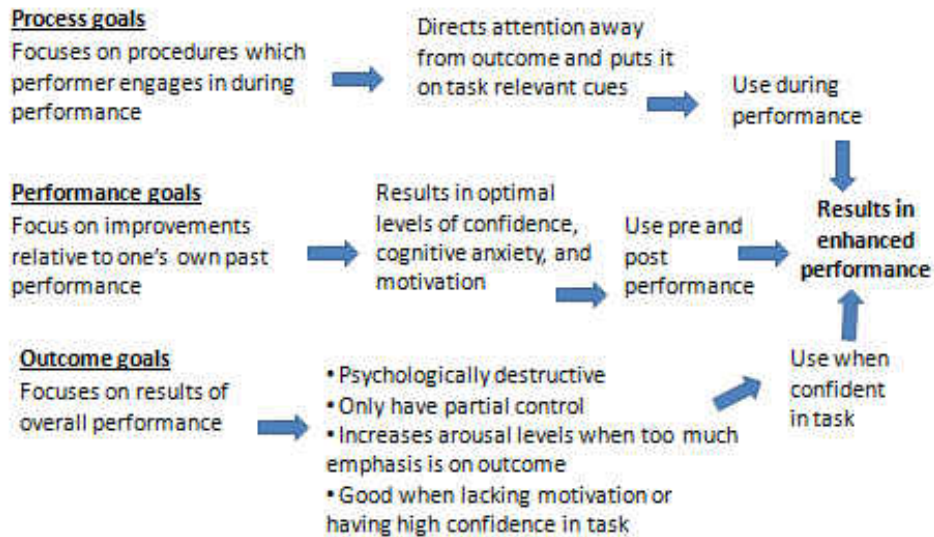
\*I am typically at this level of arousal during my performance:

1 / 2 / 3 / 4 / 5

\*This means I am typically (circle one)...  
under aroused /  
at the right level of arousal /  
over aroused  
during my performances.

## **APPENDIX D: PEAK PERFORMANCE TRAINING HANDOUTS**

## SKILL 1: SETTING PROCESS GOALS



## SKILL 2: DEVELOPING A "CUE"

- ▶ Used to focus concentration and retrigger concentration once lost
- ▶ Centers attention on most appropriate focus within task at hand
  - ▶ Verbal Cues: "Now", "Here"

### Guidelines for developing effective cues

- Verbal or kinesthetic
- Positive cues
- Present rather than past/future
- Focus on process (proper form and execution)
- Must be individualized to you

## SKILL 2: DEVELOPING A ROUTINE/RITUAL

- Routine/Rituals
  - Small procedural steps
  - Triggers concentration on the task
- When to use a routine:
  - Preperformance
  - Performance
  - Refocusing

### Guidelines for effective routine development

- Cue both body and mind
- Associate concentration with your routine

## SKILL 3: REFRAMING THOUGHTS

- Reframing means seeing thoughts from a different perspective

1) Acknowledge the thoughts that are happening → 2) Instead of changing them, see the thought from a different perspective

#### Example:

• Original thought: "I'm really psyched up right now. Wow, I feel so nervous about this presentation."

• Reframing: "Actually that's not nervousness. It's actually excitement. Sometimes I get the two feelings confused. They really do feel the same sometimes."

## SKILL 3: ABC COGNITIVE RESTRUCTURING

- ABC Cognitive Restructuring
  - Activating Event
  - Belief
  - Consequence
  - (Dispute)
- Goal is to create awareness so you immediately recognize dysfunctional thinking and then dispute it

## SKILL 4: Activation Management Skills

- To Decrease Arousal:
  - Deep Diaphragmatic Breathing
  - Visualization
    - Practice skills of “Vividness” & “Controllability”
  - Meditation
  - Alter significance of performance by restructuring thoughts
  - Slow Music
- ▶ To Increase Arousal:
  - Fast breathing
  - Visualization
    - Energizing images
  - Verbal cues
  - Fast music

## SKILL 4: Activation Management - Visualization

### Visualization Guidelines

- Practice Vividness & Controllability when visualizing
- Images should contain
  - Conditions of the situation (audience, podium, etc)
  - Your behavioral, psychological, and physiological responses to the situation
- Don't try to do too much, too soon
- External vs. internal perspectives
- Must be controlled, systematic practice (organized sessions) (there is no evidence for effectiveness of haphazard imagery)
- Practice imagery in any kind of setting and position
- Timing in imagery should be the exact same as when practicing the real skill (do not do slow motion or fast forward)
- Imagine mental, physiological, AND behavioral responses to situations
- Imagine performance AND outcome
- Be specific in all uses of imagery
- Use imagery logs



## **APPENDIX E: FOCUS GROUP PROTOCOL**

Date: 11-29-2011

Time: 9:30am – 11:45am

Location: 1929 Summer Club Unit #201, Oviedo, FL 32765 (Researcher's Residence)

Moderator: Matt Hallett

## **PART 1**

- Welcome
  - Thanks for being part of the focus group. I appreciate your willingness to participate.
  - At this part, you all will have been through the consent process and will have a copy of the consent form for your records. If you do not, please let me know as I have extra copies for anyone who needs one.
- Introduction of myself and research I'm conducting
- Purpose
  - As part of my master's thesis at the University of Central Florida, I am conducting this focus group in order to get feedback on this peak performance training program. I need your input and want you to be completely forthright and honest during the discussion.
- Your information will be used to help me make changes in the peak performance training workshop
- You were selected for this focus group because of your background and relevancy in training and development or in business
- Some Ground Rules
  - The session will last approximately 1 ½ - 2 hours in duration
    - 60-90 minutes of training
    - 30 minutes of focus group discussion
  - There are no right or wrong answers, only differing points of view.
  - I will be audio recording the entire session

- You don't need to agree with others, but you must listen respectfully as others share their views
- Please turn all cellular phones on vibrate. If you ABSOLUTELY must take a call, please do so quickly and rejoin the discussion as soon as possible
- My role as moderator will be to guide the discussion

Any questions? If not, let's begin....

## **PART 2**

- I. Deliver the Peak Performance Training Workshop to Participants (60-90 minutes)
- II. Questioning Route (30 minutes)

### **Opening Question:**

- a. What were your general impressions of the training program? What did you like? What did you not like? (30 seconds to 2 minutes per response)

### **Key Questions:**

- b. Can this training program be improved? If so, how can it be improved?
- c. Do you feel like you understood the content of the peak performance training program? Can I improve on this and if so how?
- d. Do you feel like you can apply this in your lives? How can I make this training more applicable and more useful so you'll use it more?
- e. Were you motivated and interested in the training content? Can I make the material more interesting and if so how?

### **Closing Question:**

- f. Of all the things we've discussed today, what is the #1 thing you can offer me as far as feedback on how to improve this training program?

## **APPENDIX F: EXPLANATION OF RESEARCH**



## **Peak Performance Training**

### **Explanation of Research**

Title of Project: Peak Performance Training

Principal Investigator: Matt Hallett

Other Investigators: N/A

Faculty Supervisor: Dr. Bobby Hoffman, Ph. D

You are being invited to take part in a research study. Whether you take part is up to you. It is completely voluntary.

- The purpose of this study is to gather feedback from you on the effectiveness of a peak performance training workshop designed by the researcher. Your feedback will be used for formative evaluation purposes that will help the researcher make changes to his peak performance training workshop.
- You will be asked to contribute approximately 90-120 minutes of your time in a focus group where you will meet with the researcher and other group participants at the researcher's residence located at 1929 Summer Club, Unit 201 in Oviedo, Florida 32765. The first part of this focus group will be a training session where the researcher will take you through the peak performance training as a participant. The first part will last approximately 60-90 minutes. The second part of this focus group will involve you taking part in a 30 minute discussion about the training workshop where the researcher will ask you and the rest of the group questions about the effectiveness of the training program. The focus group will take place towards the end of September 2011 or in early October 2011. Your responsibilities are to show up to the focus group promptly on time and make honest contributions to the focus group discussion.

**Audio taping:**

You will be audio recorded during this study. The audio recording will be kept in a locked, safe place. The audio recording will be kept during the course of the research study as the researcher analyzes the focus group discussion and writes up the results. The audio recording will be destroyed at the conclusion of this study or by December 31, 2011, whichever date comes first.

**You must be 18 years of age or older to take part in this research study.**

**Study contact for questions about the study or to report a problem:** If you have questions, concerns, or complaints or think the research has hurt you, talk to: Matt Hallett, Graduate Student, Applied Learning and Instruction Master of Arts Program, College of Education, (314) 922-9633 or Dr. Bobby Hoffman, Assistant Professor, School of Teaching, Learning, & Leadership at (407) 823-1770 or by email at [bobby.hoffman@ucf.edu](mailto:bobby.hoffman@ucf.edu).

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

## **APPENDIX G: LETTER TO PARTICIPANTS**

(Insert Date)

Dear \_\_\_\_\_,

Thank you for your willingness to participate in the focus group on my Peak Performance Training Workshop. As discussed, I would like to hear your thoughts and feedback about the effectiveness of the Peak Performance Training Workshop you will go through during the focus group. The entire focus group will last approximately 1 ½ - 2 hours (60-90 minutes to go through the training and 30 minutes of discussion). Your responses during the focus group will be kept anonymous. The date, time, and location are listed below.

Date:

Time:

Location:

If you need directions please call me at (314) 922-9633. Otherwise I look forward to seeing you.

Sincerely,

Matt Hallett



**APPENDIX H: IRB APPROVAL - EXEMPT OF HUMAN RESEARCH**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Matt Hallett**

Date: **September 22, 2011**

Dear Researcher:

On 9/22/2011, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Peak Performance Training  
Investigator: Matt Hallett  
IRB Number: SBE-11-07882  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 09/22/2011 01:10:39 PM EDT

A handwritten signature in cursive script that reads 'Joanne Muratori'.

IRB Coordinator

## **APPENDIX I: IRB APPROVAL OF MODIFICATIONS**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Matt Hallett**

Date: **September 28, 2011**

Dear Researcher:

On 9/28/2011, the IRB approved the following minor modifications to human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: Focus group changes have been revised and slight changes have been made to the peak performance PowerPoint slides. In addition a peak performance training work sheet and training handouts have been created. All new documents have been added to the study in iRIS.  
Project Title: Peak Performance Training  
Investigator: Matt Hallett  
IRB Number: SBE-11-07882  
Funding Agency:  
Grant Title:  
Research ID: NA

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 09/28/2011 12:29:24 PM EDT

A handwritten signature in black ink that reads "Joanne Muratori".

IRB Coordinator

## REFERENCES

- Andersen, M. B. (2009). The “canon” of psychological skills training for enhancing performance. In K. F. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 11-34). Washington, DC: American Psychological Association.
- Baldwin, T. T. & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*, 63-105.
- Beilock, S. (2010). *Choke: What the secrets of the brain reveal about getting it right when you have to*. New York, NY: Free Press.
- Bianco, T. (2010). [Review of the book *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations*, by Kate F. Hays (Editor)]. *Canadian Psychology, 51*, (3), pp. 213-220.
- Brodbeck, S. (2007). Cricket and the karmayoga. A comparative study of peak performance. *Sport in Society, 10*(5), 787-801.
- Brown, C. H. (2009). The consultant as a performer. In K. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 309-327). Washington, DC: American Psychological Association.
- Brown, S. C., Stevens, R. A., Troiano, P. F., & Schneider, M. K. (2002). Exploring complex phenomena: Grounded theory in student affairs research. *Journal of College Student Development, 43*, 1-11.

- Bruning, R., Schraw, G., Norby, M., & Ronning, R. (2004). *Cognitive psychology and instruction* (4th ed.). Englewood Cliffs, NJ: Pearson Education.
- Cheng, E. W. L. & Hampson, I. (2008). Transfer of training: A review and new insights. *International Journal of Management Reviews*, 10, 327-341.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety: The experience of play in work and games*. San Francisco: Jossey-Bass.
- Dick, W., Carey, L., & Carey, J. (2009). *The systematic design of instruction* (7<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Education.
- Foster, S., Lloyd, P. J., & Kamin, S. (2009). Mental preparation, memorization, and improvisation. In K. F. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 77-97). Washington, DC: American Psychological Association.
- Garfield, C. (1986). *Peak performers: The new heroes of American business*. New York, NY: Avon Books.
- Garfield, C. A., & Bennett, H. Z. (1984). *Peak performance: Mental training techniques of the world's greatest athletes*. Los Angeles, CA: Tarcher.
- Gay, L. R., Mills, G. E., & Airasian, P. (2009). *Educational research: Competencies for analysis and application* (9<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Education.
- Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations* (4<sup>th</sup> ed.). Belmont, CA: Thomson Learning, Inc.
- Gould, D. (2002). Moving beyond the psychology of athletic excellence [Special issue]. *Journal of Applied Sport Psychology* 14 (4), 247-248.

- Gould, D. (2006). Goal setting for peak performance. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 240-259). New York, NY: McGraw Hill.
- Gould, D. R. (2009). Confidence. In K. F. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 57-76). Washington, DC: American Psychological Association.
- Harmison, R. J. (2006). Peak performance in sport: Identifying ideal performance states and developing athletes' psychological skills. *Professional Psychology: Research and Practice*, 37(3), 233-243.
- Harung, H., Heaton, D., Graff, W., & Alexander, C. (1996). Peak performance and higher states of consciousness: A study of world-class performers. *Journal of Managerial Psychology*, 11(4), 3-23.
- Hays, K. F. (2009). Performance anxiety. In K. F. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 101-120). Washington, DC: American Psychological Association.
- Hays, K. F., & Brown, C. H. (2004). *You're on!: Consulting for peak performance*. Washington, DC: American Psychological Association.
- Ievleva, L., & Terry, P. C. (2008). Applying Sport Psychology to Business. *International Coaching Psychology Review*, 3 (1), 8-18.

- Jones, G. (2002). Performance excellence: A personal perspective on the link between sport and business. *Journal of Applied Sport Psychology, 14*, 268-281.
- Kinicki, A. (2008). *Organizational behavior: Core concepts*. New York: McGraw-Hill.
- Knodel, J. (1993). The design and analysis of focus group studies: A practical approach. In D. L. Morgan (ed.). *Successful focus groups: Advancing the state of the art* (pp.35-50). Newbury Park, CA: Sage.
- Krane, W., & Williams, J. M. (2006). Psychological characteristics of peak performance. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 207-227). New York, NY: McGraw Hill.
- Krueger, R. A., & Casey, M. A. (2000). *Focus groups: A practical guide for applied research* (3<sup>rd</sup> ed.). Thousand Oaks, California: Sage Publications, Inc.
- Landers, D. M., & Arent, S. M. (2006). Arousal-performance relationships. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 260-284). New York, NY: McGraw Hill.
- Loehr, J., & Schwartz, T. (2001). The making of a corporate athlete. *Harvard Business Review, 79* (1), 120-128.
- Marotto, M., Roos, J., & Victor, B. (2007). Collective virtuosity in organizations: A study of peak performance in an orchestra. *Journal of Management Studies, 44*(3), 388-413.
- Maslow, A. (1999). *Toward a psychology of being*. New York, NY: John Wiley & Sons, Inc.
- Mayer, R. (2007). *Learning and instruction* (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Pearson Education.



- McCann, S. M., (2009). Emotional intelligence. In K. F. Hays (Ed.), *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations* (pp. 35-56). Washington, DC: American Psychological Association.
- Murphy, S. (1997). *The achievement zone: An eight-step guide to peak performance*. New York, NY: Putnam.
- Nideffer, R. M., & Sagal, M. (2006). Concentration and attention control training. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 382-403). New York, NY: McGraw Hill.
- Privette, G (1981). Dynamics of peak performance. *Journal of Humanistic Psychology*, 21 (1), 57-67.
- Privette, G. (1983). Peak experience, peak performance, and flow: A comparative analysis of positive human experiences. *Journal of Personality and Social Psychology*, 45, 1361-1368.
- Privette, G., & Landsman, T. (1983). Factor analysis of peak performance: The full use of potential. *Journal of Personality and Social Psychology*, 44(1), 195-200.
- Ravizza, K. (2006). Increasing awareness for sport performance. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 228-239). New York, NY: McGraw Hill.
- Robbins, S. P., & Judge, T. A. (2009). *Organizational Behavior* (13<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Education.

- Russ-Eft, D. (2002). A typology of training design and work environment factors affecting workplace learning and transfer. *Human Resource Development Review, 1*, 45-65.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. Bristol, PA: The Falmer Press.
- Thornton, F., Privette, G., & Bundrick, C. (1999). Peak performance of business leaders: An experience parallel to self-actualization theory. *Journal of Business and Psychology, 14*(2), 253-264.
- Torres, C., & Bruxelles, M. (1989). You've entered the training zone. *Training & Development Journal, 74-76*.
- Vealey, R. S., & Greenleaf, C. A. (2006). Seeing is believing: Understanding and using imagery in sport. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 306-348). New York, NY: McGraw Hill.
- Weinberg, R., & McDermott, M. (2002). A comparative analysis of sport and business organizations: Factors perceived critical for organizational success. *Journal of Applied Sport Psychology, 14*, 282-298.
- Weinberg, R. S., & Williams, J. M. (2006). Integrating and implementing a psychological skills training program. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 425-457). New York, NY: McGraw Hill.
- Wells, G. W. (2010, February 21). Peak performance: Why do athletes sometimes not perform up to expectations? Retrieved from <http://www.drgregwells.com/wells-blog/2010/2/21/peak-performance-why-do-athletes-sometimes-not-perform-up-to.html>

- Williams, J. M., & Harris, D. V. (2006). Relaxation and energizing techniques for regulation of arousal. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 285-305). New York, NY: McGraw Hill.
- Wilson, V. E., Peper, E., & Schmid, A. (2006). Strategies for training concentration. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 404-422). New York, NY: McGraw Hill.
- Zinsser, N., Bunker, L., & Williams, J. M. (2006). Cognitive techniques for building confidence and enhancing performance. In J. M. Williams (5<sup>th</sup> ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 349-381). New York, NY: McGraw Hill.