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Impact of meditation on emotional intelligence and self-perception of leadership skills

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Impact of Meditation on Emotional Intelligence and Self-perception of Leadership Skills

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Abstract

Effective leadership is still a subject of much research, but it seems that the questions of what is an effective leadership and how to be an effective leader, still remain. In order to address this issue, the transformation of leaders in terms of self-development, attitude, their perception and behaviour is necessary in order to help leaders cope with the uncertainties and continuous change in business environments. This research investigates the role of meditation for enhancing emotional intelligence and self-perception of leadership skills of executives.

An experimental research involving 80 executives in Bangkok and 64 executives in London has been conducted for 12 weeks in each city. Study participants have been divided into two groups: an experimental group and a control group. Experimental groups in Bangkok and London had 40 and 32 participants respectively from different organisations. Through testing the two groups of executives, this research explored the differences between executives in an experimental group who practised an one-hour meditation for every week for 12 weeks, and executives from the control group who were merely monitored. All research participants in both groups completed 125 items EQ-i Bar-On Emotional Quotient Inventory (Bar-On EQ-i) as well as 25 items of Self-perception of Leadership Skills Inventory before the start of the first session, and after the last session.

Results of the overall test for analysis using Multivariate Analysis of Variance (MANOVA) showed that the Wilks Lambda multivariate tests of overall differences obtained for experimental groups in both Bangkok and London were statistically significant ($p<.05$). This implies that there are statistically proven significant differences in emotional intelligence and self-perception of leadership skills simultaneously due to meditation practice within experimental groups. Furthermore, the Analysis of Variance (ANOVA) showed a particular impact was made on the management of stress, intrapersonal awareness and motivating people. Meditation helps to gradually cultivate mindful awareness and concentration, resulting in a direct effect of enhancing emotional intelligence and self-perception of leadership skills. Insight competence resulting from meditation, if utilised in an appropriate way, can be a potential tool for enhancing the skills of business leaders.

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I declare that all the material contained in this thesis is my own work.

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Tanmika Tamwatin

Chapter 1: Introduction

1.1 - Introduction

The purpose of this research is to investigate the impact of Meditation on Emotional Intelligence (EI) and Self-perception of Leadership Skills (SPLS) in a business context. It may be argued that these disciplines share certain common concepts:

(1) It is a subject of interesting research;

(2) Subject history is unique and rich in context; and

(3) The key objective is the promotion and enhancement of human potential and development in business context.

However the difference between the individual concepts is that each discipline may be viewed from different perspectives. Walsh and Shapiro (2006) argued that, with a greater opening of minds by scholars, and with mutual aspirations from the meditative and science disciplines now being enjoyed, these disciplines have put pressure on researchers and scholars to investigate this subject further and by doing so have also challenged and enriched one another.

> *'The history of science is rich in the example of the fruitfulness of*
> *bringing two sets of techniques, two sets of ideas, developed in*
> *separate contexts for the pursuit of new truth, into touch with one another'*

> J. Robert Oppenheimer,
> Science and the Common Understanding, 1954

To combine the benefits of a variety of disciplines is advantageous as the assimilation of multi-conceptual disciplines into a business context may enhance the intended outcome. Meditation is directly related to the areas of 'mind body awareness and consciousness' (Shapiro and Walsh, 1984; Wallace, 2003; Zelazo *et al.,* 2007; Cahn and Polich, 2006; Walsh and Shapiro, 2006; Bond *et al.,* 2009), the topics of which are most commonly used in the field of psychology. Therefore, by implication, it is necessary to address the psychological element within this investigation. However, the

main purpose and intention of this research is to make a significant contribution to the business environment.

Conducting research on meditation in business is a challenging task, as many empirical studies on meditation have focused largely on clinical and medical psychology (Chan and Woollacott, 2007), or personal health-enhancing aspects (Epstein, 1990; Shapiro, and Walsh, 2003). Hence, little academic research has been done regarding its relationship to business, especially development of leadership skills (McCollum, 1999). The argument states that studies investigating the effect meditation may have in the business environment often lack academic rigour (Harung *et al.,* 1995); consequently, a variety of issues arise when comparing studies for the purpose of drawing universal conclusions. This thesis proposes a solution to these problems in order that future studies may have academic rigour, provide a greater uniformity of research, and the results may be more easily compared and analysed.

The first visible connection between meditation and leadership skills begins with Lee *et al.,* (1989). Lee suggested that most of leadership skills training only acts as a push in the right direction towards sustainable development of leadership skills. This, he argues, results in most leadership skills training only providing benefits for a limited period of time, not enough to transform business managers into effective leaders. This notion is also supported by Harung *et al.,* (1995). Their view is that the world is constantly changing towards sustainable development with sophisticated demands, resulting in difficulties dealing with and managing the self and others.

Bar-on (1997) asserted that sometimes social and emotional sensitivity plays an important role for leaders to deal with a complicated work environment. Goleman *et al.,* (2002b) agrees that the social environment puts pressure on leaders, thereby diminishing their ability to perform effectively. The prominent leadership scholars such as Drucker (1967) and Bass (1985) stated that 'leadership is a set of behavioural skills which can be learned' which is encouraging news. Kaplan (1990) argued that although behavioural changes are important for management development, it does not have the ability to make a significant impact when used in isolation. Chakraborty (1995) notes that Warren Bennis viewed the training of leadership as having the ability to teach skills but without changing the vision. Therefore, one proposition for enhancing the

benefits of leadership skills development is to provide a means for leadership development, that is, to direct more attention towards creating a leader from 'within' a person of positive attitude, using and building on the talents, skills and the power of 'the inner self' that that person may already possess (Harung *et al.,* 1995; McCollum, 1999; Napier, 2007; Chakraborty, 1995). It is believed by Harung *et al.,* (1995), Napier, (2007) that at the deepest level of subjectivity of leaders - the ego, the self, or the sub-conscious - can be developed by enhancing one's consciousness (Gross, 2010). Literature reviews on leadership have stated the importance of leadership development, but it was argued that it lacked the tools to develop leaders at a deep level. Therefore, at the heart of this research is the study and analysis of how to develop leaders at this deep inner core. To clarify this, the thesis focuses on self-perception of leaders rather than leadership management and performance leadership.

Meditation is gradually becoming internationally recognised (Walsh and Shapiro, 2006), however, its conceptual nature is often misunderstood (Napier, 2007) since most people still regard meditation as an aspect of religious belief. One common misconception relating to the term 'meditation' refers to a person sitting in certain difficult postures, as in yoga. For example, the ancient yogi had a specific posture when practicing by raising one leg up by the ankle around the neck, humming or chanting a mantra. This research intends to extricate the practice of meditation from all misconceptions. Therefore, any connection to religious beliefs will be disregarded during this investigation. Nevertheless, there will be some religious terminology used simply to indicate useful information regarding the origin and history of meditation. This allows clarification of the subject being studied as well as insight into previous forms of research (Lutz *et al.,* 2007).

Some well-known benefits common to the three variables, meditation, emotional intelligence (EI), and self-perception of leadership skills (SPLS) will also include improved self-awareness and the ability to generate effective self-perception of leadership skills from 'within'. It is postulated that once concentration and self-awareness has been attained then one may begin to control one's emotions in a positive manner. (Marques *et al.,* 2005; Walsh and Shapiro, 2006; Gupta *et al.,* 2007). Leaders that are able to manage emotions effectively in challenging situations may be regarded as possessing emotional competency, by having awareness of personal negative and

judgmental thoughts (Walsh and Shapiro, 2006), impulse control and motivation, (Dalai Lama and Ekman, 2008; Davidson and Harrington, 2002; Shapiro *et al.,* 2006) and, empathy and persistencee (Goleman, 1995). The strengthening of these qualities is in direct positive correlation to perceptions of 'success' in the work place (Goleman, 1995). It is proposed, therefore, that this research will show how meditation can be positively employed as one of the tools designed to enhance the self-perception of leaders by harnessing the 'inner strengths' at the deepest level of consciousness.

This chapter begins with: Introduction (1.1); Psychoanalytic approach - understanding and analysis (1.2); Overview of the research (1.3); Background context of the research (1.4); Framework of the study (1.5); Research aims and objectives (1.6); Research questions (1.7); Problems of the background research (1.8); Utilisation of the research method (1.9); Structure of the thesis (2.0); Chapter summary (2.1).

1.2 - Psychoanalytic approach - understanding and analysis

This research has attempted to apply a psychoanalytic perspective to the overall view that meditation may enhance the ability of leaders in the business environment to improve their self-perception of leadership skills. However, this perspective is merely on the periphery of the research as a whole. It touches only on the aspect of the conscious and unconscious mind, a theoretical style of analysis, originated by Sigmund Freud (1914), as contextual means for understanding and analysis of this thesis. The psychoanalytic view emanates from the 'psychoanalytic theory of personality', which falls under the study of 'personality psychology'.

Personality psychology is based on the study of how and why people feel, think and behave in a particular manner. The psychoanalytic view that all feelings, thoughts and behaviour occurs through the processes of the conscious and unconscious mind (Freud, 1914). It looks at the inner mental process comprising 'id, ego and superego' unlike the behaviourist school of thought influenced by Watson (1913). Behaviourism is a theory of learning that assumes all behaviour can be measured and changed and that all behaviour influenced by a learning process is acquired through external interaction. The cause of behaviour is not linked with the inner mental state of mind (Watson, 1913), however, behaviourism is of the view that the external environment does actively shape

human behaviours, unlike the Freudian view that it is the unconscious mind that is in control of behaviour. The psychoanalytic perspective stands as a reaction against behaviourism and structuralism, and to ensure that the psychoanalytic view emphasised the 'perception' (Freud, 1914).

Freud's (1914) psychoanalytic approach states that the conscious mind refers to feelings, thoughts, actions and general human behaviour. This conscious mind shapes the way one thinks, feels and acts rationally (Gross, 2010). It includes perceptions, feelings, sensations, fantasies and memories that are rationally guarded with absolute awareness (Freud, 1914). In contrast, the unconscious mind refers to feelings, thoughts, and actions, including memories, that the conscious mind is unaware of as being in control of feelings and all aspects of human thoughts and actions.

Freud stated that the unconscious mind plays a far more significant role than the conscious mind, as it is hidden away from what one's own awareness. On this basis, it may then be possible to alter the state of the unconscious mind by the practice of meditation to a higher level of conscious mind, including all aspects concerning feelings, thoughts, perception, sensations, memories etc, which could potentially change human personality, perception, attitudes, and actions into a more positive way of thinking and behaving. Gross (2010) states that human behaviour is determined by unconscious forces of which one is not aware, such as thinking, utterance or behaviour. Thinking, utterance and behaviour are hidden by inner motives which cause the change in perception (Gross, 2010).

This research applies a psychoanalytic view to explain that the process of meditation practice may have an impact on the participants' feelings, perception towards their emotional intelligence and perceived leadership skills during the stage of 'mindful awareness' which may influence the level of human's unconscious mind. The participant in this research refers to a person who had been appointed to a chief executive position in a company and whose role, therefore, influences subordinates.

Psychoanalytic makes a main basic assumption in which the unconscious is the origin of determining the causes of human behaviour. Therefore, all behaviour, thinking and feelings have identifiable reasons for their existence (Freud, 1914). The discussion of

the possible causes of human behaviour, thinking and action remains the preserve of philosophical and psychological study and the justification of the results lies in the observations and experiences from repeated answers and behaviour (Gross, 2010).

1.2.1 - Evaluation of the approach

The psychoanalytic approach is expected to provide strength to this research because this method enables a deep exploration and close examination of feelings, thoughts and behaviour emanating from the 'id' or 'inner self'. The explanation on the link between meditation and awareness of thoughts, feelings, and behaviour can be explained, based on the view of the conscious and unconscious mind, which other approaches do not address. In contrast to this positive view of a psychoanalytic approach is the criticism that it lacks significant scientific evidence. Psychoanalytic and other psychodynamic theories are criticised as being 'unscientific' due to being *"unfalsifiable"* (Gross, 2010). This is because most of the research that adopted the psychoanalytic approach was conducted based on case studies rather than scientific experimental research. However, Zeldow (1995) stated that sometimes the theory with the deepest explanation cannot demonstrate in a simple, reliable, quantitative way. Since the approach in this thesis often involves the unconscious mind and is criticised for its difficulty to measure and quantify (Gross, 2010), this research adopted an experimental method rather than a case study method, in order to minimise the impact of above criticism. Another possible limitation to this approach is that it provides academic freedom for researchers to present their own analyses, therefore, care and consideration of analysis must be considered.

Gross (2010) said that the psychodynamic approach has limitations and is open to criticism as understanding human behaviour involves subjective issues which are difficult to explain and prove scientifically. However, rejection of the psychoanalytic approach is controversial since it is widely accepted and employed in psychological research, even though the criticisms are fully understood.

1.2.2 - Implication of the psychoanalytic method: adopting a psychoanalytic perspective

The analysis technique adopted within this research applied a 'psychoanalytic perspective'. The application of psychoanalytic method, through repeated questions and answers and through the participants' observations and experiences, may contribute to the understanding and treatment of an individual regarding their thinking and behaviour.

This analysis technique will be applied to participants in both London and Bangkok by repeating questions and answers from validated questionnaires. The repeated answers occur before and after their experiences and observations from the meditation practice. Participants will complete questionnaires before and after their 12-week meditation practice. The questionnaires contain exactly the same questions but listed in a different order in the post-practice questionnaire so that participants assume they are completing a completely different questionnaire (Coolican, 2004). Their experiences and observations occur during specific tasks and are assumed to be honest expressions of their feelings as they engage with the process of meditation practice (Zelazo, 2007).

Psychoanalysis is said to assist the analyst in receiving honest responses from patients while the patients improve their individual development through the treatment process (Gross, 2010). The 'analyst' in this case refers to the repeated questions from the questionnaires and the 'patients' refer to the participants whose criterion for selection is having been appointed chief executive of a company in either London or Bangkok before they will be received 'treatment' (which is the 12-week meditation practice). In this case it will be from the observations, experiences, feelings, thoughts, and behaviour of the subjects who received meditation as a treatment in investigating their self-perception towards their perceived emotional intelligence and self-perception of leadership skills.

Through repeated questioning analysis will be performed based on their perceptions indicated in their answers to the questionnaires. During this process, one possible bias may occur as the subject or may not respond honestly, which is said to be one of the limitations that could diminish the power of the results. Therefore, the validity and

reliability of the questionnaire are crucial (Coolican, 2004). Taking that into account there are many items in each questionnaire that will measure the same objectives. The method will reduce bias and limit mistakes, or the impact of dishonesty, when answering the questions. This is because the average for each of the items that measured the same objective shows the possible range for the actual answer (Coolican, 2004).

This analytical approach is able to identify and analyse human thought and feelings. The reference material includes attention, perception, thinking, decision-making, problem solving, reasoning, memory and concept-formation. Some of the issues such as attention, perception, decision-making and problem solving are directly related components of emotional intelligence and self-perception of leadership skills. The analytic approach also examines perception within a social context with regard to *interpersonal relationships, perception, prejudice and discrimination, anti-social behaviour, social and emotional change* (Gilbert, 1998). This can be applied to describe the self-perception of leadership while experiencing meditation practice in relation to emotional intelligence and their self-perception of leadership skills. As Gross (2010) explains, 'the concept is concerned with mental development issues cultivated from the experience of emotion and behaviour as a positive result from an inner state of consciousness.'

1.3 - Overview of research

The primary purpose of this research is to examine whether or not meditation can assist the development of emotional intelligence and self-perception of leadership skills in business leaders.

The major assumptions of this research have been focused on three key areas of the study.

First, meditation in this thesis is defined as a mind training teaching that helps to stabilise the mind (Walsh and Shapiro, 2006; Dalai Lama, 2001). The research investigates the impact of meditation through meditation practice. The practice will

focus on mind training, following the instruction of a seven-point meditation practice, known as Vipassana meditation.

Second, emotional intelligence is defined as an ability to be aware, to understand, to manage, and to control one's emotions in a variety of challenging social situations (Bar-On, 1995). A Bar-on EQ-i is used as a variable indicator for this thesis. Bar-on EQ-i is focused on emotional and social factors. It is considered as a mixed model where, rather than a performance model, its theoretical concept is more suitable to the design of this study. More details with regard to its theoretical and analytical measurement are provided in Chapter 2.

Third, 'self-perception of leadership skills' is addressed rather than the concept of 'leadership skills'. The concept of self-perception of leadership skills in this thesis, refers to the perception of an individual towards their own leadership skills, not other people's views on their leadership skills. In the context of self-perception of leadership skills, the subject of the study will be a leader by appointed to a senior positioning an organisation, such as a chief executive.

Although much previous research into meditation has focused largely on its psychological effects, the history of the technique is strongly entwined with religious practice. Whilst reference is made to these aspects, the focus of this research is unrelated to these concepts and are merely mentioned as signposts for useful information. The role of meditation within a business setting is an area that has not been fully explored in the past and is, therefore, a subject that is ready for examination and detailed study.

Given this, meditation experiments were conducted amongst two groups of business leaders in Bangkok, Thailand and in London, United Kingdom. This quantitative, experimental research allowed the experiments to be conducted systematically, allowing the findings presented to represent validated, scientific process outcomes.

1.3.1 - Summary of the possible links between meditation, emotional intelligence and self-perception of leadership skills

The table below summarises the overall links between the three subject areas that will lead to the research questions and hypotheses of this study. The table contents will receive further clarification throughout this chapter in order to add further details to the research overview.

Table 1.1 - The links between meditation, emotional intelligence and self-perception of leadership skills

Meditation, emotional intelligence and self-perception leadership skills : How these three variables can be linked together?
Previous Research Problems (1) • What is effective leadership? How do leaders acquire their self-perception of leadership?
Possible approaches to the research issues • Leaders must look inside themselves, inside their own consciousness (Harung *et al.*,1995; Dalai Lama, 2001; Chandasaro, 2003; London, 2002). • Vision of the future, self-development, learning process, experiences (Bennis and Nanus, 1988; Harung *et al.*,1995; Owen *et al.*, 2004, Western, 2008). • Self-perception of leadership skills necessarily involves having a moral purpose (Bass, 1985; Goleman, 1995; Broome *et al.,* 2005; Dalai lama, 2001; Lennick and kiel, 2005; Western, 2008). • EI is more important than IQ (Goleman, 1995, 1996; *Owen et al.,* 2004; Western 2008). • In order to lead people, intellect itself is not enough. Non-intellectual abilities are essential. (Thorndike, 1937; Wechsler, 1943; Gardner, 1995; Salovey and Mayer, 1990; Goleman, 1995; Owen *et al.*, 2004; Poter *et al.*, 2006; Western, 2008; Goleman, 2004a).
1st link (Self-perception of leadership skills+ EI) 1. EI can be a potential underlying attribute of effective self-perception of leadership skills. (Goleman, 1995, 2000; Owen *et al.*, 2004; Jackson and Parry, 2008) 2. Leaders with high EI tend to enjoy success in their work and their daily life.

Response to the issues	
Suggestions	**Arguments against**
• More training required (Lee, 1989; Fry, 2003).	• No. Training does not help prolong the results. (McCollum, 1999; Ghauri and Gronhaug, 2005). • Costly, time consuming, Specific place (Wheelahan and Carter, 2001).
• Self-report/self-test (reflection) (Goleman, 2000).	• It is just a kind of self-reflection, tend to forget after having done the test.
Why meditation is proposed ?	

Benefits and contributions

- To cultivate beneficial mental capacities such as calmness and concentration, and positive emotions such as love and joy; it is also said to reduce negative emotions such as fear and anger (Goleman, 1988).
- To reduce stress while making decisions as well as developing a sense of inner peace, consciousness, awareness, strength (McLaughlin, 2005).
- Meditation also enhances psychological capacities, for instance, emotional intelligence (Gloeman, 2003; Davidson *et al.,* 2003; Lutz *et al.,* 2004 Walsh and Shapiro, 2006), motivation, attention (Murphy and Donovan, 1997; Dalai Lama, 2001; Cahn and Polich, 2006, Walsh and Shapiro, 2006), sense of withdrawal (Goleman, 1988; Walsh and Shapiro, 2006).
- Equanimity (Goleman, 2003; Walsh and Shapiro, 2006), Motivation (Dalai Lama and Ekman, 2008; Davidson and Harrington, 2002; Shapiro *et al.,* 2006), Moral maturity (Dalai lama, 2001; Walsh and Shapiro, 2006).
- Cultivation of transcending meditation through transcendental meditation leading to experience A higher state of consciousness and the cultivation of abilities important for effective leadership (Harung *et al.,* 1995).
- Scientific tests have shown that meditation can improve people's memory and creativity (Lazar *et al.,* 2005).
- Improvement of concentration and self-awareness as it can bring mental processes under greater control and thereby foster mental well-being and developmental capacity Marques *et al.,* (2005).
- Meditation as *'a helping and problem-solving process'* (Gupta *et al.,* 2007 p.49).
- Enhances emotional awareness and consciousness (Shapiro *et al.,* 1998; Nyanaponika, 2000; Goleman, 2003; Nielsen and Kaszniak, 2006; Gupta *et al.,* 2007; Chambers *et al.,* 2009).

> **2nd link**
>
> - Meditation associated with EI.
> - Correlation between experiences of higher states of consciousness and higher levels of self-perception of leadership skills potential through self-development.
> - EI involves consciousness and self-awareness
> - Meditation involves consciousness, self-awareness and concentration.
> - EI is needed more in leaders to promote performance and work success.
> - Leaders with high EI associate with the development of self-perception of leadership skills potential.

1.4 - Background context of the research

A person with the perceived effective leadership skills is a perennial concern for every organisation that strives to develop its full potential. Most research studies into leadership have addressed this issue (Stogdill, 1974; Bass, 1990; Tjosvold, 1991; Harung *et al.,* 1995; Kotter,1998; Zaleznik, 1998; McKenna, 2000; Goleman, 2002b; Owen *et al.*, 2004; Porter *et al.,* 2006). However, the main questions remain: What is effective leadership? How can one be perceived to be an effective leader? (Tjosvold, 1991; Harung *et al.,* 1995; Adair, 1997; Kotter, 1998; Zaleznik, 1998; Goleman, 1995).

Washbush and Clements (1999) point out that perceived effective leadership skills has two facets. The positive element may be influential in promoting a better society, but the negative aspect of it can also be instrumental in creating social disaster. By social disaster, they mean, for example, if a leader exerts inappropriate decision making due to uncontrollable emotion, unintended consequences and frustration. Harung *et al.*, (1995), Lennick and Kiel (2005), and Napier (2007) have addressed this issue earlier by asserting that a leader must look inside their consciousness and take responsibility for what is going on inside themselves, examining their emotions so that they can cope with those negative aspects of self-perception of leadership skills.

This long addressed issue has been supported by Goleman (1995); Nair (1996); Koestenbaum (2002); Broome *et al.,* (2005); Lennick and Kiel (2010). To clarify the term 'transformation of leadership', Bass and Steidlmeier (1999) mean that leaders need to transform themselves in relation to development of the self. However, this issue will

continue to remain unpopular until there is a global shift towards the acceptance of more spirituality within the business community. Nevertheless, few attempts have been made to address this issue (Lennick and Kiel, 2005; London, 2002).

Due to increased global connectivity, work and management of people, which has shifted from a more simplistic approach to a highly sophisticated one (Harung *et al.,* 1995), a call for leadership development is even more critical today than ever before. Thus, it is important that concepts being researched, and the tools proposed, should be easily available and effective.

A review of available literature related to business performance issues reveals that effective leadership is the subject of much research; but it seems that effective and efficient self-perception of leadership skills development is scarce (Tjosvold, 1991; Harung *et al.,* 1995; Adair, 1997; Kotter, 1998; Zaleznik, 1998; McKenna, 2000; Goleman, 1995; Goleman *et al.,* 2002a; Fry, 2003; Owen *et al.,* 2004; Porter *et al.,* 2006).

In order to address this, the transformation of leaders in terms of self-perception of leadership skills, self-management, taking responsibility and participation, analytical behaviour and belief, is emphasised in order to cope with the uncertainties of the constantly changing business environment (Davidow and Malone, 1993; Harung and Heaton, 1993; Manz and Sims, 1993; Harung *et al.,* 1995; Goleman, 1995; Fry, 2003; Potter *et al.,* 2006; Owen *et al.,* 2004; Western, 2008). Owen *et al.,* (2004) and Gross (2010) added that the transformative developmental process always begins within the self.

There are other tools that also exist for self-perception of leadership skills development such as coaching (Goleman, 2000; Kilburg, 2000). It has been said that executive coaching is one of many effective tools that helps to change people's attitudes, (London, 2002) aiming to equip leaders (and others) with the tools to reflect on and identify and effectively deal with problems presented by the highly changeable, global business world (Smith and Sandstorm, 1999). The tools help executives to develop their creative side (Masciarelli, 1999), improving performance for public speakers (Witherspoon and White, 1997) and helping to develop leadership competencies

(Goleman, 2000). It is a path that can lead to self-insight, which London (2002) defines as a qualification to understand others and the surrounding environment. Coaching can help facilitate leadership development, claiming to provide sustained, long-term development (Smith and Sandstorm, 1999).

Even though there is extensive research on coaching effectiveness and efficacy, it is argued that:

(1) Little empirical evidence has confirmed the efficiency of this development tool (Kampa-Kokesch and Anderson, 2001) and very few studies have examined the impact of coaching of chief executives (Garman *et al.,* 2000). Therefore, it can be inferred that the results of implementing coaching towards self-perception of leadership remain unclear.

(2) Rogers (2008) defined the role of coaching by emphasising its involvement in the process of facilitating. The process was facilitated by experts focusing on the present, the outcome for the future and working with the issue, or analysing the case and, therefore, enhancing attitudes and performance (Burdett, 1998). Having referred to the process of coaching, it is argued that the means will not directly solve the root of the problem. It is possible that the end results from coaching produce developed performance (Burdett, 1998), thus enhancing psychological development (Popper and Lipshitz, 1992). But this can be done by facilitating the process, whereas coaching is trying to empower people. The process of coaching focuses more on facilitating, which is different from the process of meditation practice.

(3) 360-degree feedback is implemented as a tool to complement the coaching session (Thach, 2002), and aims to strengthen individual development (Garman *et al.,* 2000). The coach helps to analyse data and identify development areas (Thach and Heinselman, 1999). Even though coaching through 360-degree feedback is said to be the best method to promote self-awareness (Thach, 2002), it is argued that the process of coaching is actually opposed to the meditation process. The method itself is not aimed at targeting the development from within and there is little research that quantifies the effectiveness of coaching methods (Garman *et al.,* 2000).   The

sustainability and visibility of the method still remains in question (Kampa-Kokesch and Anderson, 2001).

Apart from the coaching method, another increasingly popular concept investigated for increasing leadership effectiveness is Emotional Intelligence (EI) (Goleman, 1995). However, a review of the literature on EI gives general guidance on training, but does not reveal specifically how EI can be achieved. Goleman (1995) proposed the changes and paths needed to achieve awareness of the real self by offering two main points:

(1) 'engaging your passion and create your dreams; and

(2) 'know yourself'. The meaning of 'know yourself' by Goleman (1995) was defined as being similar to the awareness of one's own emotions. It was argued that it is still unclear on how to create awareness, therefore the two main points suggested by Goleman (1995) remain imprecise.

These two points can be achieved by putting them into practice through multiple feedbacks. One of the most popular feedbacks is called 360-degree feedback, which is argued as being an ineffective means for development from 'within'. The process emphasises feedback assessing individual behaviour, performance, and competence. However, this requires the involvement of several people within an organisation. As opposed to the meditation process, meditation is recognised as a self-regulating mental training and development process, and is said to directly cultivate mental capacities (Walsh and Shapiro, 2006) such as self-awareness, calm and concentration. (Murphy and Donovan, 1997; Dalai Lama, 2001; Cahn and Polich, 2008, Walsh and Shapiro, 2006; Shapiro and Walsh, 2003; Nyanaponika, 2000; Goleman, 2003; Nielsen, 2006; Gupta *et al.,* 2007; Chambers *et al.,* 2009). These two methods are different in terms of the process of treatment. Meditation involves individual practice whereas 360-degree feedback is group feedback.

1.5 - Framework of the study

It is suggested that EI is important for leadership effectiveness, hence a person possessing EI may be more likely to enjoy success in their work life (Goleman, 1995, 1996; Western, 2008). EI is needed more in leaders to promote their performance and work success. Leaders with high EI are associated with the development of leadership

potential (Goleman, 1996). However, current literature has not provided effective means of how to enhance EI and how self-perception of leadership skills can be improved. Therefore, meditation is proposed as a subject of investigation, as another tool, or means, to enhance EI and self-perception of leadership skills from within. The study focuses on an individual rather than an organisational level.

Figure 1.1 - Conceptual framework
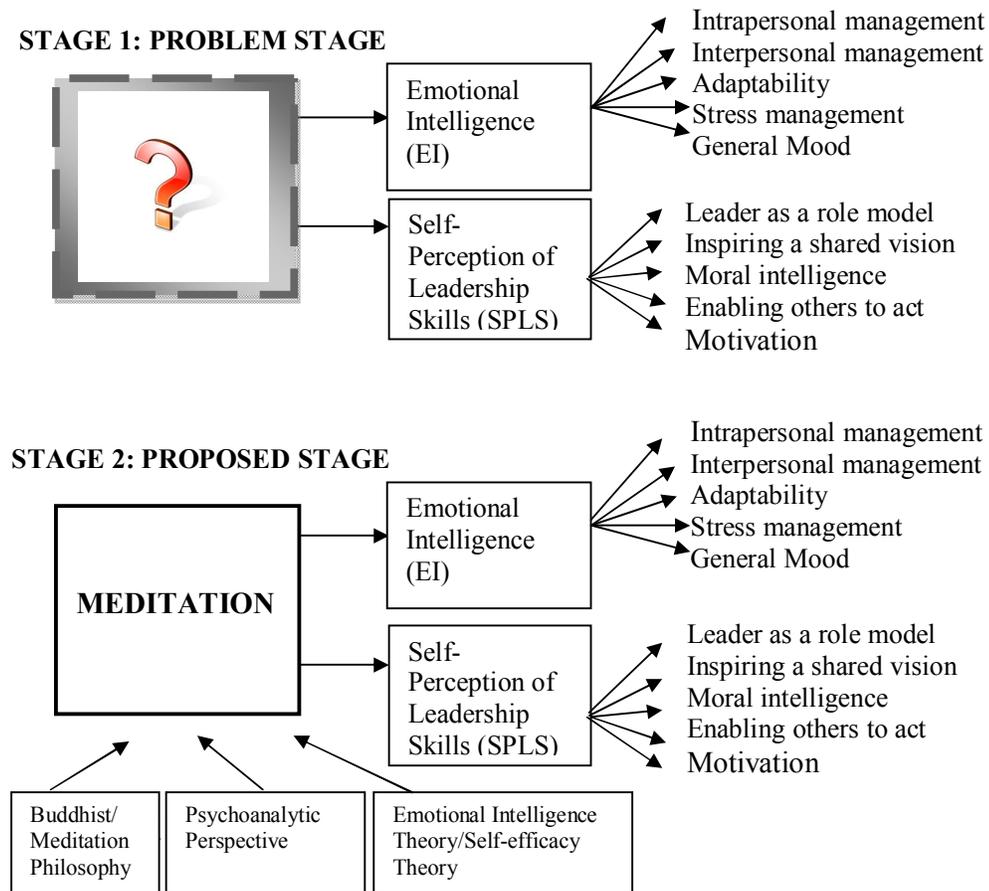
This research uses meditation as the base for the adopted conceptual framework. In order to critically analyse how meditation directly relates to the mind and emotions, this research draws upon theory of meditation from the Buddhist perspective to explain the basic assumptions of meditation philosophy combined with a scientific concept, especially in relation to the neuroscience of consciousness. This choice of perspective is justified as meditation originated in Eastern culture where Buddhism is the main

cultural background and therefore lends itself to the exploration of meditation via Buddhist philosophy.

The process of meditation practice forms the basis of consciousness level through mind training resulting in restful awareness (Shapiro and Walsh, 1984; Nyanaponika, 2000). Mental training cultivates mindfulness and therefore forms the basis of higher states of consciousness (Harung *et al.,* 1995; Nielsen, 2006; Gupta *et al.,* 2007). The development of consciousness set the foundations for development of the changes in perception of individual (Gross, 2010). This thesis applies Vipassana meditation, as discussed fully in Chapter 2, as a means to develop from within.

Figure 1.2 below illustrates the overview of a meditation framework drawn as a diagram from the first stage of developing the research question, and the stage of experimental design and analysis that will be investigated as a tool to enhance an individual's EI and self-perception of leadership skills. The framework is drawn as a conceptual ideal attempting to summarise the background of previous studies, the rationale why meditation is proposed and how to gain achievement as an overall research framework. It is divided into three stages as shown in Figure 1.2.

Figure 1.2 - Overview of a meditation framework
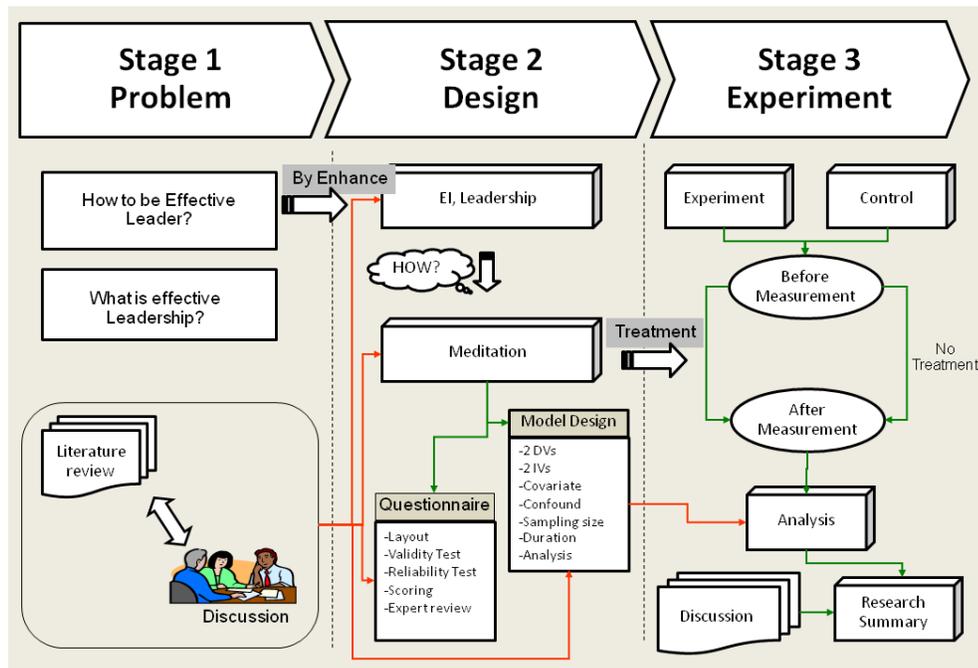
Stage 1 presents the overall research problem in a general context as well as the possible drawbacks of previous research in the area of study. The main problems are associated with how insight into self-perception of leadership skills and EI can be achieved.

Stage 2 provides the connection between Stage 1 and Stage 3. At this stage, meditation experimental research is chosen as a means to test hypotheses and to answer research questions. Emotional Intelligence by Reuven Bar-On and self-perception of leadership skills questionnaires adapted by leadership practice inventory (Kouzes and Posner, 2002) were selected as measurement instruments. The framework is to investigate whether meditation can be one of the tools for enhancing emotional intelligence and self-perception of leadership skills, or not. Therefore, Emotional Quotient Inventory (EQ-i) and the self-perception of leadership skills questionnaire were the two measurement instruments. To clarify this, the thesis is not measuring the different types of meditative techniques. It will only use Vipassana meditation as a one-treatment variable.

Stage 3 presents an overall experimental research design followed by the statistical analysis tools. The detailed experimental research design is discussed in Chapter 3.

1.6 - Research aims and objectives

This research aims to examine the role of meditation, in particular, to investigate the impact of meditation on executives' emotional intelligence and self-perception of leadership skills. In an attempt to achieve the research aim the following research objectives were formulated:

1. To investigate the role of meditation for improving emotional intelligence;

2. To investigate the role of meditation for improving self-perception of leadership skills;

3. To compare the experimental results between the first experiment in Bangkok, Thailand and the second experiment in London, United Kingdom; and

4. To conduct experimental research in Bangkok and London in order to test the hypothesis of this research study - Can meditation enhance leaders' emotional intelligence and self-perception of leadership skills?

1.7 - Research questions

1. Can meditation enhance emotional intelligence?
2. Can meditation enhance self-perception of leadership skills?

The thesis was tested on thirteen hypotheses which are listed below in Table 1.2

Table 1.2 - Thirteen hypotheses tested in Bangkok and in London

	Null hypotheses
$H_0 1$	Meditation does not enhance emotional intelligence and self-perception of leadership skills (simultaneously)
$H_0 2$	Meditation does not enhance emotional intelligence
$H_0 3$	Meditation does not enhance self-perception of leadership skills
$H_0 4$	Meditation does not enhance intrapersonal emotional intelligence
$H_0 5$	Meditation does not enhance interpersonal emotional intelligence
$H_0 6$	Meditation does not enhance adaptability (a component of emotional intelligence)
$H_0 7$	Meditation does not enhance stress management (a component of emotional intelligence)
$H_0 8$	Meditation does not enhance general mood (a component of emotional intelligence)
$H_0 9$	Meditation does not enhance self-perception of leadership skills as a role model (a component of self-perception of leadership skills)
$H_0 10$	Meditation does not enhance inspiring a shared vision (a component of self-perception of leadership skills)
$H_0 11$	Meditation does not enhance moral intelligence (a component of self-perception of leadership skills)
$H_0 12$	Meditation does not enhance enabling others to act (a component of self-perception of leadership skills)
$H_0 13$	Meditation does not enhance motivation (a component of self-perception of leadership skills)

1.8 - Problems of background research

Most of the major drawbacks in past research in the field have been focused on two main areas. Methodology is the first, and arguably most important, which will be discussed in section 1.7.1. This is because the concept of meditation is not the subject of scientific study and, therefore, it lacks objectivity in terms of evidence (Lutz *et al.,* 2007; Lehmann *et al.,* 2001). The second main drawback is related to the overall content and context of meditation study, which will be discussed in section 1.8.2. However, these universal drawbacks are presented in the first chapter as it gives readers an understanding of past research, its problems, and the means to overcome them.

1.8.1 - Methodological drawbacks

First, experiments described in journal articles on meditation were identified as 'poor-quality studies' (Chiesa, 2010 p.37). The drawbacks were highlighted by the poor sampling method (Perez-De-Albeniz and Holms, 2000) such as a lack of sampling randomisation which should be at the core of a true experiment (Coolican, 2004). In the work of Bowen *et al.,* (2007), (2008), Simpson *et al.*, (2007) and Emavardhana and Tori (1997), the absence of a control group, such as in the work of Ostafin *et al.*, (2006) and Cahn and Polich, (2008), and lack of statistical methodology (Chiesa, 2010) are other drawbacks to research and represent the limitations of past research studies. Second, the method of meditation practice was not clearly described and most of the journal articles did not explain whether participants received meditation teaching from a qualified teacher (Lutz *et al.*, 2006). So, the primary concern over critiques in journal articles is whether the findings can be held as reliable given the lack of information on meditation teaching method.

To overcome these limitations, it is important that the sampling method, as well as a meditation teaching method, should be addressed. In the context of this research, in order to ensure reliability and validity, the improvement of the sampling selection method is clarified below. The teaching method for meditation is discussed in detail in Chapter 3.

First, it is necessary to randomly assign samples into groups. This solution has been widely recommended as randomisation is a critical part of a true experiment. Having been employed, randomisation may be able to infer cause and effect (Mead, 1988).

Second, there should be an increase in sample size to produce the larger context as recommended both in previous literature reviews and in statistical theory (Coolican, 2004, Hair *et al.*, 2010, Howell, 2007). However, a large sample size is not necessary as long as size risks can be tolerated and variability is presented in the population, based on past experience (Hicks and Turner, 1999). This does not mean that sample size is not important. The researcher must be able to identify the minimum numerical sample size that can allow the use of the selected statistical analysis in the framework of substantial data analysis (Saunders *et al.*, 2000; Ghauri and Gronhaug, 2005).

A third solution is to use a proper quantitative method but opposed with attitudinal and perceptual questionnaires. To clarify this solution, it can be argued that employing experimental research is required as all variables are assigned at random to the experimental units, which allows the development of a statistical model and estimation of its validity (Mead, 1988; Hicks and Turner, 1999, Coolican, 2004).

Fourth, there should be a 'true representation' of the sample (Hicks and Turner, 1999). A good and effective sample should be a true representation of the population. 'A true representative' of the sampling must be similar or closely related to the subject that the researcher intended to investigate (Hicks and Turner, 1999).

A fifth solution suggests that future studies may want to be conducted on different meditation techniques in other contexts. From the meditation literary reviews, it is apparent that transcendental meditation has produced the most research in scientific settings. It is recorded that over 600 research studies have been conducted at over 250 universities in 30 countries.

Despite the fact that these solutions for future research have been provided, there are some other arguments, derived from many scholars, dealing with the nature of the subject research (Mead, 1988; Hicks and Turner, 1999; Saunders *et al.,* 2000; Ghauri and Gronhaug, 2005). According to Mead (1988) most of the arguments concerning the limitations of research focused on sample sizes being too small. It is argued that this is normal in that there are not many subjects in meditation experiments due to the nature of the subject study itself as it requires a high level of commitment from participants.

1.8.2 - Drawbacks on the context of meditation

These includes the lack of definition of what meditation is, the difference among the types of meditation, the lack of experts in teaching meditation, and the unclarified meditative technique practiced in the experiment.

To eliminate the drawbacks, this research clarifies the conceptual framework with meditation theory under the Buddhist perspective and clarifies the conceptual meaning

and the process of meditation. As there were a number of claims regarding meditation subjectivity and the lack of empirical evidence, this thesis provides examples from a systematic review of the current evidence regarding altered states of consciousness through meditation training. Though the review does not provide a complete summary of empirical studies, the thesis will address the areas regarded as limitations in the field.

1.9 - Utilisation of the research method

The assertions that meditation exists and that its application brings benefits to individuals in terms of physical and psychological well-being are documented (Anderson *et al.,* 2008; Chan and Woollacott, 2007; Wallace and Shapiro, 2006). The remaining questions are how to test the existence of the field of meditation and what are the consequences of experiencing it on emotional intelligence and self-perception of leadership skills?

In order to derive the most effective and efficient findings, a systematic method of research is required in all studies, this is because appropriate methods are essential for achieving the research objectives. Therefore, systematic research methods require a quantitative approach, using experimental design to test the hypotheses. A quantitative research method is used to gather information in the form of numeric values (Zikmund, 2003), as it allows the direct measurement of results (Coolican, 2004).

The research experiment is conducted first in Bangkok, Thailand and then in London, United Kingdom. Through testing the impact of meditation this research explored the differences between chief executives within an experimental group who practiced meditation compared with those in a control group who did not meditate. Both experiments were conducted during a 12-week meditation course. Each participant completed two sets of questionnaires, an emotional intelligence questionnaire and a self-perception of leadership skills questionnaire. These questionnaires were completed before the first session began and again after 12 weeks, when the sessions had finished. Since the research measures the impact of meditation on the leaders' emotional intelligence and self-perception of leadership skills, the EI questionnaire and self-perception of leadership skills questionnaire were used as measurement instruments in this experiment.

The research encompassed a positivist approach as it can be inferred that the causes of positive or negative effects of meditation on EI and self-perception of leadership skills can be real and observable. The descriptive research strategy employed an experimental approach through quantitative methodology, in which it articulates through answers to the research question, as well as facilitating the testing of the hypotheses.

This research employed a quantitative approach, to gather information as numeric values, as opposed to qualitative research, which obtains information by descriptive studies (Zikmund, 2003), using experimental designs to test the hypotheses. This is advantageous as it allows for the direct measurement of results (Coolican, 2004). Through this experiment certain independent variables are manipulated to separate cause and effect. Thus, it will be able to infer if the results are changed by meditation. The details of the methodology used in this research will be discussed in Chapter 3.

1.10 - The structure of the thesis

This thesis comprises six chapters as follows:

Chapter 1 introduces the background of the subject studied and the stance of the research. Research studies stating the importance of emotional intelligence for effective modern leadership are available but have not addressed the issue of how to achieve it. The proposal for the meditation framework is presented, a psychoanalytic approach as a means for understanding and analysis, as well as the aims and objectives of the research, the methods utilised, and a summary of the findings. This chapter, therefore, provides an overview of the research.

Chapter 2 provides a review of available literature. It presents the background of meditation, the concepts of emotional intelligence and self-perception of leadership skills, as well as the exploration of research literature on the relationship of meditation on EI and self-perception of leadership skills. The chapter also presents the critical analysis of the existing research literature on meditation, the possible solutions offered by authors and the justification for each of the solutions. The theoretical framework based on meditation philosophy, emotional intelligence theory and self-efficacy theory.

Chapter 3 discusses in depth the methodology used in the study. The chapter is divided into two parts: the first part aims to describe assumption of the study, the method as well as the measurement instrument tools for validating the methodology and also explains how sampling and data collection methods were employed; and the second part presents the experimental design and analytical procedure used. The process and procedure of the experimental studies were conducted in two cities - Bangkok, Thailand, during September to December 2008, and London, United Kingdom, during May to August 2009. The procedure and the meditation teaching are also clarified. The reason for clarification of the meditation teaching used in the experiment is to fill in the gaps and minimise the limitations of past meditation research in which the actual procedures and meditation teaching have not necessarily been clearly presented in the available literature. Consequently, the critiques of the validity and reliability of the techniques of meditation teaching have been focused on the issue of undefined meditation, and the issue of meditation teaching. Without a clearly defined meditation method, the findings may not enhance knowledge of the subject.

Chapter 4 focuses on the results and the interpretation from univariate analysis (ANOVA) and multivariate analysis (MANOVA) as the statistical analysis tools. These tools have been used to investigate whether or not meditation can enhance leaders' EI and their perceived leadership skills. All thirteen hypotheses were tested and the results are presented.

Chapter 5 discusses the overall empirical results in a descriptive manner. The chapter further discusses the implications of the research and provides a summary of the research. It briefly summarises the thesis research and findings.

Chapter 6 presents the overview of the main thesis summary from the first chapter through to completion of the thesis. This chapter also provides the contribution of the research, its possible limitations and recommendations for possible future research.

Appendices are also included; these contain information relevant to the study. Some additional documents are also presented as part of the thesis clarification. The letters, the questionnaire design as well as the instructions for validating the questionnaire and the participant information sheet related to the ethical issues are included.

1.11 - Chapter summary

This chapter introduced the overall subject area of the research study, underlining the relevance of the topic, the rationale for proposing meditation and highlighting the existing gap in knowledge about the topic. The chapter introduced the aims and objectives of the thesis, namely, to investigate the impact of meditation on a leaders' emotional intelligence and self-perception of leadership skills in order to answer the research question:

> **'Can meditation have a significant impact on emotional intelligence and self-perception of leadership skills?'**

In doing so, the thesis employed a quantitative approach through experimental research in order to test the hypotheses. An overview of the research structure is presented in Figure 1.3 below to help facilitate reading the thesis.

Figure 1.3 - Overview of the thesis

Chapter 1 - Introduction Chapter 1 provides a roadmap of the thesis through the presentation of background and rationale of the study as well as aims and objectives of the thesis.	**Chapter 2 - Literature review** The chapter reviews available meditation literature, specifically in the context of emotional intelligence and self-perception of leadership skills, whilst including a brief explanation of the psychological aspects of meditation.
Chapter 3 - Research methodology This chapter is divided into two parts. The first part presents the descriptive research methodology while the second part presents the rationale and assumption for using the statistical methods, MANOVA and ANOVA.	**Chapter 4 - Bangkok and London: experimental results of the study** The overall results of the study in two cases, the Bangkok case and the London case, are presented separately in this chapter.
Chapter 5 - Discussion and implication of the research Chapter 5 expands the interpretation of the results presented in Chapter 4. An implication of the research study is also included in this chapter.	**Chapter 6 - Conclusions** Chapter 6 briefly summarises the overall thesis. It also highlights the contribution of the research and also explores the limitations of the research. Discussion of the generalisations of the findings is also presented.

Chapter 2: Literature review

2.1 - Chapter introduction

Chapter 2 reviews the literature on meditation as being one of the potentially useful tools for enhancing emotional intelligence (EI) and self-perception of leadership skills (SPLS). The objective of this chapter is to illuminate concepts in the subjects being studied by forming and summarising a body of literature that addresses the area of the study, and to highlight the major limitations of past research. This ensures that the current research builds upon existing knowledge and minimises previous problems. The literature review identifies significant gaps and inconsistencies in the current body of knowledge. It is said that a literature review should be able to investigate the topic of the study by refining the topic of study, research idea, and form research questions (Cronin *et al.,* 2008). Therefore, this chapter intends to clarify the topic of study, how the research idea is presented, and the process of forming research questions. The goal of this chapter is to combine the body of knowledge from the past and combine it with critically current literature and examine its usefulness to this study to minimise past limitations. Therefore, the knowledge formed by both past and current research material may provide a significant contribution for future researchers to utilise.

In this chapter the issues concerning meditation, especially emotional intelligence background and self-perception of leadership skills, are the three main topics for the introduction of this chapter. The chapter excludes the issue of measuring the performance outcome of an individual in relation to organisational performance. The link between meditation and the application of the EI's measurement tools are also included. The possible criticism of all major EI's tools are included in this thesis as it is noted that EI measurement tools have been the subject of ongoing debate.

The chapter starts with a review of meditation literature stating initial concepts and constructs, the historical background of various kinds of meditation, as well as an introduction on how meditation from the East grew in interest increasingly in the West. In particular, the literature review draws its information from both previous and current research, specifically on EI and self-perception of leadership skills through meditation

training. This enables a clearer picture of the subject to emerge, taking into account the variety of perspectives which previous studies have undertaken.

The historical background of meditation is presented as a contextual overview of the important events that have developed over time within the field. The literature review identifies which conclusions have been reported regarding the limitations and gaps within the area. This study, therefore, minimises the impact of weaknesses in previous research. Special emphasis is given to the subject of meditation, as the research tries to examine its impact on EI towards self-perception of leadership. The nature of the subject itself does not mean that researchers undertook the study with a religious bias. However, it is necessary that the terms and definitions, as well as the clarification of meditation's relationship to religious beliefs and practices, are clarified. The review emphasises the business perspective but includes some elements from the psychological perspective for the purposes of a clarification of the subject being studied.

2.2 - Literature review process

The current research of existing literature does not provide sufficient impetus from most academics and practitioners to deliver what is known as 'best evidence' in search history. As a result, inappropriate recommendations may occur due to the poor quality of the literature review (Cook 1997). Clinical studies offering inappropriate or incorrect recommendations may have serious implications for patient treatment. Historically, literature review searches have been criticised, noting that they have not precisely defined if they acquired their reviews appropriately. This issue has been widely raised by scholars, but has not been seriously taken into consideration. Unfortunately, it has remained a low priority for most academics and practitioners.

Needham (2000) identified the criteria undertaken by the literature review process as follows:

(1) Define precisely the questions the review is addressing;
(2) Search as exhaustively as possible for all studies that address the question;
(3) Assess the quality of those studies using predefined criteria;
(4) Exclude studies that fail to meet the criteria;

(5) Provide an overview of the results of the included studies; and

(6) Interpret those results in terms of implication practise.

Furthermore it has been suggested that a good literature review should gather information from both published and unpublished studies. Consequently, it minimises what is known as 'publication bias' (Needham, 2000; Cronin *et al.,* 2008) or in other words 'data extraction bias' (Nightingale, 2009). This bias occurs in a research environment where studies that have positive results tend to be published, whereas negative findings or neutral results are not published. However, it is worth looking at unpublished papers as they may provide significant, alternative contributions to this field of research (Cronin *et al.,* 2008). Furthermore, unpublished sources may refer to informal information that has not been officially released or approved by a publication and the information has not been fully available for academic study. By looking at an unpublished source, discretion and judgement for utilising knowledge must be paramount.

The following sections will present the extent to which the literature review has been applied in this thesis. Cronin *et al.,* (2008) suggested that it is necessary to take the improvement of the quality of the literature review and the limitations of past research into account. As a consequence this thesis supplies a defined structure to ensure transparency and access to a more rigorous and evidence-based literature review. Table 2.1 illustrates the literature review approach for this thesis.

Table 2.1 - Search strategy

Search Strategy	Means/Key Strategy
• Selecting a review topic	• By identifying the subject of the literature review
• Searching the literature through database	• This is done through an electronic database which provides a vast amount of sources currently available. The database provides the main content of related studies. Sources of the database include PsyCoInfo and EBSCO and other relevance sources.
• Restricting the search limit through topic of interest, time-frame and articles.	• The key word used to identify terms such as 'meditation', 'meditation emotion', emotional intelligence, ' self-awareness' 'emotional intelligence and self-awareness', 'meditation and emotional intelligence', 'self-perception', 'self-perception of leadership', 'self-efficacy', 'meditation and self-perception'
• Gathering, reading, analysing the literature	• Selecting from the reliable sources, for example, peer-reviewed journal articles and academic text books,
• Writing the review	• Summarising the key findings, methodology, limitations and future recommendations.

2.3 - Limitations to previous meditation research

This section presents an overview and critical analysis of previous meditation research, the gaps, the concerns and the limitations. This section provides background information on general meditation to provide a context for past research, identify the limitations of this type of research, and recommendations for future research, thereby improving the standard of research material.

This section brings together research questions, concerns and limitations gathered from a variety of meditation literature reviews with regard to a refined meditation search topic. For example, the recommendations, research questions and/or limitations of meditation under the search for 'epileptic study' or 'meditation in a health care setting' are excluded as this thesis mainly examines meditation, emotional intelligence and self-perception of leadership skills in relation to the field of business, however, not all unrelated topics are excluded. Cronin *et al*., (2008) notes that a good literature review involves gathering sufficient information from different sources in order to obtain a variety of perspectives regarding the subject areas that previous research has examined. However, it is advisable to refine topics to derive more specific research questions as well as highlight limitations in areas that might be addressed differently from article to article. This strategy allows more explicit focus on the requisite study areas; aids refinement of research questions (Beecroft *et al.,* 2006); theory development and shaping of a critical framework (Coughlan *et al.,* 2007).

Past research, indicating areas of weakness conducted under the context of meditation is evident, both from the perspective of quantitative and qualitative approaches. Past research has been either purely scientific - medical and clinical studies - or descriptive, qualitative research. These shortcomings are described in Table 2.2.

Table 2.2 - Limitations of past meditation research

	Limitations detected in past research	References
Limitation of past research	• Definitions of meditation were not presented clearly. • Lack of well-documented meditation methodology in detail - merely describes type of meditation used but did not explain how to achieve certain stages.	Manocha, 2011; Gupta *et al.,* 2007; Chiesa, 2010
	• Meditation techniques described inadequately. • Insufficient concerns regarding the qualification of the meditation teacher or guru, leading to unqualified results and findings.	Manocha, 2011; Chiesa, 2010
	• Lack of suitable sample sizes.	Chiesa, 2010
	• Inadequate empirical research material regarding meditation in business settings, mainly conducted in clinical/psychological field.	Walsh and Shapiro, 2006;
	• Continuous research conducted on Transcendental meditation (TM). Lack of empirical research on other types of meditation.	Chiesa, 2010
Recommendations of past research	• Future studies require larger samples, population-based (cross-sectional, retrospective cohort studies should be performed).	Perez-De-Albeniz and Holms, 2000.
	• Learning an appropriate meditation technique should take empirical research into account, as it is key to deriving maximum benefits from the practise.	Perez-De-Albeniz and Holms, 2000; Chiesa, 2010.
	• Method of analysis needs revision.	Chiesa, 2010

In order to tackle past research limitations, care and concern was taken in this thesis to minimise their impact on this research study. The experiments described in some journal articles on meditation have not been conducted using an appropriate sampling method (Perez-De-Albeniz and Holms, 2000). Therefore, this can be regarded as an example of research affected by the limitation of past research studies. Additionally, the methods used to describe meditation practice fail to explain whether participants

received appropriate instruction from a qualified teacher (Chiesa, 2010). These issues throw doubt on the reliability and validity of past research findings presented in journal articles. In order to overcome these limitations, it is imperative that appropriate sampling and meditation teaching methods be comprehensively addressed in this thesis. With this in mind, possible available means of future improvement has been examined within the confines of the parameters set by and available to the researcher for this thesis.

Some of the problems regarding past research on methodology drawbacks are described separately in Chapter 3. The two main drawbacks concern the limitations on other types of meditation techniques used in the past research and a lack of applicable theoretical knowledge. One major problem is the overabundance of research on Transcendental Meditation (TM). Future studies may choose to conduct research on the different meditation techniques in other contexts. From the literature reviews it is apparent that TM has been researched largely in scientific settings. However there is no confirmation of the number of the studies published in academic journals with regard to self-perception of leadership skills.

Application to this thesis

In this thesis, Vipassana meditation technique, insight meditation, is selected as an alternative type to contrast with Transcendental meditation (TM). Reasons for choosing this technique are to apply a comparison/contrast examination to address the problem of how to enhance emotional intelligence and self-perception of leadership skills, because its characteristic way of teaching meditation is unique in that it is acknowledged to be a major meditation type that has been practiced for around 5,000 years (Chiesa, 2010). The examination of its historical background will be addressed in a later section.

2.4 - Meditation and motivation of self-perception of leadership skills

Porter *et al., (*2006) regard the ability to motivate as implicit in the definition of leadership. Schein (2004) points out that any analysis of motivation leads to a discussion on how the leader should handle followers. A question that may arise from this is 'How many managers regard motivation as an important leadership issue?'

Furthermore 'How many managers attempt to motivate people but fail to do so?' Porter *et al.,* (2006) hypothesise that a lack of self-development and self-awareness are the major issues affecting self-perception of leadership skills to create motivation in an organisation.

It is sometimes assumed that people are uninterested in their work and inherently dislike what they have to do unless they have been either persuaded, motivated, forced or directed to perform at the required level in the workplace (Boyce *et al*., 2010). This suggests that the link with motivation implies that managers and, more importantly in this thesis, have a form of self-perception of leadership skills that needs to adopt a tough, strict approach in management style (Morris and Seeman, 1950), exercising threats and psychologically manipulating their thoughts and fears in order to gain the desired outcome from their staff (Mahanta and Thooyamani, 2010), whereas those with a softer approach attempt to use encouragement and more subtle, persuasive techniques to achieve compliance (Boyce *et al.,* 2010). Both types of approach utilise external manipulative methods to extract optimum compliance from the workforce.

The employees' core responsibility is to plan, organise and take the requisite action in order to fulfil their role and complete their tasks. Managers with appropriate self-perception of leadership skills should recognise, from the ideology of leadership, that managers should not exert or use an excess of force and power in their words and actions in order to coerce employees into performing appropriately (Boyce *et al.,* 2010). Meditation practice would be of benefit in this type of scenario. No matter what style is adopted, when management and workers are self-aware, they then become conscious of every situation, and the consequent need for appropriate action becomes available when they are equipped to cope with their own emotions and of how to handle the emotions of others around them (Sosik and Megeran, 1999). This skill set will effectively enable management's self-perception of leadership to solve problems.

2.5 - Meditation: history and definition

Meditation is said to be one of the most enduring, widespread and researched of interesting methods of practice. (Walsh and Shapiro, 2006; Germer *et al.,* 2005; Grossman *et al.,* 2004; Andresen, 2000). The most recent reviews usually are about

mindfulness and transcendental meditation. Mindfulness is about awareness practice or an open focus whereas transcendental meditation focuses on concentration of the object (Walsh and Shapiro, 2006).

A wide variety of meditation has been practiced for thousands of years (Walsh and Shapiro, 2006). The study of meditation's application to psychotherapy has only fairly recently been investigated. In 1976, Benson reported on the effects of transcendental meditation as it may influence the practitioner. In recent years, mindfulness meditation has been the focus of the majority of literature concerning meditation. Perhaps most notable is the work by Jon Kabat-Zinn and his colleagues at the University of Massachusetts Medical School. He defines mindfulness as 'paying attention in a particular way: on purpose, in the present moment, and non-judgmentally' (Kabat-Zinn, 1994, p. 4). Other forms of meditation include various insight techniques and assorted meditations that include imagery or visualisation (Gilbert and Procter, 2006; Walsh and Shapiro, 2006).

As an attempt to distinguish between the many types of meditation, most types of meditation can be grouped into one of two distinct categories (Gilbert and Procter, 2006). Concentration meditation aims to develop the ability of the mind to focus. Awareness meditation looks to explore the depths of the mind along with increasing awareness of the various moment-to-moment experiences we have. Elsewhere, the many various practices of meditation are put into even different categories. Field (2009) distinguished between concentration meditation and mindfulness meditation. The aim of concentrative meditations, according to the author, is to promote the skill of concentration by repeatedly redirecting one's concentration back to a chosen object when the mind wanders. On the other hand, mindfulness meditation promotes a neutral, observing awareness of thoughts, feelings, and sensations as they arise in the body and mind (Walsh and Shapiro, 2006; Fontana, 2009; Dalai Lama, 2001).

With this wide variety of meditative practices come various definitions of the very concept of meditation. Walsh (1983) defined meditation as a 'family of practices that train attention in order to heighten awareness and bring mental processes under greater voluntary control' (p. 19). It has also been defined as a means of assisting in 'self regulation and retraining of attention habits' (Bogart, 1991, p. 385). Marlatt and

Kristeller (1999) described meditation as a way that a person can 'become more comfortable with the experiences of compassion, acceptance, and forgiveness' (p. 68). More recently, it has been described as 'the practice of self regulating the body and mind to induce relaxation and altered states of consciousness' (Field, 2009, p. 127).

2.5.1 - Meditation: practical implementation

Meditation, a mental cultivation and self-regulation practice focuses on training attention and awareness (Walsh and Shapiro, 2006). Meditation literature has been attempting to define its principle of practice for many centuries, however, it is mutually accepted that meditation itself is vague and has many diverse principles of practice (Lutz *et al.,* 2009). His argument is supported as the term and the practices of meditation are diverse and meditation practices have a variety of traditions. Therefore, as discussed below, it is important to know the background and meditation theory from a Buddhist perspective. The reason why this thesis needs to address meditation theory from a Buddhist perspective, and not from other perspectives, such as Christian for example, is because the origin of meditation has its origins in the East where the concept of mediation derives from Buddhist principles.

It could be argued that most of the early meditation researchers omitted the initial background and its theory. They usually began with an explanation and then gave an imprecise exploration of its historical richness. The subjects studied in past literature focused interest mainly on clinical, neurobiological research (Lutz *et al.,* 2009). Furthermore, meditation research into clinical, biological and psychological areas has not emphasised the concept of a meditative technique or how and why meditation practice can benefit people. Since meditation practice is regarded as a most ancient practice (Chiesa, 2010; Lutz *et al.,* 2009) and one of the meditative techniques, called Vipassana meditation (VM), is the most ancient type of Buddhist practice (Chiesa, 2010), it is necessary to talk about the justification of how meditation can benefit people and also the theoretical assumptions that lie under this ancient practice.

Therefore, meditation theory under the perspective of Buddhism will be used as a base to explaining the phenomenon. However, one could argue that ancient meditation lacks scientific evidence in supporting its theory. In order to avoid this type of criticism, the

evidence for meditation study will be further explained to support meditation theory. Meditation is assumed to cultivate awareness (Chiesa, 2010). This is because 'awareness' is a base for emotional intelligence and self-perception of leadership that share a common study.

'Through meditation one develops one's power of internal concentration, and we become aware of our internal process, leading to the ability to transform negative emotional states to the positive emotions of tranquility. As meditation deepens, one experiences one true identity as one of calmness and non-attachment, and one is able to be creative in the world without identifying with the ups and downs of our personalities or our previous attachments, desires, and dependencies'

(Ballentine, 1986, p.3).

One of the major theories that support the theory that meditation is influential in increasing leadership development is called 'a unified theory of leadership'. A unified theory of leadership introduces a new concept of leadership development by focusing on the deepest inner-self rather than visible, superficial behaviour. Harung *et al.,* (1995) have also supported this theory and practice of meditation.

It is noted that the introduction of a stage of development of consciousness can extend the development potential of psychological states to higher stages of consciousness, affecting characteristics and traits. Thus, there is a possibility that the deepest inner-self, once stimulated by any means that could help stimulate consciousness, would be able to enhance self-perception of leadership (Harung *et al.,* 1995). However, it is not indicated that the self-perception of leadership would be enhanced. This research conducts experimental research regarding meditation and self-perception of leadership.

2.5.2 - The origin of meditation: from East to West

In order to seek a definitive explanation of mediation, it is necessary to go back to the philosophy of Hinduism, as well as Buddhism as both religions were instrumental in developing meditation. Eastern people view meditation differently from Western people, as a result of their different cultural experiences and perspectives. They view meditation as a means to eradicate sources of grievance (Dalai, Lama, 2001; Hwang

and Chang, 2009). This is what the ancient meditators had been practicing for years and have benefited from it with regular practice (Ivanovski and Malhi, 2007).

Later, this research will further explain the different points of view towards meditation. Even though the two perspectives, Eastern and Western, view meditation differently, the influences of Eastern thought regarding meditation have emerged in Western practices in the areas of health, religion, social work, and spirituality (Gupta *et al.,* 2007). It is believed that meditation is a powerful guide to eradicate sources of grief, as well as cultivate insight into one's values and self-being in achieving enlightenment (Hwang and Chang, 2009; Gupta *et al.,* 2007). Therefore, a person who encounters mindfulness practice would be able to increase their awareness and consciousness (Dalai Lama and Ekman, 2008), which is part of self-development (Dalai Lama, 2001). Goldstein (2002) reasoned that once meditating, the mind is still consequently increasing in awareness regarding what is happening inside each person, at each moment, resulting in concentration and equanimity which is congruent with an ancient monk, Pramongkolthepmuni, who practiced and taught meditation (Jindahra, 2006 translation edition). He described the state of meditation as a state of calming the mind, leaving out other distractions of thoughts, and arriving at equanimity; neither woeful nor joyful.

2.5.3 - The Western perspective on meditation: Westerners view meditation differently

In contrast, instead of viewing meditation as spiritual, religious, healing, as well as the way to Nirvana, Western people view meditation as 'a helping and problem-solving process' (Gupta *et al.,* 2007). In fact, Western views towards meditation overlap with Eastern views in the sense that it is an eradication of all problems, as Buddhists believe, of greed, hatred, and delusion, which are the causes of suffering; meditation helps eliminate these causes (Jindahra, 2006 translation edition; Dalai Lama, 2001). Westerners are more concerned with the effects of meditation rather than the Eastern ideology of meditation, which is a basic fundamental element of their culture. Thus, it can be said that dissimilar cultures, values, and beliefs make up the differences between Western and Eastern societies.

To address the Western perspective on meditation, the efficacy of meditation is vital. The efficacy of meditation was recorded approximately in 1666, but meditation practices might have occurred 2,000 years before the birth of Christ (Leonard, 2006) and more than 2,500 years before the time of Buddhist and Hinduism. In the past, the Indian and Hindu perspective on meditation viewed meditation as one of the traditional healing methods. The view on healing meditation has created a sense of astonishment as well as curiosity for many academic researchers on whether or not there is any scientific justification to meditation practice (Wallace and Benson, 1972; Leonard, 2006).

Gupta *et al.,* (2007) argued that meditation and spirituality is subjective. It is an attribute of an individual, based on individual experience. However, Westerners have adopted meditation practices through exploration of self-identity as well as self-expression (Perez-De-Albeniz and Holmes, 2000).

Table 2.3 - The differences in Western and Eastern perspectives towards meditation

Eastern view of meditation	Western view of meditation
- The goal to '*Nirvana*'. Self-cultivation through detachment from the surrounding world, especially detached from one's ego (Hwang and Chang, 2009), to see oneself with a crystal clear mind by eliminating hindrances (Fu and Wawrytko, 1994). A goal of self-cultivation from an Eastern perspective encourages the search for one's self. On the other hand, one needs to practice alone to reach that goal.	- Self-cultivation is viewed as psychotherapy. It is a process of the self's alleviation of psychological suffering caused by internal and external problems (Hwang and Chang, 2009; Heppner, 2006). Western views on self-cultivation is to use an analytical approach, not to engage in a process themselves, but rather set up an experiment and use scientific method to prove something.
- Causes and effects in terms of human suffering. All effects must have a cause. The cause of one's actions directly affects the result. All negative desires cause negative results.	- Cause and effect were viewed in terms of scientific evidence.
- Meditation principle is based on the Buddhist concept of detaching from all possible causes of suffering that the mind creates (Hwang and Chang, 2009).	- The Western view of meditation is based on conceptual theories of physical and psychological therapy, such as how to cultivate an inner state of calm and joyfulness (Hwang and Chang, 2009). It is predominantly used as a stress-related intervention, rather than to acquire profound state of emotional awareness (Nielsen and Kaszniak, 2006).
- Meditation practice is a path to purification of the mind, thoughts, and feelings. Meditation is described under the title of 'consciousness'. Concentration centres on consciousness and also on a single object. Concentration is a process of eliminating distraction in order to unify the mind (Zalazo *et al.,* 2007).	- Meditation is viewed as psychotherapy as the process is regarded as a guide to mental awareness, and releasing the individual from thinking (Perez-De-Albeniz and Holmes, 2000). This common feature shares the same goal with the Eastern view of meditation.

2.6 - Types of meditation

There are many types of mediation and each one has a different name and technique. In addition, the meaning of meditation differs with each style of meditation. Scholars from the West have been looking for the best definition to describe each kind of meditation, whereas meditation in the East seems to have only one goal, which is to achieve enlightenment.

Before moving on to the type of meditation, the meaning of meditation from a different perspective must be addressed. However, this thesis will only discuss the key meaning as follows:

(1) From the Buddhist perspective, meditation does not have a specific meaning but rather is a means to purify the mind in order to eradicate the causes of suffering which are greed, hatred, and delusion. Thus, the purpose of Buddhist meditation is to liberate ourselves from delusion as well as to gain more than an intellectual understanding of the truth and real meaning of life (Fu and Wawrytko, 1994; Jindahra, 2006 translation edition).

(2) From the psychological perspective, meditation is the deliberation of self-regulation of attention, through the process of self-inquiry in the here and now (Mason *et al.,* 1995). Most of the expressions of meditation are described in behavioural terms (Craven, 1989), including concentration, altered state of awareness, consciousness, suspension of a logical thought process, control of the mind, and a maintenance of a self-observing attitude.

According to different perspectives, definitions of meditation vary. According to Shapiro and Walsh (1984), there are two main types of meditation. First, there is 'mindfulness meditation' which evolves mental awareness through an object or a process, either a visualisation, mantra, breathing process, sound, or exercise. The result is more of an awareness of an individual's emotions, sense and experiences (Goleman, 1988; Ivanovski and Malhi, 2007). This type of meditation includes Vipassana and Zen meditation.

'Concentration meditation' focuses on a preselected, specific object. Both types of meditation aim for techniques to control the mind with the subject in a sitting posture, in silence. However, some articles regarding meditation show different types of meditation which are called 'transcendental meditation' or TM. This is a sitting meditation with the eyes closed and a simple mantra meditation developed and brought to America by the Maharishi Mahesh Yogi. This technique is defined as 'turning the attention inwards towards subtler levels of a thought until the mind transcends the experience of the subtlest state of the thought and arrives at the source of the thought'.

(Maharishi-Mahesh, 1969 p.49) It is claimed that this technique requires no effort when meditating, thus leading easily to a calmness stage.

In an article, Chan and Woollacott (2007) compared two types of meditation, concentrative meditation and opening-up meditation (Shapiro and Walsh, 1984). The American Psychiatric Association subdivided meditation into 'concentrative' and 'opening-up' meditation. These involve various, attempts to expand awareness in feelings, thoughts, and sensations as they arise, without fostering judgment and interpretation of the occurrence, and have led to confusion in the differing types of meditation.

Some other scholarly work, such as Kabat-Zinn (1991) at the University of Massachusetts, developed another type of meditation called 'mindfulness Based Stress Reduction' (MBSR), describing this type of meditation as a non-judgmental awareness of the moment, feelings, sensations and thoughts, that might occur daily. This type of meditation focuses on awareness, rather than the classic mantra like transcendental meditation. Passage meditation by Easwaran (1991) is another term that is found in the journal articles. This type of meditation is similar to MBSR developed by Kabat-Zinn (1991). The technique lies in the deepening meditation and integrating the meditational state of the mind into daily life.

2.6.1 - Transcendental meditation (TM)

This type of meditation has been widely researched on Clinical studies. TM is a sitting meditation, which requires the eyes to be closed and a simple mantra meditation, developed and brought to America by the Maharishi Mahesh Yogi. It is claimed that this type of meditation benefits physiological changes (Maharishi-Mahesh, 1969; Wallace and Benson, 1972); for instance, the respiratory rate and volume decreased (Maharishi-Mahesh, 1969; Wallace 1972), oxygen consumption decreased by 20%, carbon dioxide production decreased, and blood lactate decreased (Wallace and Benson, 1972), implying a change in basic metabolism (Jevning *et al.,* 1992).

2.6.2 - Vipassana or insight meditation

This research focuses on this particular type of meditation. Sometimes, it is called mindfulness meditation (Walsh and Shapiro, 2006). This type of meditation requires some degree of concentration until the mind is focused on one object and is able to exclude everything else. As a certain degree of concentration is reached, the mind is aware of what is going on around the self (Ballentine; 1986; Jaseja, 2007). With this, a true understanding of the way the subject really is, which is called insight, is developed (Ballentine, 1986; Chandaraso, 2003).

All the types of meditation, it can be stated that the fundamental technique of each meditation lies in the same foundation of sitting in silence, where the mind becomes aware of the expansion of attention until it is in the stage of non-attachment to thoughts (Keeva, 2005). Even though this seems to be useful when defining different kinds of meditation, it lacks agreement on how best to define the type and means of meditation, thus reflecting the poor understanding of meditation. This view is also supported by Ivanovski (2007) in which systematic categorisation for describing meditation is addressed.

In summary, many of the meditation articles have used different terms when describing the different types of meditation, which creates confusion. However, by grouping sub-meditation, it can be concluded that meditation has two main categories which are called 'Mindfulness' and 'Concentration' meditation. Mindfulness includes Vipassana or insight meditation and Zen meditation. This type of meditation involves the awareness of emotions and feelings. By this, it means the mindful awareness of feelings when they arise, undertaking the framework of meditative practice which aims to achieve insight (Chandaraso, 2003). This research adopts this type of meditation as a meditative practice to examine whether it can enhance emotional intelligence and the self-perception of leadership. On the other hand, 'Concentration meditation' involves the focus of attention on a mental 'object' to still the mind. Transcendental meditation (TM), Samatha meditation, Yoga, and Quigong are categorised as forms of concentration meditation.

Table 2.4 - the summary of meditation research areas

Research areas based on empirical study	Key Findings	Authors
Cognition	Meditation research in medical and clinical studies focused on the measurement of neuroelectric brain measuring EEG activity. The key findings indicated meditation experience associated with the increase in parieto-occipital gamma which referred to the ability to control the frontal activity of the brain working in the perceptivity sensory, attention, and cognitive flexibility, therefore, enhancing the sensory ability to recognise awareness. These key findings have led to the major conclusion that meditation is not a form of relaxation technique.	Cahn and Polich, 2008; Lutz *et al.,* 2009; Slagter *et al.,* 2007; Chan and Woollacott, 2007; Lehmann *et al.,* 2001; Moore and Malinowski, 2009
Health care	Meditation promotes human well-being in terms of physiological and psychological well-being through the process of mental silence. Complicated mental activities have also been reported to reduce while promoting stress-free feelings.	Hwang and Chang, 2009; Kabat-Zinn, 2003; Shapiro *et al.,* 1998; Atwood and Maltin, 1991; Shapiro *et al.,* 1998
Physiology	Meditation reports psycho-physiological effects through meditation practice. The effect on physiological change found in an experienced meditator. This included an increase in the level of metabolism; and muscle relaxation. Jevning *et al.,* (1992) identified the effect	Herzog *et al.,* 1990; Jevning *et al.,*1992

	in physiological 'awakeful hypometabolic integrated response'.	
Mindfulness	Long-term meditation practice associated with 1. The ability to focus and maintain attention while reducing distraction. 2. Mindfulness based stress reduction has been increasingly implemented in medical and clinical fields, gaining popularity in the improvement of psychological well-being	Kabat-Zinn, 1991, 2003; Thera, 2005; Bishop *et al.,* 2004;
Meditation and emotions	The emotions and the mind are factors determining health. Through meditation practice, it is reported that emotionally well-balanced, harmony, and the ability to become aware of emotions, control and transforming all negativities into positive feelings and outcomes result from the process of internal development in which emotional clarity is promoted.	Goleman, 1995; Ballentine, 1986; Nielsen and Kaszniak, 2006; Goleman *et al.,* 2002a; Shapiro and Walsh, 2003; Davidson *et al.,* 2003
Vipassana meditation	Vipassana meditation associates with altered states of consciousness. Vipassana meditation focuses on a sense of awareness and emotional activity. The practice and benefits derive from the basis of mindfulness. Based on the principle of Vipassana practice, self-awareness, and internal stimuli are enhanced. The mindful basis benefits life and general well-being.	Gunaratana, 2002; Davision *et al.,* 2003; Kabat-Zinn, 2003; Lutz *et al.,* 2007; Segal *et al.,* 2007; Cahn and Polich, 2008;
Self-cultivation of Therapeutic effects	A state where mental and body heal the individual and alleviate one's spiritual suffering.	Hwang and Chang, 2009

| Negative effects | Not all meditation creates benefits. The outcomes of meditation practice have reported side effects during and after meditation. The adverse effects of meditation include an increase in tension, muscle pain, confusion, feelings of negativity as one cannot reach the intended goal while meditating. This negative side effect was argued to be caused by one who practices meditation. This is because the meditation objective is to detach all emotions, non-thinking and for the mind to be still (Ballentine, 1986). | Shapiro, 1992; Craven, 1989; Swinehart, 2008. |

2.7 - Meditation: a mental self-discipline

Any technique, particularly meditation, concerning raising awareness and attention can be regarded as a way to discipline mental ability (Kabat-Zinn, 2003; Dalai Lama, 2001; Walsh and Shapiro, 2006). Apart from meditation, other techniques such as Yoga exercise are often compared with meditation practice. However, meditation is different from other techniques. It can be argued that the form of other techniques are viewed as relaxation methods rather than raising an awareness in the mind. Although these techniques require attention, it is noted that they contribute to physical awareness rather than to mental discipline.

Therefore, it is important that the differences in meditation techniques and relaxation are clarified and clearly stated. Meditation overlaps, but is clearly distinguished from, other techniques; for instance, relaxation (Moore and Malinowski, 2009; Slagter *et al.* 2007; Dunn *et al.*, 1999; Kokoszka, 1994), hypnosis, daydreaming (Frommca, 1975), neurovascular and cardiovascular feedback, and autogenic training (Kokoszka, 1994). Atwood and Maltin (1991) described how meditation helps to develop a patient's tolerance, which increases awareness that is also beneficial to problem solving. During

meditation, focusing on their breath or a specific object, as used in insight or mindfulness meditation, the person becomes more alert and aware of their thoughts (Osho, 2004). This allows one to control their inner turmoil and to discover the causes of their problems.

From this, meditation differs from other techniques in its emphasis on maintaining alertness (Snaith, 1998; Atwood and Maltin, 1991). Alertness in this sense is not the physical alertness, but rather, in the sense of the mind becoming aware of what is happening at the moment (Goldstein, 2002), as well as its philosophical and cognitive setting, which aims to expand self-awareness and increase the sense of cohesiveness (Snaith, 1998). Other techniques, for example, yoga, focus on physical health. After analysing many literary reviews, it can be concluded that meditation is a mental discipline by which one attempts to go beyond the conditioned mind. Meditation often involves turning attention onto a single point of reference, resulting in a state of awareness in the mind (Osho, 2004). Relaxation, in contrast, is any method, process, procedure, or activity that helps a person relax, or helps them attain a state of increased calmness, or just a reduced level of anxiety or stress (Moore and Malinowski, 2009).

Generally, meditation brings more alertness than relaxation, and good meditation practice will lead to relaxation but also aims to increase awareness in a person. Relaxation is less specific and is a way to release stress and tension (Kostanski and Hassed, 2008; Kushner et al., 2008). This view is also supported by Dunn et al., (1999). Their research aims to answer two main questions. First, 'Is meditation, concentrative and mindfulness, different from relaxation?' Second, 'How do the concentration and mindfulness of meditation compare to each other?'. To answer these questions they compared EEGs of meditating participants to EEGs of the same participants during their relaxation whilst having their eyes closed. They found that both meditations differed from relaxation and that mindfulness meditation produces greater delta waves in the brain, which increases alertness for the subject (Moore and Malinowski, 2009; Slagter et al., 2007).

Having compared meditation practice with other mind-body techniques, for instance, Yoga and Gigong (Schure et al., 2008), it is interesting that meditation, Yoga, and Gigong all contribute to three identical benefits: firstly, attitude or mental change in

being more open and conscious; secondly, spiritual awareness in an increased capacity to make themselves more meaningful, a better understanding of themselves, and change in attitude and perceptions; and thirdly, an interpersonal change, an ability to handle relationships and social environments more positively where they would normally act negatively (Schure *et al.,* 2008).

In fact, Goleman (1996) considered these benefits as part of emotional intelligence, but the difference is that meditation is considered to be a mind-controlling technique. In practicing meditation, physical exercise is not required and does not lead to physical health improvement, whereas Yoga and Gigong are a mind-body exercise (Schure *et al.,* 2008). Yoga and Gigong are reported to have benefits, especially aiding in the consciousness of one's body, increased energy, and physical changes leading to improvements in health and producing more positive emotions. However, the idea of promoting healthy improvements refers to the increase in the immune system, which is similar to what Davidson *et al*., (2003) report. The main distinguishing feature is that meditation deals more with emotions. Schure *et al*., (2008) noted that the benefits of meditation have considerable positive outcomes for many people but, inevitably results vary individually.

2.8 - Attention and mind-wandering

Meditation often refers to the mind-attention process and one of the objectives is to 'still the mind' and to 'keep the mind from wandering' (Dalai Lama, 2001; Walsh and Shapiro, 2006; Ballentine, 1986). So what is Attention and Mind Wandering?

Attention is defined as selectively focusing on specific information in order to provide input to the brain for further processing (Banich, 2004), and is a basic component of several complex cognitive mechanisms including executive control, which governs higher-order processes, and working memory, which involves the manipulation and temporary storage of information. Mind wandering, also known as stimulus-independent or task-unrelated thinking, is defined as paying attention to thoughts or feelings unrelated to a primary task, often without the awareness of doing so.

According to Smallwood and Schooler (2006), mind wandering can be thought of as an automatically initiated 'situation in which executive control shifts away from a primary task to the processing of personal goals' (p. 946). While mind wandering can be beneficial at times, such as for problem solving (Smallwood and Schooler, 2006), task-unrelated thoughts are associated with causing up to 25% more task errors compared to task-related thoughts (McVay *et al.,* 2009). Moreover, mind wandering has been associated with decreased levels of happiness (Killingsworth and Gilbert, 2010). In fact, Killingsworth and Gilbert (2010) contend that mind wandering is 'a cognitive achievement that comes at an emotional cost' (p. 932), and thus is a viable topic for scientific research. Of particular concern is the finding that people tend to mind-wander, on average, at least one-third of the time, whether that be while completing a lab-based task (Christoff *et al.,* 2009; McVay *et al.,* 2009; Smallwood and Schooler, 2006) or simply progressing through their day (Killingsworth and Gilbert, 2010; McVay *et al.,* 2009).

2.9 - Benefits of meditation

Meditation research usually studies its history and narrates its benefits but its uniqueness and richness have been overlooked (Walsh and Shapiro, 2006; Wong, 1996). The richness and uniqueness are emphasised in the form of their technique of practice and the descriptive analysis of research method. However, the practice of meditation is a new investigation for many researchers and valid outcomes from meditation research can be translated into new theories or guidelines. Some research has argued that meditation theories need clarification in order to prove conclusively that meditation is providing the claimed benefits (Kabat-Zinn, 2003), whereas Rosch (1999, p. 224) wrote 'research on the meditation traditions can provide data to crunch with the old mind-set, but they have much more to offer, a new way of looking.' However, it still lacks the explanation of how it becomes a new way of thinking.

Osho (2004) describes the method of meditation as a process of bringing one's attention inward, and therefore allowing one's mind to settle into stillness. The process, he describes, can be said to be a process of withdrawing one's attention from the constant presence of external stimuli by removing them. Once this has been achieved then it is possible to elevate one's consciousness into the centre. This process has also

been described in the meditation principle of practice and is supported by Buddhist doctrine. The process of meditation practice can be powerful if all external stimuli have been eradicated (Buddhaghosa, 1976; Dalai Lama, 2005). Osho (2004) and the Dalai Dalai Lama (2001) supports the assertion that the process of meditation practice is unique in that it is by the power of mind that one can let go of the causes of complex stressors of the mind. This can be done by the mind holding itself stable and becoming aware of the present thought, that is, thinking nothing (Chandaraso, 2003). Therefore, from meditation theory and a description of meditative technique, this includes the interpretation of the concept of meditation that has been attempted by many researchers. It can be said that the meditation concept is simply about 'not thinking about thinking' (Dalai Lama, 2005). By this way, it helps to bring the mind, that may have wandered, back to the self and relieve any negative feelings. The benefit helps to reduce stress, resulting in a calmer state of mind while making decisions, as well as developing a sense of inner pace, consciousness, awareness, strength (Osho, 2004) and enhancing one's psychological capacity (Walsh and Shapiro, 2006). Scientific tests have shown that meditation can improve people's memories and creativity (Lutz *et al.,* 2009). Shapiro *et al.,* (2006) assert that meditators show enhanced subjective well-being. More importantly, the process of practising meditation helps people focus on individual points of what they are doing. Scientific evidence has claimed it helps people in different areas, leading to a variety of perspectives on meditation (Chiesa, 2010).

The ways of looking at meditation has led many interested researchers to discover the challenges inherent in exploring how meditation clearly demonstrates its capacity for assisting people in gaining new awareness and perspective. One way is that meditation may be able to improve psychosomatic and psychological disorders such as cardiovascular disorder (Schneider *et al.,* 2005). Conclusions from a number of meditation studies found that meditation is one of the instruments that can reduce stress (Osho, 2004) increase concentration (Goleman, 1998), EI (Goleman, 1995, 2003; Davidson *et al.,* 2003; Lutz *et al.,* 2004; Walsh and Shapiro, 2006) and consciousness (Osho, 2004; McCollum, 1999; Harung *et al.,* 1995). Meditation also enhances psychological capacities; for instance, emotional intelligence (Goleman, 2004a; Davidson *et al.,* 2003; Lutz *et al.,* 2004; Walsh and Shapiro, 2006), motivation, attention (Murphy and Donovan, 1997; Dalai Lama, 2001; Cahn and Polich, 2006, Walsh and Shapiro, 2006), sense of withdrawal (Goleman, 1988; Walsh and Shapiro,

2006), equanimity (Goleman, 2003; Walsh and Shapiro, 2006), motivation (Dalai Lama, 2001; Davidson and Harrington, 2002; Walsh and Shapiro, 2006), and moral maturity (Dalai Lama, 2001; Walsh and Shapiro, 2006).

Having discussed the benefits of meditation, it may be seen that some benefits of meditation, such as gaining awareness and consciousness to gain attention and motivation, to reduce stress and to enhance psychological capabilities, are common factors. Raising motivation can be one factor that influences the enhancement of self-perception of leadership. Therefore, the benefits of meditation can be common sources of influence that indirectly involve the increase of well-being. Self-perception of leadership could benefit from a process of practicing meditation as the process itself helps to guide one to be a positive thinking person. Chiesa (2010) said that one who practices positive thinking is a person who can calm their mind, be able to get away from negative thoughts, and look positively to problem solving, rather than being frustrated by it. The basic characteristic is said to be a cheerful person, able to motivate others (Dalai Lama, 2001). From the benefits of the meditation point of view, it is assumed that meditation can be one of the crucial tools to influence self-perception of leadership. Though the benefits of meditation may be well established, there is also a critique of meditation that needs to be addressed; this will help clarify meditation in another dimension.

2.10 - The relationship between meditation and emotional intelligence

It seems that meditation is perceived to have practical relevance. During the past ten years people have increasingly recognised the importance of integrating their outer and inner life through meditation practice (Wilber, 1998; Ray and Anderson, 2000).

This boom in spirituality meditation began at the start of the 1990s. There is evidence of a substantial increase in the numbers of conferences devoted to spirituality meditation in the workplace. Many publications are devoted to this topic. It is argued that the integration of spirituality meditation and work can bring profound value to the perception of people's work, and thus offer them deeper fulfilment. It has been evidenced that managers who are committed to spirituality through meditation techniques share similar concerns with others, despite differences in religious and

cultural backgrounds and beliefs. (McCormick, 1994; Wachholtz and Pargament, 2005).

With regard to the connection between spirituality, meditation, and emotional intelligence, it is supported that EI is aligned with competencies and can be measured as a part of a competency framework. Spirituality meditation can be defined in many ways and the concept can vary from one person to another, but it is commonly understood to be about the 'emotional behaviour' or 'attitudes' of an individual. Being spiritual is similar to being open, compassionate, or meditative (Tischler *et al*., 2002). In terms of personal awareness competencies, such as, self-awareness, emotional self-awareness, positive self-assessment, and self esteem, all can be increased with spirituality, which is similar to the personal awareness competencies with EI. Moreover, spirituality meditation seems to bring a sense of independence, self-supportiveness, and self-motivation. Thus, there appears a parallel between the awareness and skill competencies of EI and the behavioural, attitude, and personality results of an increase in spirituality meditation practice (Goleman, 2002).

Mindfulness has been used in a variety of contexts in modern time. The term refers to one of the meditation terms that were used as a name or type of meditation, appearing more than 2,500 years ago (Buddhaghosa, 1976). However, it is noted that there are many types of meditation practice according to the Pali canon. The ways to practice meditation has been differentiated from time to time, from people to people, and from culture to culture. The differentiation of meditation techniques can be seen in Western culture as the techniques have been modified to suit each culture. In Western countries, especially America and England, a transcendental meditation, or what is best known as TM technique, was developed by Maharashi Yogi. This type of meditation technique has been widely accepted by Western culture as the technique itself was applied to suit everyone in Western society and tremendous benefits have been validated through scientific experiment. (Hwang and Chang, 2009; Kabat-Zinn, 2003; Lutz *et al.,* 2009; More and Malinowski, 2009). However, there are some journal articles (Jaseja, 2007; Swinehart, 2008) that have argued against its disadvantages, one of which is that it may cause epilepsy (Jaseja, 2007). Nevertheless, there were discussions and arguments regarding the 'double edged sword' of meditation. The topic of meditation causing

epilepsy has become a main area of discussion regarding the disadvantages of meditation until recent times.

Many people who see the benefits were following the teachings of Buddha, both in theory and practice. It is believed that no one has found the exact way to practice that Buddha discovered in order to achieve Nirvana, even though meditation practice has become diverse. There are some forty means of meditation practice, however, it is believed that every single way is correct, depending on its suitability and comfort of each practitioner. This is because, according to meditation theory (Buddhaghosa, 1976), no matter how techniques develop, when people have reached a certain degree of emptiness, they will also reach the stage called Samattha Vipassana, which is the means to Nirvana, the equivalent means that Buddha used.

In order to achieve effective meditation practice, it is important that the meditation teacher is experienced in meditation practice. In Eastern culture, like Thailand and India for example, where meditation practice originated, people will search for an appropriate teacher. Usually, they are monks or acolytes who will have experienced enough to pass along what they have learned and practiced according to Buddhist doctrine (Buddhaghosa, 1976). There are many teachers with different levels of practice. The difference is what level of mindfulness the individual can gain through the practice of meditation. The result of the practice depends on the individual (Walsh and Shapiro, 2006; Kostanski and Hassed, 2008). The teacher, or the monk, can only guide the way to success. The way of practicing meditation deals with mind training (Buddhaghosa, 1976). Walsh and Shapiro (2006); Kostanski and Hassed (2008) have supported that the mind needs to be trained to be at the highest level of calm. In order to purify the mind, the mind should be trained. It has been asserted that, to achieve mindfulness, the practice of meditation must be one of the most effective types of practice for mind training.

2.11 - Conceptual framework

The review of current literature and theoretical frameworks has shaped the conceptual framework of this study.

Direct effect scenario
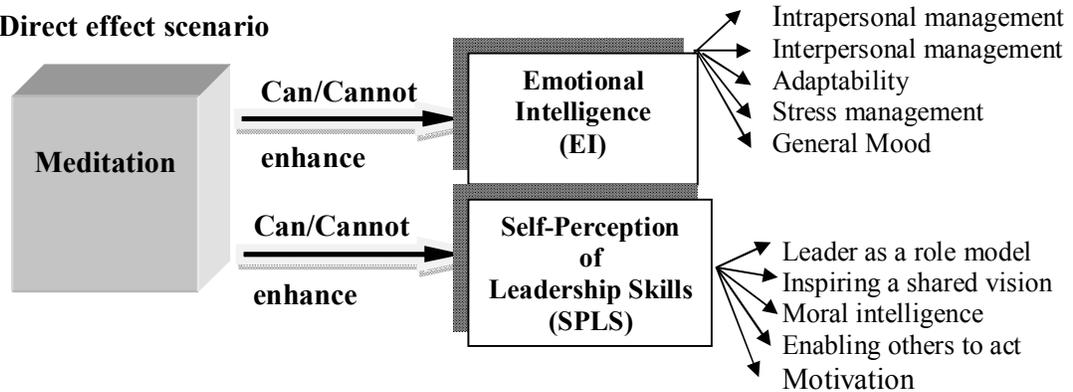
Meditation theory supports the cultivation of emotional awareness into the inner level of the self and, therefore, raises other related skills of EI that constitute basic awareness and consciousness. This is because the EI framework builds upon the awareness of emotions. Thus, it can be said that meditation and EI share the same common features, with awareness as a base. It is proposed that EI is important for leaders, as it is a key for leaders' success in work life. Therefore, it is assumed that meditation can enhance self-perception of leadership skills. Support from previous studies into EI and self-perception of leadership demonstrates the relationship between EI and self-perception of leadership (Goleman, 1995; Kickul and Neuman, 2000; Dulewicz and Higgs, 2000; Boyatzis and Mckee, 2005). This scenario presents a direct effect on meditation towards self-perception of leadership skills. Meditation theory is a cause and effect rationale of explanation that relates to the cultivation of awareness and consciousness. Moreover, if awareness is a foundation of what constitutes good and bad, self-perception of leadership should be aware of emotions and moral competency (Goleman, 1995; Kouzes and Posner, 2002; Lennick and Kiel, 2010). EI is said to be vital to leaders' success (Goleman, 1995; Bar-On, 1997; Salovey and Mayer, 1990), therefore, it is assumed that it is possible for meditation to provide a direct effect to enhance self-perception of leadership skills.

2.12 - Discussion on theoretical assumptions towards meditation: the principle cultivation of mindfulness

Emotional intelligence is well known with the definition of ability, competencies, and skills that are required for effective leaders (Bar-On, 1997; Goleman, 1996; Western,

2008) and is key for the outstanding performance that is a necessity for leaders. It comprises other important components in relation to the ability to be able to perceive and be aware of one's own positive and negative emotions, and those of others, so that relationships among people are still maintained, and the ability to express feelings and personal rights in a *non-destructive manner,* and the ability to control and to cope with stressful demands. Leaders, whose self-perception of leadership towards those skills and competencies differentiate themselves in all areas, will continue striving to succeed.

The discussion of meditation benefits can include the mind training development in providing benefits for self-perception of leadership and emotional intelligence. The discussion of how meditation may be able to enhance emotional intelligence and self-perception of leadership skills has been emphasised, based on the principle of meditation influencing people's mindfulness. The mind, if trained correctly, can gradually cultivate concentration and awareness (Payutto, 1988). The basic meditation principle is to focus on one central point inside the body and keep focusing, but just a slight concentration, not a deep concentration (Chandaraso, 2003).

At this stage, concentration occurs through the process of focusing into the centre of the body. After a while, it is normal for person's mind to wander as long as the subconscious is still functioning. Scientific evidence into the sub-conscious shows that meditation is not either a 'falling into sleep' stage, or a relaxation technique (Payne, 2005). In fact it is a process of creating awareness (Moore and Malinowski, 2009). At some stage while meditating, the meditator will become aware that the mind is wandering. At this point it is necessary to pull the mind back again to focus into the centre of the body. The clear crystal ball visualised inside the body is a foundation that helps to pull the wandering mind back to the point. Practicing meditation can then be a means to concentrate on what we are doing, feeling and acting (Chandasaro, 2003). This process has been discussed as it is the theoretical assumption of meditation that supports the hypotheses. The result is that one will be aware of what one is doing, feeling and acting. Therefore, meditation can be a means to cultivate concentration and awareness at the same time. The practice of mind through meditation helps create a still mind. Once a mind is still, calmness and tranquillity occur.

In Buddhist terminology this is called a stage of mindfulness, Samatha in Buddhist theory. Once the mind is calmed, concentration and awareness are gradually obtained and insight gained. Buddhist teaching has been a source of recognition for cultivating insight for the human consciousness (Pelled, 2007). As soon as a mind is calm, that mind is purified. Consequently, insight emerges. At this stage, we are now finding a way to concentrate our mind.

In Buddhist philosophy, feelings refer to emotions such as love, greed, anger, and absent-mindedness. In other words, feelings can be referred to as emotions, which cover the expression of one's feelings, this expression can be negative or positive. If one cannot control negative feelings, disasters may occur. It has been said (Harung, 1995) that a person in the position of leader not only has positive but also has negative sides, for instance, bad decision making, not understanding people, and using power in a negative way, these can cause personal failure and failure in others. When linking self-perception of leadership with emotional intelligence, Goleman (1996) said leaders should be able to manage their own emotions as well as those of other people, that is, understanding and controlling bad emotions and delivering positive feelings.

An effective leader should have the self-perception of being able to motivate, encourage, show moral intelligence and be a role model. Those traits, or characteristics, differentiate a perception of being leaders by managers, and encourage leaders to enhance their self-perception of effective leadership. In science, meditation can help create positive feelings. By positive feelings, in Buddhism we mean happiness (Dalai Lama, 2003), whereas, in science, it is called endorphin. This chemical comes from the brain when people feel happiness. As a result, it reduces cortisol in the blood. Cortisol relates to the sources of stress. If the level of cortisol is high, it is likely that the level of stress is also high. Practicing meditation can help reduce stress levels when one does not think of anything, by reducing cortisol in the blood while meditating. Therefore, the mind is calm and tranquil, peaceful and purified. (Walsh and Shapiro, 2006; Dalai Lama, 2001).

In science, the state of meditation also creates 'a ground state of consciousness' (Ong *et al.,* 2009) in which it is said to be a conceptualisation of meditation theory and neuroscience theory (Osho, 2004), a common basis for understanding the mental state

by minimising cognitive activities while reducing the mind's activities until it is diminished. However, the mind is still in a state of wakefulness-alertness without thinking, and feelings (Travis *et al.,* 2004) result in an enlargement of the level of consciousness. Therefore, consciousness becomes greater enabling the mind's capability to function to its full potential (Maharishi, 1972; Ong *et al.,* 2009). Wallace *et al.,* (1970) said *'With nothing inside the mind, the mind opens to positivity and creativity, as it is fresh from the restfulness and is therefore awake and alert.'* They called this process a *'restful alertness'*.

2.13 - Emotional intelligence background and definition

Regarding the terms 'intelligence' and 'emotion', the background of the words is diverse. William Shakespeare and Francis Bacon referred to the terms 'intelligence' and 'intelligent' over 400 years ago (Oatley, 2004). The actual word 'emotion' emerged approximately 200 years ago (Oatley, 2004). Farrelly and Austin (2007) suggested that the term 'emotional intelligence' seems to be an upgraded version of the theory of emotion, created in 1890 by William James.

Bar-On (1997) actually coined a similar term to emotional intelligence, referred to as 'emotional quotient' (EQ). EQ was actually utilised as a synonym to 'IQ' (Emmerling and Goleman, 2003). The EQ model comprises five categories and does appear to have similarities to the concept of emotional intelligence:

(1) The capacity to understand one's self;

(2) The capacity to understand others;

(3) The proficiency to cope with emotions and perform rationally;

(4) The dexterity to be open to change; and

(5) The ability to solve personal or social problems.

The actual idea to expand the concept of emotional intelligence into a field of knowledge had its inception in the late 1980s by Salovey and Mayer. Until this point, emotion and intelligence were regarded as being inherently contradictory. Currently, the theory itself appears to be in its infant stages of research and review. Mayer, Salovey and Caruso (2004, p.251) contributed the first definite utilisation of the term 'emotional intelligence' to scholarly literary fields. Salovey and Mayer (2004)

reviewed that emotional intelligence may be viewed as the ability to monitor one's own and other's feelings and emotions, analyse them, and to use this information to possibly control and guide emotions strategically.

Farrelly and Austin (2007) simply described emotional intelligence as the way people are unique in their variety of abilities to understand and utilise their emotions. Furthermore, this understanding and utilisation of emotions includes interaction with other people.

Dearborn (2002) reviewed the competencies of emotional intelligence as:
- (1) Self-awareness;
- (2) Self-management;
- (3) Social awareness; and
- (4) Relationship management.

A key competency of emotional intelligence also requires leaders to be flexible and able to adapt their leadership style to any given situation. These competencies of relationship management, flexibility and interpersonal skills within the emotional intelligence modality emerged in the leadership reports during interviews. The next section will focus on emotional intelligence and leadership.

2.14 - The history of emotional intelligence (EI)

Emotional intelligence is actually not a new concept but has its roots in the 1920s in the field of psychometric research, especially the work of Thorndike (1920), However, scientific evidence was first produced by Salovey and Mayer (1990). Since the establishment of emotional intelligence's scientific evidence was introduced in 1990, research on emotional intelligence increased substantially.

There are now three broad emotional intelligence models:
(1) The EI ability-based model (Mayer and Salovey, 1997). This method is an ability-based assessment approach or performance-based approach (Conte, 2005);

(2) The Bar-On model of emotional-social intelligence (Bar-On, 1997). The Bar-On model is a self-report personality-based approach. It can also be used an informant approach; and

(3) The Goleman model. This is a competency model that focuses on the workplace (Goleman, 1998; Boyatzis *et al,* 2000).

These three emotional intelligence models were developed through qualitative and quantitative research and have been academically accepted (Berrocal and Extremera, 2006. Salovey *et al.,* (2004), including its theoretical framework, have been accepted for use within the educational and organisational field (Feldman-Barret and Salovey, 2002). The differences are that the concepts and constructs are introduced in a variety of contexts with the objective of having a measurement focus on the variety of contexts. However, it has been argued by Matthews *et al.,* (2002) and Mayer *et al.,* (1999) that the concept is broadly accepted and it has been introduced worldwide.

In the early work, the concept of EI stemmed from the concept of 'intelligence' in which theory and concept were not clearly defined (Berrocal and Extremera, 2006). However, gradually its theory has become much sharper and more accurately defined. The research on EI had focused on the concept and construct of EI, until the construct of EI was clearly statedand became more rigid through the works of Mayer and Saarni in 1999 (Berrocal and Extremera, 2006). From an academic research point of view, the concept was still ambiguous, as it had been in early development (Kunnanatt, 2008). In contrast, the value of EI became a practical contribution to the individual and society by Goleman (1995) through the attribution of the concept. His published book is said to take EI from the academic world of research to a practical business industry (Kunnanatt, 2008). Since then, the EI construct and concept has attracted both academic and general research. Below are detailed the roots of how EI became a concept, attracting academic researchers to the practical world of social interaction.

It has been said that EI dates back to the concept of 'intelligence'. The topic of 'intelligence' became of interest to psychologists (Boyatzis and McKee, 2005), especially focusing on its cognitive aspects, such as memory and problem-solving (Walsh and Shapiro, 2006; Wallace, 1993). The cognitive aspect is said to be part of human potential. However, it has been argued by Wechsler (1943) that non-cognitive

aspects are also crucial for people that engage in social interaction. For intelligence, David Wechsler (1943) defined it as "To act purposefully, to think rationally, and to deal effectively with the social environment rather than focusing on how an effective individual can solve a problem." As early as 1940, he referred to 'non-intellective' elements. By that he meant affective, social and emotional skills, which also reflects the work of Thorndike (1920). Therefore, he proposed that non-intellective abilities and social emotional skills are defined as the ability to manage one's own and others emotions, which is essential for predicting one's potential to succeed in life; this idea was popularised much later in the work of Goleman (1995).

2.15 - Emotional intelligence: theoretical framework

Emotional Intelligence is a multi-dimensional construct broadly defined as a constellation of abilities, competencies, and traits related to recognising, understanding, and expressing emotions in oneself and others. EI also includes more complex skills such as regulating and managing one's emotions, the ability to reason about emotions and to use emotions to enhance thoughts and behaviour. In recent years, the construct has attracted considerable research attention, although the peak of its elaboration occurred in the 1990s in the work of several theorists, who subsequently formulated their concepts from previous theoretical developments (Bar-On and Parker, 2000; Salovy and Mayer, 1990). Indeed, the historical roots of EI can be traced back to Charles Darwin's early writings about the adaptive importance of emotional expression. In particular, he viewed emotions as integral to survival by providing an important signalling system within and across species. In particular, the universal facial expressions of emotion among humans have been strongly supported by research (Ekman, 1973). Similarly, Thorndike's (1920) concept of 'social intelligence' also informed current concepts of the construct. Thorndike defined social intelligence as comprising the abilities to understand and manage others, and to engage in adaptive, purposeful social interactions. Gardner's (1993) theory of 'multiple intelligence', which distinguished between intrapersonal and interpersonal, also contributed to the emerging research on emotional intelligence.

There are three main emotional intelligence models that have been developed, based on the theoretical framework of emotional intelligence, and are conducted based on

empirical scientific study (Berrocal and Extremera, 2006; Ashkanasy and Daus, 2005), unlike the emotional intelligence instrument that was intentionally produced for commercial purposes (Elias *et al.,* 1999) after the launch of Goleman's emotional intelligence book in 1995 (Berrocal and Extremera, 2006).

In summary, the three EI models that have developed based on a theoretical framework and academically accepted are:

(1) The EI ability-based model (Mayer and Salovey, 1997);

(2) The Bar-On model of emotional-social intelligence (Bar-On, 1997); and

(3) The Goleman model. This is a competency model that focuses on the workplace (Goleman, 1998; Boyatzis *et al.,* 2000).

All the EI models aim to measure different constructs, however, their concept of measurement is found to be similar: that is to regulate, monitor and to have the ability to understand their own and others' emotions, and to promote positive emotion and intellectual growth. The differences are the aims and objectives of the measurement outcomes.

Although the EI models comprise a large set of abilities that have been studied by psychologists for many years, Bar-On's emotional-social intelligence theoretical approach to EI is wider and more comprehensive compared to Mayer and Salovey's model 1997 (Berrocal and Extremera, 2006), and its psychometric test provided a valid empirical study. The aims of the Bar-On model (1997) combine components of social and emotional functioning that are key to having balanced psychological and emotional well being (Bar-On, 2000). Each model is justified as being acceptable by the scientific approach of validating the concept and construct. However, Bar-On's 1997 model is best suited for adoption within this research. The following EI models are described:

2.15.1 - The EI ability-based model by Mayer and Salovey

The EI ability-based model (Mayer and Salovey, (1997) is considered as an 'ability model' where the theoretical framework has been developed based on the ability to perceive accurately, to express and appraise emotion, to access and generate feelings

when facilitating thoughts, to regulate emotions to build intellectual growth and to promote emotion, and to understand emotion and emotional knowledge (Mayer and Salovey, 1997 p.10).

The ability-based model provides knowledge around debates of scoring, reliability and validity (Mayer, Salovey, Caruso, Sitarenios, 2003). It comprises four sections:

(1) Perceiving emotions;

(2) Utilising emotions to translate cognitive activities;

(3) Understanding emotions; and

(4) Management of emotions.

The MSCEIT is a measurement instrument for the ability-based EI model. This included a panel of 21 emotion experts, rather than the previous MEIS study with only two panel experts. This added criteria and consensus around the apparent correct answers. Interestingly, in an organisational setting, members are usually able to notice a mood and come to a consensus of a superior just by recognising certain facial expressions. Word may travel rather quickly in an organisation in which the leader is in a bad mood, and members will attempt to avoid that person. It would seem that this type of situation can have a negative impact on leadership success and organisational effectiveness.

Brody (2004) pointed out the importance of the MSCEIT being able to test knowledge of the level of emotions, but not necessarily the ability to communicate the emotional level when performing activities. This study utilised open-ended interview questions, and at times was able to sense the emotional levels when the participants were reporting emotional leadership experiences. Ability-based emotional intelligence was widely used by a number of researchers (Geher, 2004). As indicated by Matthews *et al.* (2002), there is a long history of the development of this measurement method compared to other emotional intelligence measurement tools.

Deciding on the most appropriate EI measurement depends on the overall aims of assessment (Conte, 2005; Matthews *et al.,* 2002; Gowing, 2001). The ability-based model is not suitable for this research. The rationale of not choosing the EI model by Mayer and Salovey (1997) is because it is an ability-based model measuring the

individual's emotional performance level (Mayer *et al.,* 2003; Conte, 2005). The aim of this study is not to measure individual performance but rather to focus on how effectively an individual can understand one's own and others' emotions based on the context of social and emotional management skills. The Bar-On emotional-social intelligence model (Bar-On, 1997; Bar-On, 2000) performs this and therefore meets the criteria and objectives of this study.

2.15.2 - Bar-On emotional intelligence model

Bar-On's emotional-social intelligence model (Bar-On, 1997; 2000) is a mixed model focusing on a cross-section between emotional and social competency skills in which the theoretical framework was initially developed based on the concept of cognitive intelligence and intelligence quotient developed by Wechsler (1958). Cognitive intelligence has been defined as the capacity to understand, recall, think rationally, learn, problem solve and apply what the individual has learned (Kaplan and Sadock, 1991). Later, the broad conceptual framework of intelligence by Wechsler (1958) includes the ability to manage and to adapt to new situations and cope with the varieties of everyday life. His conceptual framework focuses on 'non-intellective' factors, such as social factors and emotional well being. Therefore, he proposed that non-intellective abilities are essential for predicting one's ability to succeed in life. The concept of the non-intellective factor involving emotional and social skills management would later become a foundation of the construct of emotional intelligence.

The theoretical framework of emotional intelligence influenced from the early work of Thorndike (1920), as cited in Ferris *et al.,* (2002) refers to the ability to send and receive effective social-verbal and emotional-non-verbal information. This process depends on knowledge of socially appropriate behaviours as well as the ability to regulate these behaviours flexibly in accordance with changing situational demands. Riggio (1986) defined social emotional skill in terms of the following six dimensions:

(1) Emotional expressivity;

(2) Emotional sensitivity;

(3) Emotional control;

(4) Social expressivity;

(5) Social sensitivity; and

(6) Social control.

Emotional expressivity refers to the accurate verbal and non-verbal expression of experienced emotional states. People high in emotional expressivity may be described as 'emotionally charged' and able to 'emotionally arouse or inspire others because of their ability to transmit their felt emotional states' (Riggio, 1986, p. 651). Emotional sensitivity refers to one's ability to receive and decode accurately the non-verbal cues emitted by others. Emotional control involves the ability to regulate ones emotional responses to others. Those individuals high in emotional control guard against the expression of extreme or spontaneous displays of emotion by paying attention to their feelings, such as self-monitoring and adjusting their actions according to the situation.

Social expressivity refers to one's overall ability to effectively engage in social interaction, manage, and control one's emotions. 'Persons high in SE (social expressivity) appear outgoing and gregarious because of their ability to initiate conversations with others' (Riggio, 1986, p. 651). Social sensitivity focuses on ones' ability to comprehend verbal communication and engage in effective communication within the normative context of the situation. Finally, social and emotional control refers to the general ability to perform effectively in social situations. Those high in social and emotional control are capable of varying their behaviour in order to match the social demands of any given situation (Riggio, 1986). Goleman (1995) supports the assertion that people who are high in emotional sensitivity will be effective as they are aware of their own and others' emotions. Therefore, the social and emotional contexts are essential (Bar-On, 1997).

In an empirical study utilising the Social Skills Inventory, which operationalises the six dimensions of social skills listed above, Riggio (1986) found strong positive correlations between the social skills dimensions, particularly social expressivity and social control, and the favourability of initial impressions. Similarly, Riggio *et al.,* (2003) found that the possession of basic social-emotional skills correlated positively with others' ratings of leader effectiveness. Together, these findings suggest that social-emotional skills are an important component of effective leadership.

Social and emotional skills are likely to influence the types of behaviour a leader exhibits, thereby affecting the way in which leader are perceived. Leaders who are able to read and interpret social and emotional cues and act upon this understanding are more likely to exhibit behaviour that meets the needs of their followers, ultimately resulting in more positive perceptions of the leader's performance (Riggio and Reichard, 2008). Specifically, leaders whose influence rests on the ability to employ communicative strategies effectively in order to instil in others a sense of identity and purpose (Yukl, 2006), and have the ability to express and control emotional and social displays appropriately, are particularly important (Bar-on, 1997). Additionally, leaders must be able to read and decipher effectively verbal and non-verbal information that they receive from followers in order to respond in a manner that meets their followers' needs. Thus, social and emotional sensitivity are also essential if followers are to perceive their leader as being effective.

Emotional intelligence is claimed as being one of the most important determining components of success in work and life (Goleman, 1995; Bar-On, 1997). However, this notion, from an academic point of view, is to some extent still under discussion. They were aware of previous work on non-cognitive aspects of intelligence and described emotional intelligence as 'a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action'. The considerable research on EI lends itself to study related to the performance of success (Dulewicz and Higgs, 2000) and other related topics, such as how to become an effective leader (Lindebaum and Cartwright, 2011). However, it is argued that the reviews have not clearly indicated how to achieve emotional intelligence.

This self-report instrument was designed to assess those personal qualities that enabled some people to possess better 'emotional well-being' than others. This model was developed on a theoretical base just like the ability-based models. The difference is focused on the emotional-social context and is a competency-skills based model that aims to determine how effectively people understand and express themselves, deal with their own and others' emotions, and how well they can cope with daily demands, (Bar-On, 1997) which are justified to use in this research with regard to meditation.

The Bar-On EQ-i (1997) model comprises five factors, which are:

Table 2.5 - Components and sub-components of emotional intelligence

Emotional intelligence (Bar-on, EQ-i)	(1) Intrapersonal skills	- *Self-regard* - *Emotional self-awareness* - *Assertiveness* - *Independence* - *Self-actualisation*
	(2) Interpersonal Skills	- *Empathy* - *Social responsibility* - *Interpersonal relationship*
	(3) Adaptability	- *Reality testing* - *Flexibility* - *Problem solving*
	(4) Stress Management	- *Stress tolerance* - *Impulse control*
	(5) General mood	- *Optimism* - *Happiness*

(1) Intrapersonal skills:

These refer to the ability to be aware and understand feelings and emotions in the self. Within interpersonal skills itself, it is further sub-divided into 5 subscales: self-regard, emotional self-awareness, assertiveness, independence and self-actualisation.

a. *Self-regard* is defined as the ability to accept one's strengths and limitations, to be able to respect one's perception from both a negative or positive aspect.

b. *Emotional self-awareness* is the ability to be aware and recognise one's own feelings and emotions and to differentiate between negative and positive feelings and the cause of these feelings.

c. *Assertiveness* is the ability to express one's own feelings, thoughts, and beliefs as well as to stand up and defend one's personal rights, such as not to allow other people to take advantage. Moreover it is defined as the ability to openly express opinion and judgement without aggression.

d. *Independence* refers to the ability to be 'self-controlled' and 'self-directed' in terms of one's own thinking and actions. A person with this ability will be an independent person able to decide effectively and make important decisions. It requires a degree of 'inner strength and desire to meet expectations and obligations, without becoming a slave to them' (Bar-On, 1997 p.16).

e. Self-actualisation is defined as the 'ability to realise one's potential capacities'. (Bar-On, 1997). This factor requires the ability to do the very best within one's capabilities and constantly motivating oneself to be tactful.

(2) <u>Interpersonal skills</u>

This refers to the ability to be aware and understand the feelings, emotions and ideas in other people and is further sub-divided into three subscales;

a. Empathy: This is defined as an '*ability to be aware of, to understand, and to appreciate the feelings of others'* (Bar-On, 1997 p. 16). It is also the ability to be sensitive to how, what, and why others react or feel the way they do.

b. Social responsibility is '*the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one social's group'* (Bar-On, 1997 p.16). A person with social responsibility has social consciousness in a responsible manner, being able to accept others' opinions and respect their social values, this includes the ability to do things for others.

c. Interpersonal relationship is '*the ability to establish and maintain mutually satisfying relationships that are characterised by intimacy and by giving and receiving affection'* (Bar-On, 1997 p.16). This component includes the ability to convey intimacy to other human beings with warmth and understanding, which requires sensitivity towards others.

(3) <u>Adaptability</u>

This refers to the ability to alter emotions and feelings according to the situation. It is further sub-divided into three sub-components:

a. Reality testing refers to '*the ability to assess the correspondence between what is experienced and what objectively exists'* (Bar-On, 1997 p. 17). This is being able to tune into an immediate situation with the ability to accept reality as well as to clarify the perception and thought process.

b. Flexibility is '*the ability to adjust one's emotions, thoughts, and behaviour to changing situations and conditions'* (Bar-On, 1997 p.17). This component involves the decision-making process to react appropriately, and adapting and responding to change

effectively. A person with flexibility can change their mind when influenced by evidence or other people.

c. Problem solving is '*the ability to identify and define problems as well as to generate and implement potential effective solutions*' (Bar-On, 1997 p.17). This includes the ability to sense problems, cope effectively and motivate others to deal with problems. Problem solving involves a clear decision-making process and the ability to be completely flexible.

(4) Stress management

It is the ability to cope with stressful demands and to control one's emotions. It is further sub-divided into two sub-scales:

a. Stress tolerance: This is defined as '*the ability to withstand adverse events and stressful situations without 'falling apart' by actively and positively coping with stress*' (Bar-On, 1997 p.17). This is based on the ability to know the causes of a situation, coping with it and offering suitable remedial action. It also includes the ability to take control of any stressful situation and believe in one's ability to face and handle the difficulty, being aware of their own's own feelings, thoughts and actions. It is also associated with the capacity to be relaxed, to stay calm, and concentrate on the crisis being faced.

b. Impulse control is '*the ability to resist or delay an impulse, drive, or temptation to act*' (Bar-On, 1997 p.18). This component is similar to the stress management component, the difference is that it includes the ability to accept and control one's aggressive impulses and aggressive behaviour.

(5) General mood

It is the ability to be optimistic and express positive emotions which are composed of:

a. Optimism: This refers to '*the ability to look at the brighter side of life and to maintain a positive attitude*' (Bar-On, 1997 p.18). It is associated with a positive attitude and optimism towards oneself and others.

b. Happiness is '*the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun*' (Bar-On, 1997 p.18). It also includes a general feeling about enthusiasm and the combination of self-actualisation.

2.15.3 - Emotional competency inventory (ECI)

Emotional Competency Inventory (ECI) or Goleman's model of EI (Goleman, 1998) is a competency model that focuses on workplace performance, this EI model was influenced by Goleman (1995). It is based on the theory of performance in organisations, aiming to predict the effectiveness of personal outcome focusing on the individual performance in the organisation and workplace (Boyatzis *et al.,* 2000; Goleman, 1998). This model was developed to identify competency or ability that is necessary for the organisations, therefore, it is not suitable for utilising as an EI measurement instrument in this study.

Currently, Competency Inventory (ECI) comprises four dimensions:

(1)   Self-awareness includes emotional self-awareness, self-confidence and accurate self-assessment;

(2)   Social awareness includes organisational awareness, empathy and service orientation;

(3)   Self-management refers to self-control, adaptability, conscientiousness, trustworthiness, initiative and achievement drive; and

(4)   Relationship management comprises communication, developing others, conflict management, influence, leadership, building bond, teamwork and collaboration and acting as a change catalyst.

The measurement of this model includes two methods of evaluation which are, first, self-report, in which the individual rate themselves and, second, the evaluation is rated by an outsider, their superior and/or their worker (Goleman, 2001).

2.16 - Critique of EI assessment tools

It has been argued that (Schutte *et al.,* 1998; Ciarrochi *et al.,* 2000) although the ability-based EI model has been widely supported with its theoretical underpinning, the mixed model by Bar-On (1997, 2006) has created more influence in EI measurement in the workplace (Murphy and Sederman, 2006). Cartwright and Pappas (2008) agree and give the reason to support the argument of using Bar-On EI model (1997) being that the model approach is reliant on the emotional-social ability of people to assess their own

and others' emotions in a real life context. However, it has been criticised on the grounds that Bar-On EI has promoted his work commercially, and that creates negativity regarding its use academically. It is difficult for academic researchers or students to acquire and study the Bar-On (1997) emotional-social intelligence model (Cartwright and Pappas, 2008). By way of contrast, Murphy and Sederman (2006) stated that since this Bar-On model has been heavily promoted in the market, the language and reliability/validity of the instrument measurement is better addressed. The reliability and validity of the Bar-On EQ-i have not been much criticised when compared to the ability-based model of Mayer and Salovey (1997), as supported by Brody (2004). Ciarrochi *et al.*, (2000) has also criticised the reliability of the ability-based EI model by Mayer and Salovey, 1997). However, Petrides and Furnham (2000) stated that both the ability-based EI model and Bar-On EQ-i are now showing an incremental validity over traditional cognitive intelligence and personality tests.

Further to all the discussion, this study has chosen the Bar-On emotional-social intelligence model (Bar-On, 1997) as an appropriate instrument measurement tools for investigating the impact of meditation on emotional intelligence and self-perception of leadership skills.

Table 2.6 - Summary of emotional intelligence measurement tools

EI's measurement tools	Type of measurement	Objective of assessment	Common critiques	Major critiques	Major strengths	Suitability of this study
1. MEIS Mayer, Salovey, Caruso (2000)	EI ability-based performance model	-Measure performance or ability to rationally regulate, evaluate their emotions	-These three EI tools share common critiques as follow: -Inadequate concept, theory and measurement method (Matthews *et al.,* 2002; Landy and Conte, 2004) -Are the EI's tools measuring the same construct (Matthews *et al.,* 2002) -Need more evidence on congruent validity (Conte, 2005) -Since each of the assessment tools are measuring different purposes, it is difficult to understand mutually (Matthews *et al.,* 2002; Landy and Conte, 2004)	- Though it is an ability-based model, the answer still involves with emotion. The test taker must answers correctly, therefore it is difficult to justify whether the answers are correct or not (Berrocal and Extremera, 2006)	-Receive more attention on measuring performance -Strong theoretical framework	**No,** this tool is an ability-based performance approach. This study is not aim to measuring performance
2. MSCEIT Mayer, Salovey, Caruso (2000)				-Too new to be utilised in the research study (Conte, 2005)		**No,** this study is not aiming to measure performance and is recommended that it is too soon to utilise this tool since it is newly developed from the previous tools
3. Bar-On EQ-i Bar-On, (1997)	Bar-On model of emotional-social intelligence	-Measure of emotional-social factors focusing on the perception rather than the performance assessment		-Self-report assessment usually difficult to rely on (Salovey *et al.,* 2000) -Theoretical framework is not strong when compare with a performance model (Cherniss and Goleman, 2001)	- Receive worldwide accepted since it has been showing consistency in reliability issues	**Yes**, this study looks into how effectively an individual can understand one's own and others' emotions based on the context of social and emotional management skills

4. <u>Emotional Competency Inventory</u> **(<u>ECI</u>)** Goleman, (1998); Boyatzis *et al.,* (2000)	competency model that focuses on the workplace (Goleman, 1998; Boyatzis *et al.,* 2000)	-Measure emotional competencies and positive social behaviour in workplace		-Self-report assessment usually difficult to rely on (Salovey *et al.,* 2000) -No predictive validity (Cherniss and Goleman, 2001)	-Using 360 degree instrument	**No**, this tool is a competency-based approach aiming to measure emotional competencies

2.17 - Emotional intelligence, social sensitivity and perceived-effective leadership

To engage effectively in each of the behaviours associated with leadership, leaders must be sensitive to their followers and capable of reading and understanding dynamic social contexts. Social sensitivity, as described by Riggio (1986), involves effectively reading and interpreting verbal cues, whereas emotional sensitivity involves an understanding of non-verbal cues such as body language and facial reactions. Together, emotional and social sensitivity should help leaders to recognise and understand better the thoughts, feelings, and needs of followers, establish rapport, and engage in active listening and monitoring of social behaviours (Riggio and Reichard, 2008).

Idealised influence and inspirational motivation tend to be highly correlated in studies using the MLQ. Bass (1985) refers, in part, to engaging the morals and values of followers and encouraging followers to identify with the shared vision articulated by their leader. Leaders who are perceived as inspirational and who exhibit idealised influence often offer innovative ideas that deviate from the *status quo* (Bass, 1985). To be well-received, such ideas must be offered at a time when followers are most receptive and the environment is most favourable (Conger and Kanungo, 1987). Thus, sensitivity to both the expressed and unexpressed needs and motives of followers is critical if leaders are to exhibit idealised influence and inspirational motivation. Similarly, intellectual stimulation involves encouraging followers to question assumptions, reframe old problems, and offer innovative solutions (Bass, 1985). To stimulate followers intellectually, the leader must be sensitive to followers' skills, abilities, and interests, and have a strong understanding of the extent to which followers can be challenged. Finally, individualise consideration involves understanding the unique needs and motives of one's followers and tailoring one's style to satisfy best those needs/motives. Emotional and social sensitive leaders will possess the understanding and insight necessary to adjust their style and behaviour appropriately to meet best the unique needs of each of their followers.

2.18 - Emotional and social expressivity and perceived-effective leadership

As noted previously, emotional expressiveness refers to the ability to convey emotional messages, whereas social expressiveness involves skill in engaging others in social

interactions (Riggio, 1986). Both of these skills are critical for leaders, whose influence rests largely on their ability to inspire followers through engaging social exchanges and emotional appeals (Bass, 1985; Yukl, 2006). Leaders who exhibit emotional expressiveness are likely to motivate and inspire followers by conveying positive effect while those who are socially expressive will excel at public speaking and persuasion as well as one-on-one coaching (Riggio and Reichard, 2008).

Emotional and social expressiveness are particularly important for the 'inspirational motivation' and 'idealised influence' components of effective leadership, which involve rousing the emotions of followers and inspiring them to transcend self-interest in the pursuit of shared goals (Bass, 1985). Indeed, prior research (Cherulnik, Donley, Wiewel, and Miller, 2001).suggests that emotional expressiveness is closely associated with perceptions of charismatic leadership/idealised influence. Similarly, skill in expressing oneself in a clear and compelling manner has been found to be critical for leaders as they ascend the organisational hierarchy and take on roles that increasingly require them to motivate and persuade their followers (Riggio *et al.,* 2003). Thus, social and emotional expressiveness are critical if leaders are to exhibit idealised influence and inspirational motivation.

In addition to inspiring the masses through broadly-directed emotional and social appeals, leaders must be able to adapt their expressions to meet the needs of their followers in one-on-one interactions. Leaders high in emotional intelligence and social expressiveness possess a large repertoire of expressive behaviours and are able to adjust their behaviours depending on situational demands (Riggio, 1986; Riggio and Reichard, 2008). Such flexibility is essential if leaders are to exhibit individualised consideration, as some followers may be motivated by gregarious appeals whereas others may require more subtle and subdued forms of expressive influence. Thus, leaders who are able to modify their social/verbal and emotional/non-verbal expressions regarding the needs of their followers will be more likely to engage in the behaviuors associated with individualised consideration.

Emotional and social expressiveness are critical antecedents of intellectual stimulation, which involves encouraging followers to reframe past problems and generate novel solutions (Bass, 1985). Through contagious emotional expressions, leaders may arouse

in followers feelings of displeasure or frustration with existing practices or procedures. By expressing such displeasure verbally, leaders may reinforce the need for change and create an environment in which novel ideas are willingly expressed and actively considered. The ability to express oneself through both emotional and social channels is thus important if leaders are to be perceived as intellectually stimulating.

2.19 - Emotional and social control and perceived-effective leadership

To be perceived as effective, leaders must also be able to control their social and emotional expressions. Emotional control refers to regulating one's non-verbal/emotional displays and masking emotions when appropriate (Riggio, 1986). Similarly, social control refers to regulating one's social self-presentation and engaging in social role-playing (Riggio, 1986). By regulating inappropriate emotional and social displays and adjusting such displays to meet situational demands, leaders are able to manage the impression they make on others and exude a sense of calm and control in the face of challenges (Riggio and Reichard, 2008). Skill in controlling one's social and emotional displays is an important component of both idealised influence and inspirational motivation. Leaders must effectively regulate their own emotions and social expressions so as to evoke desired responses from followers. For instance, leaders may need to suppress their own disappointment or anger in the interest of encouraging and motivating followers. Alternatively, leaders may need to express their negative feelings in a controlled manner so as to ignite their followers' passion and instil a sense of urgency in goal pursuit.

Understanding when to suppress or express felt emotions and social expressions is also an important aspect of individualized consideration. Some followers may become disheartened by their leader's negative or angry emotional displays, whereas such displays will inspire and motivate others. The ability to control one's social and emotional displays and tailor them to meet the unique needs of one's followers is thus a critical antecedent of individualised consideration.

Finally, by regulating their emotional and social expressions, leaders should be more able to stimulate their followers, intellectually. To be perceived as intellectually stimulating, leaders must appropriately challenge their followers to reframe existing

problems and develop innovative solutions (Bass, 1985). The development of fresh, 'outside the box' ideas requires an element of risk-taking and a willingness to fail. If leaders react to failures with angry outbursts or disappointment, followers may be deterred from pursuing innovative ideas in the future. Therefore, it is critical that leaders regulate their emotional and social displays so as to support followers through challenges and encourage on-going innovative efforts.

2.20 - Historical overview of self-efficacy theory

Bandura (1977) defined self-efficacy as the competence an individual exhibited in relation to the assessment of a specific task or activity. An individual's self-efficacy might affect the effort the individual put into a given situation, the length of time the person persisted on the given task, and the feelings the person had about the task (Goddard and Woolfolk 2004). Bandura (1977) introduced the self-efficacy theory to explain behavioural changes resulting from clinical therapy, and hypothesized that an individual's expectations of the ability to succeed influenced the way the individual behaved, the effort the person exerted and the perseverance the individual applied to overcome difficulties and face challenges. Efficacy might affect the ability to motivate oneself (Bandura, 2007).

Motivation, closely related to behaviour stemmed from social cognitive theory and according to Bandura (1977), self-efficacy theory connected behaviours, cognitions, and the surroundings and had an effect on one's perceptions. How one thought, behaved, and anticipated outcomes influenced perceived self-efficacy (Bandura, 2007). An individual may believe specific behaviours will produce certain outcomes regarding the one's ability to perform the actions was the force influencing the expectation (Bandura, 1977). The construct might have an effect on one's behaviours in order to achieve the outcomes, because self-efficacy addressed an individual's expectations.

Bandura (1994) identified four ways through which self-efficacy may developed as follows. (1) mastering experiences and believing in one's abilities through experiences of personal success was one way through which self-efficacy developed (Bandura, 1994); (2) Social modelling; (3) Persuading others to succeed through conveying positive belief and ability (Bandura, 1994); (4) Observing the success and failure of

others allowed one to transfer the competency efforts to one's own situation (Bandura, 1977). However the theory did not indicate the precise means/method on how it can be developed. Therefore,

2.21 - Perceived self-efficacy

Bandura (1994) defined perceived self-efficacy as people's beliefs regarding their ability to produce the requisite levels of performance that exercise influence over events that affected their lives. The beliefs determined how people felt, thought, motivated themselves, and behaved (Bandura, 1994). Such beliefs produced diverse effects through four major processes, namely cognitive, motivational, affective, and selective processes. A strong sense of efficacy may enhance human accomplishment and personal well being in different ways. Individuals, confident of their capabilities approached difficult tasks as challenges to be mastered rather than threats to be avoided. A similar efficacious outlook may result in individuals becoming deeply interested and deeply engrossed in activities. The resulting efficacious individuals set themselves challenging goals and maintained strong commitment to the set goals, heightening and sustaining their efforts when they encountered failure.

2.22 - Leadership and self-perception

Leadership is a central and enduring phenomenon in organisational life. Through selection, training/development, and promotion processes, organisations attempt to advance those individuals who will enhance the performance outcomes of the organisation as a whole. Over the past fifty years, a vast body of research has focused on identifying the leadership traits and behaviours that are most likely to enhance organisational efficiency and effectiveness. One perspective that has garnered a great deal of research attention is Bass's (1985) theory of transformational leadership.

Another line of research has focused on self-awareness as an antecedent of leadership behaviour (Atwater and Yammarino, 1992; Tekleab, *et al.,* 2008). Self-awareness has typically been conceptualised in terms of self-evaluation; self-aware leaders have self-evaluations that are well-aligned with evaluations of the leader by subordinates, peers, and/or supervisors. Those who over-estimate or underestimate their own performance

relative to ratings from other sources lack self-awareness (Tekleab *et al.,* 2008). Previous research findings suggest that self-awareness is related to higher levels of managerial performance (Church, 1997) and subordinate trust and commitment (Sosik, 2001), and a lower likelihood of derailment (Gentry *et al.,* 2007).

Most prior studies have used alignment on leader performance ratings as an indicator of self-awareness (Atwater and Yammarino, 1997; Church, 1997; Sala, 2003). More recently, researchers (Tekleab *et al.,* 2008) have begun to focus on self-rating alignment for other types of ratings, including ratings of leadership behaviour, in the prediction of leadership outcomes. These researchers have found that leaders whose self-ratings of leadership behaviour are in alignment with their subordinates and/or peers ratings of their leadership behaviour are perceived as more effective and had more satisfied followers than leaders who either over or under-estimated their leadership behaviour (Tekleab *et al.,* 2008).

These findings suggest that self-awareness of one's performance and/or leadership abilities has positive implications in terms of perceptions of leader effectiveness. However, no studies to date have examined why some leaders are more aware of their leadership abilities than others. Given that social skill involves accurately perceiving and interpreting cues in one's social and emotional environment, it seems likely that leaders who are more socially skilled would be more attuned to their followers' perceptions and thus more self-aware of their leadership abilities than those who lack social skill. Therefore, it is expected that a positive relationship between the level of a leader's social skill and that leader's degree of leadership self-awareness.

2.23 - Self-awareness

Traditionally defined as an individual difference variable, self-awareness involves one's ability to self-observe and make accurate self-evaluations (Wegner and Vallacher, 1980). According to the theory advocated by Wicklund (1975), self-awareness involves four discrete stages: self-focused attention, self-evaluation, affective reaction, and motivated discrepancy reduction. Self-focused attention leads individuals to evaluate themselves in terms of an ideal self-image. If/when a discrepancy is recognised between one's actual (real) self and one's ideal self, the

individual experiences either a positive or negative affective response, depending on the direction of the discrepancy (Wicklund, 1975). When the real-ideal discrepancy produces a negative affective response, individuals will work to alleviate this response by either reducing the size of the discrepancy or avoiding self-focused attention entirely.

The more self-aware an individual, the more capable he or she is of incorporating self-comparison information into his or her evaluation of self and ultimately into his or her behaviour (Atwater and Yammarino, 1992). Self-aware individuals are cognizant of how they are perceived by others and are able to incorporate this information into their self-evaluation (Atwater and Yammarino, 1992). The incorporation of others' perceptions into one's self-evaluation ultimately results in a more accurate self-assessment. It has been showing the relationship between meditation and awareness that meditation creates an increase in awareness (Walsh and Shapiro, 2006)

Self-awareness has frequently been operationalised as agreement between self and other-ratings of performance (Atwater and Yammarino, 1992; Tekleab *et al.,* 2008). Consistent with Wicklund's (1975) theory of self-awareness, self-aware individuals should hold self-perceptions of their performance that are aligned with those provided by direct reports, peers, and supervisors. Research has suggested that the degree of agreement between self and other-ratings is relevant to the future behaviour of the self-rater (Atwater and Yammarino, 1992). Individuals whose self-ratings are in agreement with other-ratings are likely to have incorporated information from others into their self-assessment and adjusted their behaviour accordingly. Those who have a very positive self-evaluation that exceeds evaluations offered by others (such as over-raters) are unlikely to perceive any need for behavioural change (Atwater and Yammarino, 1992; Yammarino and Atwater, 1997). Finally, individuals with overly negative self-evaluations (such as under-raters), are likely to feel some pressure to alter their behaviour but may lack the confidence or self-efficacy necessary to do so (Atwater and Yammarino, 1992).

Self-awareness has been argued to be an important antecedent of many workplace outcomes. Atwater and Yammarino (1992) suggested that individuals whose self- and other-ratings are in-agreement are more likely than their over or under-estimating peers

to experience positive outcomes. Individuals whose self- and other-ratings are in-agreement recognize how they are perceived by others and are capable of adjusting their behaviour to form desired impressions. When ratings are in-agreement at high levels of performance (in-agreement/good), outcomes are expected to be more positive than when ratings are in-agreement at low levels of performance (in-agreement/poor; Yammarino and Atwater, 1997). Under-raters are expected to have slightly lower performance outcomes than those who are in-agreement, as they tend to lack the confidence necessary for long-term success (Yammarino and Atwater, 1997). Finally, over-estimators are expected to have the lowest performance outcomes because they have inflated self-perceptions and do not recognize that these perceptions are incongruent with those held by their peers, colleagues, and supervisors (Atwater *et al.,* 2005; Yammarino and Atwater, 1997).

As noted by Atwater *et al.,* (1998), 'self-other agreement is most relevant to outcomes that involve human perceptions and less relevant to more objective measures such as sales volume or meeting productivity goals' (p. 595). Indeed, self-awareness has been positively associated with a variety of perceptual outcomes, including follower satisfaction, follower self-leadership (Tekleab *et al.,* 2008), follower commitment, trust in the leader (Sosik, 2001), and leadership effectiveness (Atwater *et al.,* 2005; Atwater and Yammarino, 1992; Tekleab *et al.,* 2008). Self-aware managers have been found to be more effective than those who either over or under-estimate their performance (Church, 1997). Atwater and Yammarino (1992) found over-estimators to be less effective leaders than either under-estimators or those whose self- and other-ratings were in-agreement. Based on their findings, Atwater and Yammarino (1992) concluded that leader self-awareness should be considered in trying to predict leader behaviour and performance.

Most studies to date have used alignment on performance ratings as an indicator of self-awareness in the prediction of leader effectiveness (Atwater and Yammarino, 1992; Church, 1997). More recently, researchers have begun to focus on self-other agreement on other types of perceptual ratings, including ratings of derailment potential (Gentry *et al.,* 2007) and transformational leadership behaviour (Atwater *et al.,* 1998; Tekleab *et al.,* 2008). Tekleab and colleagues (2008) found that leaders whose self-ratings of transformational leadership behaviour were in alignment with their subordinates and/or

peers ratings of their transformational leadership behaviour were more effective and had more satisfied followers than leaders who either over or under-estimated their transformational leadership behaviour. Using alignment on ratings of leadership behaviour, Atwater, *et al.* (1998) reported that leader effectiveness was greater for in-agreement/good leaders than for in-agreement/poor leaders. In addition, Sosik and Megerian (1999) found that the relationship between emotional intelligence and leadership depends on leader self-awareness such that more self-aware leaders exhibited a stronger relationship between emotional intelligence and leadership than over- or under-estimators.

The relationship between self-awareness of leadership behaviours and leader effectiveness has proven to be quite robust. Indeed, self-awareness of leadership behaviours should be a somewhat stronger predictor of effectiveness than either self- or other-ratings examined independently because leadership performance is inherently dependent upon interactions with others (Atwater and Yammarino, 1992). However, we know relatively little about why some leaders are more self-aware of their leadership abilities than others. Given that social skill involves accurately perceiving and interpreting cues in one's social and emotional environment, it seems likely that leaders who are more socially skilled will be more attuned to their followers' perceptions and, as a result, more self-aware of their leadership abilities. Social skill will thus be positively related to leadership among leaders whose self and other-ratings are in agreement. In contrast, leaders who lack self-awareness (Such as over or under-estimate their leadership behaviour relative to their direct reports) will likely have lower levels of social skill than those whose self and other-ratings are in-agreement.

2.24 - Chapter summary

This chapter explored the issue of meditation on emotional intelligence and self-perception of leadership skills. The area of discussion began with the limitation of the past research addressing particularly the issue of the lack of describing meditation and its theoretical assumption. Though meditation has had an increasing amount of research, the focus has been on clinical and psychological areas rather than within the business environment. The meditation literature reviews have always addressed the importance of the clarity of theoretical assumptions, underlining the cultivation of

awareness and the techniques used, although the scope of these studies has been in either the clinical or business areas. This is because the technique of meditation and its key assumptions, with regard to cultivating consciousness and concentration, are a major foundation if one wishes to study meditation issues. The review of the literature provided critical analysis of the issues of the review of meditation, emotional intelligence focuses on its history, theoretical framework addressing Bar-on EQ-i measurement instruments. Self-efficacy theory was described in order to act as a theory underpinning the changes in one's perception.

Chapter 3: Research Methodology

3.1 - Introduction

The choice of research method refers to the techniques used for data collection (Ghauri and Gronhaug, 2005; Creswell, 2003) whilst research design is the overall plan relating to the problem and its empirical research (Creswell, 2003). The choice of research design can be conceived as the strategy designed to accrue the necessary information required in order to answer the research question (Creswell, 2009; Bickman and Rog, 2009). Both elements, research method and research design, are crucial in producing a quality empirical study. However the key to the optimum strategic choice of research design primarily depends on the researcher's skill in selecting the most appropriate approach. Chosen carefully this strategy can enable the resolution of the research question within the selected time, budgetary and skill constraints; these are significant factors that are frequently overlooked and may have a detrimental effect on the research (Ghauri and Gronhaug, 2005).

This study has employed experimental research, which is regarded as an appropriate approach in eliciting the information required in answering the research questions and testing the hypotheses; this technique is well regarded as being objective and factual (Mead, 1988). Significantly, this study design is to control extraneous variables that might affect the study and to ensure that the manipulating variables can be studied. Therefore, the results show causal relationships rather than coincidences (Coolican, 2004). The results are able to show that if there were changes, then this result would be as a consequence of meditation. The study also follows the structure and strategic design of past research regarding meditation experiments, drawing on methods that have been used prior to this study and have also been published (Davidson *et al.,* 2003).

The structure of this chapter presents a research process, adapted by Bryman and Bell (2007) as a series, demonstrating a link between each stage. The chapter begins with assumptions of the research study (3.2); discussion of the limitations of previous research and possible solutions to this study (3.3); the research strategy (3.4); an outline of the topic area of research (3.5); followed by the research questions (3.6); the methods fit for the purpose of the study are described and justified with respect to the

research design (3.7); the participants (3.8); the sampling method (3.9); sampling frame (3.10); design of demographic questionnaire (3.11); the instruments measurement (3.12); the experimental procedure and data collection (3.13); the null hypotheses (3.14); the operational and measurement levels of the variables (3.15); the null hypotheses significance statistical tests (3.16); significance level (3.17); theoretical assumptions of ANOVA, MANOVA (3.18); issues concerning sample size (3.19); effect size (3.20); finally, validity and reliability (3.21) are considered.

Before proceeding to the research strategy, it should be noted that there are core assumptions that this thesis intends to address. After stating the assumptions of this study and commenting on the limitations of using past research, parts of the methodological review process on meditation studies are addressed. This study was conducted based on systematic research since one of the advantages of this is that it enabled the researcher to identify past limitations (Nightingale, 2009). The mind mapping strategy was employed as a means to produce suggested solutions, resulting in the design research strategy being used in this study.

The strengths and limitations of other potential research approaches are discussed in table 3.4. This chapter discusses the methodology used in detail; the problems of past research and potential solutions are outlined. The research's perspective in answering research questions, as well as the methods used for collecting and statistically analysing the data, are fully explained and justified; the methodological assumptions and limitations are also discussed.

3.2 - Assumptions of the research study

There are five key issues that this research intends to address. The assumptions of this research study are divided into two main areas: first, the area involving the research methodology and second, the area in which the assumptions of the study play a vital part in the discussion and analysis sections. However, all of the assumptions in this study will be discussed fully throughout this thesis.

3.2.1 - The 'leader' as subject of the study

Most of the social experimental research and other related research, for example marketing research, had emphasised the need to have suitable representative sampling (Coolican, 2004; Hick and Turner, 1999). A 'representative sample' refers to a sample that is able to clearly represent the sampling population. In particular, the sample must reflect the main characteristics of the research aims, so that the sample may be regarded as 'truly representative' (Hick and Turner, 1999; Coolican, 2004).

The requisite criteria for choosing a leader is a person whose position was gained by being appointed to be a chief executive or senior executive of a company and commands a crucial role in making critical decisions that influence the work lives of subordinates. This research did not investigate the personal backgrounds of chief/senior executives or whether their positions as leaders were simply inherited or promoted through the strength of personal abilities. As chosen leaders it is, therefore, assumed that, their personal skills and qualities have equipped them with the requisite leadership skills to perform a leadership role as appointed within an organisation.

3.2.2 - Assumptions of the experimental research

Coolican (2004) proposes that the main purpose of experimental research is to investigate all potential alternative explanations of observed relationships and eliminate them so that the causes and effects can be isolated. The 'true experimental' research or a 'perfect experimental' research assumption must be involved, where, ideally:

(1) An independent variable is manipulated and other possible effects are controlled or held constant;
(2) There is random sampling and random allocation of subjects into different conditions.
The concepts of random sampling and random allocation differ from one another. Random sampling comprises a sample selection process that draws from a large population. Random allocation refers to a process that allocates participants into two equal-sized groups. All research studies recognise that it is very difficult to undertake a

truly random sample, however, it can at least be confirmed by the researcher that a random allocation of participants was performed;

(3) Confounding variables are eliminated by excluding any potential variables that may cause confound effects. In a perfect experiment, all variables must be similar for both the control and experimental group. Two appropriate methods for eliminating alternative explanations are by the use of a 'control group' and/or a 'placebo group'. The placebo method is mainly employed in medical trials, where it can eliminate alternative explanations caused by 'the psychological expectation of improvement' (Coolican, 2004). The control and placebo groups are similar except with regard to the 'psychological expectation of improvement' element. In order to have a placebo, it is necessary to have the same or similar method of the treatment; and

(4) There is an investigation into the differences in the overall scores between two groups by comparing the experimental and control group. Appropriate statistical measurements must be conducted in order to investigate the differences of the overall scores between the two groups.

This study has been undertaken based on the above experimental research criteria. However, there are some issues in this study that will be addressed as assumptions rather than factual material.

3.2.3 - Sampling selection process

The participants were drawn from two populations of 'leaders' working for companies in Bangkok and London. Those two populations were given a participant information sheet and a consent form. The consent form was sent out with an invitation letter, requesting subject participation and resulted in the respondents either agreeing or not agreeing to participate in this study; the respondents themselves had no part in deciding which groups they were going to be placed in. Therefore, there is no self-selection process occurring in the sampling selection. According to the assumption of the study with regard to causes of sampling bias, Coolican (2004) made a point that participants dropping out during the study can be one of the behaviours affecting its outcome, which is, therefore, considered as one possible bias. In order to minimise this potential bias, the procedure is designed to request their willingness to make a full commitments to the study for 12 consecutive weeks. Even though they do not know which groups

they would be placed in, bias may still occur during this process. They may have some emotional response regarding meditation practice, thus creating either positive or negative feelings towards the study, which may affect the outcome. However, the final procedure in the sampling process is done by random allocation into two equal groups, as Coolican (2004) suggested. Although there is no guarantee that participants will attend every session, it must be assumed that respondents will fully participate over 12 consecutive weeks.

However, the reason for moving from a 'formal random sampling process' to a 'participant agreement to participate', (which is not a participant self-selection process) is that it was too difficult to perform true random sampling. As explained in the section on assumptions of the study (2), this is different from random allocation of participants as the program required a high time-commitment to the study of 12 consecutive weeks. A high number of participants was necessary due to the high numbers potentially dropping out during the experiment which may affect the outcome of the study. This study is aware of the issue that the sampling selection process did not apply a true random sampling. However, it is assumed that the final process, where the study did randomly allocate subjects into two groups, according to Coolican (2004), is the possible solution to reduce the potential impact of any bias.

The advantages of having respondents' agreements that they wanted to participate in the experiment resulted in a high level of cooperation from the majority to commit for 12 consecutive weeks in the meditation study. This resulted in everyone fully participating with one with a zero participant drop-out rate, which is regarded as a major benefit to this study.

3.2.4 - Control group *versus* Placebo

According to Coolican (2004), the placebo group and the placebo effect and control group are similar. The placebo effect relates to the psychological effects that occur when subjects feel or think positively towards the treatment that they receive which can create positive perceptions towards the treatment and may result in a consequent positive outcome to the treatment. A placebo group eliminates a placebo effect whereas a control group cannot. The control group is a way of eliminating any alternative

explanation that may affect the outcome regarding any change in the dependent variables.

Placebo groups are mainly utilised in investigations for medical research. A control group is applied in social experimental research, where the study aims to compare and contrast the effects between two different groups. In contrast it is much more difficult to be objective in social experimental research than in a placebo group in a medical research study due to the fact that the psychological effects cannot be eliminated or minimised. Clearly the concept of a placebo group plays an important role in eliminating or minimising psychological effects that might occur during treatment but this cannot be successfully applied in social experimental research. The key difference is that in medical research, placebos are in the form of 'pill' or an 'inert pill', that is introduced to subjects to eliminate any potential psychological effects.

According to Coolican (2004), in order to use a placebo in a control group, it is necessary that the procedure of the placebo be conducted in the same manner as the main treatment. In this study the treatment is meditation and, thus, the same activities or procedures that were part of the meditation training would have to be used. In this research, another form of relaxation technique could have been substituted but it has been argued that relaxation techniques are different from meditation practice (Moore and Malinowski, 2009; Slagter *et al.* 2007; Dunn *et al.*, 1999; Kokoszka, 1994). The benefits may, however, overlap with meditation but the procedures and the form of the practice are radically different. Thus, relaxation techniques cannot be employed as a placebo effect in a control group as it is not an appropriate application of the placebo method in this meditation study. Therefore, due to this main factor, it was decided that the placebo concept was not appropriate for this study. Two sub-samples were created to compare and contrast with the control group who did not meditate. Thus, this study employed a control group as a form of eliminating any alternative explanations that may cause an effect to the dependent variables.

In having a control group, it is assumed that it will provide a baseline comparison against an experimental group in order to compare the effects of the treatment, which is, in this case, meditation. However, it is also a drawback of the control group in social experimental research, compared to a placebo group applied in medical research, firstly

a psychological expectation may occur in a control group, for instance, feelings relating to being comparable; this may be another source of bias during the study. Secondly, it is difficult to enforce control in an external environment, unlike scientific research conducted in a laboratory where a researcher may control all variables that might cause any alternative explanations, apart from the effect that the research wants to study. However, (Coolican, 2004; Hick and turner, 1999) insists that it is difficult to ensure control in most experiments, either involving human beings, animals, plants, where all possible variables can influence a dependent variable.

To overcome the limitation of having a control group, this research takes a confounding variable questionnaire that was administered before and after meditation program. This aims to minimise the psychological effect that may occur before and after the program. However, it might not be the best means to overcome all psychological effects, unlike applying a placebo group. In a placebo group, a form of the same treatment will be introduced to the subject to eliminate psychological effects. Therefore, in a control group, a possible means that could eliminate or minimise causes of psychological effects was administered to respondents. This came in the form of a confounding variables questionnaire with regard to the psychological feelings and thinking that the respondents might have. Taking that into account, it was assumed that all respondents would answer honestly regarding their feelings, though it is difficult to control this aspect of the study as respondents may disregard instructions issued to them by the researcher regarding activities which they have been asked to avoid. This can, therefore, become yet another possible bias that may affect the results of the study.

3.2.5 - The issues of experimental method in social experimentation (Hawthorne experiments)

There is an issue regarding a social experiment link to a Hawthorne effect in the sense that, in social experiments, some variables cannot be controlled, unlike in scientific research. Having conducted experimental research involving human beings, participants may be affected by the fact that they are under observation, which may be a further potential source of bias. Participants cannot avoid observation as it is a necessary part of the experiment, and therefore cannot avoid their feelings regarding being observed, as was shown in Hawthorne experiment (Mayo, 1949). However, it is

possible to achieve the most effective outcome by putting the optimum amount of effort and focus into their activities. The same is true for participants in this study and this issue has been emphasised since, during the experimental stage of this research, no participant resigned. However, the principle of meditation practice refers to the mind being still and calm and achieving a level of detachment from both internal and external stimuli. It is, therefore, assumed that participants who were meditating would be able to fulfil this requirement. It is recognised that the mind, when meditating, is calm and able to avoid disturbances. By this principle of meditation, the practice itself is assumed to minimise sources of bias.

Whereas the concept of a post-recruitment onset of 'reality', as discussed above, may well have a part to play in the discussion, it is argued that a more important reason for the variations between questionnaire and interview responses may be that this socialisation issue is a form of the 'Hawthorne effect' (Mayo, 1949). This refers to an effect found during the Mayo studies at the Hawthorne plant of the Western Electric Company in the United States. Whereas, the original objective of those studies was to determine the effects of the work environment on productivity, the researchers came to the conclusion that human factors were responsible for the productivity results. The participants had been given a sense of involvement in their jobs, merely by being asked to participate in the research. From the interviews it was noted that, the participants, many for the first time, felt as though they were an important part of the organisation. As Mayo pointed out, the argument is that participants want to talk and are prepared to talk freely under the seal of professional confidence, which would not be abused, to someone who, by their very attitude, seemed to carry authority and/or gravitas whereas it is correct to consider the 'Hawthorne effect' in this type of study, note should also be made of the Milgram 1974 experiments on 'obedience to authority figures' conducted at Yale University by psychologist Stanley Milgram (1974). He measured the willingness of study participants to obey an authority figure who instructed them to perform acts that conflicted with their personal conscience. In this study it is argued that no participants felt that meditation practice was in conflict with their personal conscience.

3.2.6 - The honesty of the responses

With regard to the self-administered questionnaire, it is obvious that the issue of whether or not the respondent is being truthful in their responses to the questions is important and the researcher must be aware of this and be very careful when discussing the results. However, this type of questionnaire has been widely used in social research. It is noted that this issue should be taken into account for further research, however this issue still remains. In order to minimise the potential for dishonesty by participants in answering questions, the issue of validity and reliability of the questionnaire itself is vital. Though it is difficult to control the issue of 'honesty' regarding participants, as people have the privacy of their own thoughts, there is an acceptable level of validity that can be built into a questionnaire, which has the potential to identify the reliability of respondents. Therefore, questionnaires with a solid level of validity and reliability can be significant tools for minimising the issue of responding to the questions (Coolican, 2004).

3.2.7 - The 12-week cut-off period for analysis

In this research, it was decided that 12 consecutive weeks would be applied as a period of analysis for the meditation program; there are two reasons for this. First, previous literature reviews on meditation experiments indicates that most meditation research claimed that after practicing meditation for an average of eight to ten times, results show positive significant changes (Holzel *et al.,* 2007; Lazar *et al.,* 2005). Second, although prior research on meditation studies has been carried out the study research between four and twelve weeks (Bowen *et al.,* 2007; Harung *et al.,* 1995) after discussions with the meditation teacher, with his 25 years of meditation experience who has been accepted by a majority of Thai people, it was decided that 12 consecutive weeks of a meditation program could be assumed to produce an optimal result in this research study with regard to time frame and location where a certain period of meditation practice will be repeated both in Bangkok and in London, therefore, this period should produce some effects for the 'participants'. The statistical analysis will be carried out based on the 12-week cut-off period. Any effects occurring after week 12 are disregarded. The period of time could potentially be the subject for future research for analysing a longer period of time that may affect the meditation outcome.

3.2.8 - Cultural factors

Meditation is recognised as being more highly regarded in the East than the West. People from the East, in general, are more likely to be aware of meditation and its practice than people from the West. In this study, there are two groups: one group based in Bangkok, comprising people from the East, and the other group based in London, comprising people from the West. By acknowledging cultural differences it is assumed that people in the Bangkok group would be more familiar with meditation practice than those in the London group. Many people from the West might not even be fully aware of, or understand, the concept of meditation and its practice. It is possible that, within the London group, no member has personally experienced, or even knows of someone who has personally experienced, meditation practice. This would not be the case in the East, where meditation practice is far more common, due to the strong Buddhist ethos in Thailand, for example.

Therefore, this could result in a much higher level of meditation practice and improved outcomes from the Bangkok group as compared to the London group. It could also be one possible bias that might cause the results from the two groups to diverge. Since this research aims to compare and contrast the two groups, Bangkok and London, it will be necessary to take this issue into account when examining the results.

3.3 - Discussion of the limitations of the previous studies in relation to research methodology

The experiments described in journal articles on meditation have not been conducted using a proper sampling method (Perez-De-Albeniz and Holms, 2000). This can, therefore, be regarded as a limitation of those research studies. More importantly, the method of meditation practice was not described clearly and did not explain whether participants had received proper instruction from a qualified teacher. So it is doubtful whether in some journal articles the findings are reliable, due to a lack of information on the meditation teaching method. To overcome these limitations, it is important that the sampling method, as well as a proper meditation teaching method, should be addressed in this study. In order to cope with the past limitations as well as to bridge

the gaps of previous research, the possible means for future improvement have been studied.

3.3.1 - Possible solutions to solve the limitation of past research

The Literature Review highlighted two common limitations that were found and noted from past research regarding the meditation part of this study. Possible solutions for these drawbacks are also discussed, supported by knowledge from academic professionals such as Walsh and Shapiro. This study should therefore be able to evaluate their critical approaches and assemble arguments based on current data. With this, the study can effectively overcome the methodological drawbacks from previous research.

Problem 1: Small sample size

Possible solution

Increase the sample size. There has always been an issue of what sample size is needed. The simple, logical answer is that the greater the sample size is, the better the generalisation (Coolican, 2004; Saunders *et al.,* 2000) and the better the power of the test (Hair *et al.*, 2010). However, the argument is that a large sample size is not necessary as long as the number of the sample size meets a reasonable minimum requirement (Hicks and Turner, 1999). That does not mean that sample size is not important but that the experimenter must be able to identify the smallest sample size number that the selected statistical analysis can use in the substantial data analysis (Hair *et al.*, 2010); (Saunders *et al.*, 2000); Ghauri and Gronhaug, (2005). Mead (1988) indicates that marketing research, would normally require a sample size of more than 500, where it is normally less than 500 in a drug trial, say, between 20 and 100. In psychological experiments involving human beings, the number of subjects used is normally only 8 to 12, whereas there may be 20 to 100 plots of land in agricultural research. The number of subjects depends on the types of the experiment and the nature of the research (Cooligan, 2004). From the different sources, it can be inferred that the appropriate sample size varies according to the field and the objective of the studies.

However, Saunders *et al.,* (2000) suggested that the smallest sample size should always be at least 30 persons.

Application to this research

Even though future recommendations and past limitations on the issue of small sample sizes have been made explicitly for future improvement, there is much hope that this matter will be resolved. Considering the fact that meditation studies normally have small sample sizes, for instance Davidson *et al.,* (2003) has 25 subjects (experimental group), 16 subjects (control group). Moore and Malinowski, (2009) has 25 subjects in both experimental and control group, it is likely that, because of the availability of suitable management participants in both Bangkok and London willing and able to attend all the regular, weekly, meditation classes over an extended period of time, the possibility of having a small sample is repeated in this research. Therefore, the cause of having small sample sizes in meditation research has been further studied. The issue of having a small sample size still remains in most meditation research, the possible reasons for this issue may be analysed as follows:

There are some arguments derived from many scholars on the nature of meditation research itself (Mead, 1988; Hicks and Turner, 1999; Saunders *et al.,* 2000; Ghauri and Gronhaug, 2005) that western people are not familiar with meditation practice and the practice itself requires a high level of commitment with a professional expert, such as a guru or a monk, who has been well trained and has numerous meditation practice experiences. It is argued that a meditation teacher is not only a person who can meditate but also should be able to guide and fully understand the nature of the meditation phenomenon, and that happens very rarely. (Dalai Lama, 2001)

Therefore, the issue of having a suitably qualified meditation guru was yet another problem in past research, creating the consequence of invalid meditation teaching methods and distorted findings (Ghauri and Gronhaug, 2005). This issue will be discussed again in the following section concerning the lack of a proper meditation teaching method.

Referring back to the fact that the nature of meditation practice requires a high level of commitment in terms of time, concentration and persistence to participate in the study, these are possible causes for the small sample sizes involved in meditation research methods. This may be the cause of self-selection sampling, or volunteer participants, in order to increase the sample size (Appendix A).

This study considered having either small sample sizes that fulfill the statistical theory and can tolerate a minimum size risk, which, as suggested by Hicks and Turner (1999), should not be less than 30 (Saunders *et al.*, 2000) or, alternatively, to gain larger samples, using self-selected samples. However, these self-selected samples would have produced data from which it would be difficult to generalise for the total population. The process of selecting sampling will be described later.

As a result, the conclusion was reached that in order to minimise past limitations and to increase validity, a basic systematic selection of sampling would be applied from the beginning of the selection process.

Problem 2: Flawed research methods

Possible solution

Some research studies or journal articles indicate that no randomisation allocation was done in the research and that is considered a poor research method (Coolican, 2004). To solve this problem, this study used randomly assigned samples in equal groups. This solution has been widely recommended as randomisation is critical as part of the experiment. Having randomly allocated subjects into different groups may be able to infer cause and effect (Mead, 1988).

Application to this research

This thesis employed a classic experimental research method. Initially, in each country, a population of some 11,500 chief executives from listed companies was created. From these listings some 715 were invited to participate in the research and, in Thailand, 80 actually became part of the research. In the UK, there were 64 participants, 32 in the

experimental group and 32 in the control group. Initially, in each country, each participant was simply allocated consecutively to one of two groups. Group A was the experimental group and Group B became the control group.

Problem 3: Poor research design

Possible solution

A third possible solution is to use a proper quantitative method but different from attitudinal and perceptual questionnaires. To clarify this solution, it can be analysed that employing a random allocation into each group is needed as all variables are assigned randomly to the experimental units and that allows the development of a statistical model and the estimation of its validity (Mead, 1988; Hicks and Turner, 1999).

Application to this research

The proper experimental design through a quantitative approach was adopted from the research methodology book by Hicks and Turner (1999). Coolican (2004) and (Hair *et al.,* 2010) were used as a knowledge framework to formulate the design of the experiment. The reason why three different areas of research were used as an experimental framework is discussed with clarity in their writings. Hick and Turner (1999) explain the quantitative experimental research design in general. Coolican (2004) research methods in psychology are designed for the non-mathematics student. Since the current research has some element of psychology included in its writings, this book appropriately served the purpose of this study. Hair *et al., (*2010) multivariate book is more advanced in terms of the depth of specific knowledge, particularly the MANOVA theory which was used as a main statistical tool for testing the hypothesis. The process of searching for research questions as stated by Bryman and Bell (2007) is adopted as a framework and is discussed later in this chapter.

Problem 4: Students as the sample

Possible solution

The fact that many researchers use students as an easily obtained sample has often been criticised. However, it is not necessarily wrong but the problem is they are not true representatives of the general population. The solution is to have 'true representation' within the sample (Hicks and Turner, 1999). The sample derives from a selection of the whole population which is being examined and from which conclusions may be drawn. A good and effective sample should be a true representation of the population being researched.

Application to this research

Since this research is studying the effect of meditation on emotional intelligence (EI) and self-perception of leadership skills (SPLS), the main research subject are people whose roles are as chief executive of different companies. Therefore, students are excluded as subjects for this study and the student bias issue is removed.

3.4 - Research strategy

A research strategy consists of the logical step-by-step stages involved in conducting a research program, from the initial proposal to the completion of the process. Many authors have modelled research strategies for social scientists, such as Sarantakos (1998), Bryman and Bell, (2007) and Bryman (2008). The differences between individual models are reflected mainly in the sequences of the steps presented, rather than the differences between the processes involved. The research strategy adopted in this study follows the sequence of steps defined by Bryman and Bell (2007) and extensively used by many researchers in the social sciences (Table 3.1). This Chapter covers steps 1 to 17. Steps 18 and 20 are covered in Chapter 4. Step 21 is presented in chapter 5.

Figure 3.1 - Steps of the research strategy (adapted from Bryman and Bell, 2007)

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│ 1. Decide on topic/area to be researched             │
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│ 2. Review literature/theories relating to topic/area │
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│ 3. Formulate research questions                       │
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│ 4. Justification process for developing research      │
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│ 5. Consider whether which method is appropriate       │
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│ 6. Consider what kind of population will be appropriate│
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│ 7. Consider what kind of sample design will be employed│
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│ 8. Explore whether there is a sampling frame that can be employed│
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│ 9. Decide on mode of administration (face to face; telephone; postal; e-mail;│
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│ 10. Develop questionnaire                             │
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│ 11. Review questions/ reliability and validity        │
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│ 12. Pilot questions                                   │
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│ 13. Revise Questions                                  │
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│ 14. Finalise questionnaire /schedule                  │
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│ 15. Sample from population                            │
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│ 16. Administer questionnaire /schedule to             │
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│ 17. Meditation experiment                             │
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│ 18. Transform completed questionnaires into computer readanle data│
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│ 19. Analyse data                                      │
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│ 20. Interpret findings                                │
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│ 21. Consider implications of findings for research    │
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3.5 - Topic and area of research

The purpose of this study was to determine if measures of emotional intelligence and self-perception of leadership skills amongst chief executives/leaders located in Bangkok, Thailand, and London, UK, were enhanced by practicing meditation. This study was based on the hypothesis that individuals who regularly practice meditation

can better manage their emotions as well as their increased in self-perception of leadership skills, as a consequence, they are likely to be as effective self-perception of leadership skills in a business environment. The topic area of meditation in the context of self-perception of leadership skills was chosen using the technique for generating and refining research ideas detailed by Saunders *et al.*, (2000) (Table 3.1). The reason that the technique, detailed below, is selected is because the technique itself provides both rational thinking and creative thinking techniques. The means used to formulate a research topic depend on the researcher (Saunders *et al.*, 2000). However, by utilising both techniques, rational and creative thinking, it is argued that the researcher will be able to ensure that:

'your heart as well as your head are in your research topic'.

Saunders *et al.,* 2000, p. 16

Table 3.1 - More frequently-used techniques for generating and refining research ideas

Rational thinking	*Creative thinking*
- Examining your own strengths and interests - Looking at past projects - Discussion - Searching the literature	- Keeping a notebook of ideas - Exploring personal preferences using past projects - Relevance trees - Brainstorming

Source: Saunders *et al.,* 2000

To clarify more on table 3.1, the research idea was generated based on the basis of two main techniques, rational thinking and creative thinking. The two techniques, when combined, create an overall picture of how to achieve the research idea and what to do to reach the outcome. For instance, rational thinking helps the researcher to examine topics of interest, strengths and weaknesses from previous documents, and to discuss the literature review. Creative thinking adds value and knowledge by transforming the rational thinking into more objectives by putting the thoughts into specific outcomes. At this stage, the process of drawing a relevance tree was carried out. The technique of a relevance tree is similar to the mind-mapping process described by Buzan and Buzan (1995). It helps to start with the broad concepts from which the researcher generates further research ideas (Sharp and Howard, 1996). Finally, the research was based on the

understanding that it would help to enhance the business environment by encouraging business executives to develop their 'inner potential', the term used to identify the power inside the individual (Harung *et al.,* 1995; Napier, 2007). Power here is not referring to special power, or miracles, obtained by unknown sources of spiritual beliefs, authority, or possession of control and command over another party. It refers to a hidden energy inside the subconscious. The details justifying the chosen research questions are presented in Section 3.6.1.

The topic or research area was based on three key variables, namely: meditation, emotional intelligence (EI), and self-perception of leadership skills (SPLS) which are each defined as follows:

Meditation refers to a family of self-regulation practices that focus on training, attention and awareness. Meditation practices bring mental processes under greater intentional control, promote general mental well-being and development, and increase the capacity for calmness, clarity of thought, and concentration (Shapiro *et al.,* 2006). Vipassana is an ancient Buddhist meditation (Lehmann *et al.*, 2001) which helps to train the mind to operate more calmly and obtain extended attention, while focusing, purifying and calming the mind by allowing it to be still and to eliminate random thoughts. These effects are common to many meditation traditions in the world (Shapiro, 2007; Chandaraso, 2003). Vipassana meditation, also known as insight meditation, was the technique used in this study. Vipassana meditation has been widely practiced among Buddhists ever since it was first practiced by Gautama the Buddha more than 2,500 years ago (Chiesa, 2010; Chandaraso, 2003).

The Vipassana technique is a sitting meditation, in which the meditator focuses on an object, an imaginary, clear, crystal ball the size of the pupil of the eye, located within their body, two inches above the abdomen (Chandaraso, 2003). As a certain level of concentration on the object is reached, the mind of the meditator becomes conscious of his/her surroundings and a true understanding of the self, called 'insight' is developed (Ballentine, 1986).

In the Buddhist theory, it is believed that people who practice Vipassana meditation can attain enlightenment (Chandasaro, 2003), a deep insight into the meaning and purpose

of all things. A scientific approach into consciousness found that with the practice of meditation, benefits occurred in the therapy of patients in terms of mental disorder, physical disorder and health related issues, such as stress symptoms (Zelazo *et al.,* 2007). The meditative techniques utilised in this study are fully explained in the appendices. In explaining the meditative technique, this study aims to bridge the gap between past literature, which often lacks an explanation of the meditative techniques used. This has resulted in a questioning of the validity of the technique itself (Lehmann *et al.*, 2001; Zelazo *et al.,* 2007). The possible reasons for not explaining the meditative technique is most likely explained because the meditation method has not been documented in a general source of review.

Since the original method has been regarded as part of religious practice and the aims of the practice is believed to be to an enlightenment (Chandasaro, 2003), it is possible that a westerner's cultural perspective can see meditation practice as a specific ritual related to religious practice. As a result, the method explained has been ignored and adapted to a less complicated method of practice. In fact, the meditative technique has been distorted and transformed into a less sophisticated means of practice (Keeva, 2005). The expression 'less sophisticated means of practice' refers to the meditative technique in which its important means of practice has been disregarded (Ballentine, 1986). This has resulted in little explanation of the meditative technique being documented in previous research. These possible assumptions can be applied to other types of meditation practice regarding the lack of explanatory meditation method in detail.

While meditating, Buddhist philosophy suggests that a person should be able to achieve the following expression: Calmness, tranquillity, insight, wisdom, concentration, awareness, mindful, mind still, mind stop, happiness (Chandaraso, 2003; Shapiro *et al.,* 2006). Those words are used as a framework in defining whether or not participants are in the optimum stage of meditation. In order to test whether each subject, after meditation, is not just sleeping or sitting still, but is in a meditative state, the monk/guru must ask how each person feels, and the researcher must observe and note the responses. However, to ensure that they were really in a state of mediation, the questionnaires relating to participants' feelings must be administered again after the final session.

3.5.1 - Method of meditation utilised in the study

The meditative technique below is quoted from the original meditation method practiced by Phramongkolthepmuni (Sod Candasaro), the founder of Vijjā Dhammakāya meditation. This technique is not a new practice, it is believed that it is the original Buddha's practice from more than 2,500 years ago (Chandasaro, 2003; Chiesa, 2010), and it is the most effective method that can help:

'uproot all defilements leading to the right wisdom'

(Chandasaro, 2003)

as well as being the original path of practice that has been widely practiced since that time. The version has been translated by Damkerng Jindahra (2006 p. 15-16) in 'The Path to Magga Phala: The Method of Samatha Vipassana Meditation'. The meditation technique follows the principle of '*Cross Section of Concentration Positions, Position 1 to Position 7'* (Chandasaro, 2003 p.18). The meditation technique used in this study was fully explained (Appendix B). At each of the stages, it was suggested that the participants should recite the following words three times in order to help them focus on their object image:

'Samma Araham. Samma Araham. Samma Araham'.

Emotional intelligence (EI) describes the capacity of an individual to identify, assess, manage and control his/her emotion and/or the emotions of others (Goleman, 1995). EI is different from Intellectual intelligence (IQ), which describes the capacity of an individual to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience (Sternberg and Salter, 1982).

Self-perception of Leadership skills describes the perception of a person who has the capacity to enlist the aid and support of others in the accomplishment of a common task. For the purposes of this study, the components of self-perception of leadership skills (Table 3.2) where the leaders have the ability to act as role models, inspire a shared vision, enable others to act, encourage (Kouzes and Posner, 2002), and to display moral intelligence (Lennick and Kiel, 2005). Moral Intelligence describes the

capacity of an individual to understand right from wrong, to have strong ethical convictions and to act on them so that he/she behaves in a culturally perceived correct and honorable way (Lennick and Kiel, 2005).

Table 3.2 - Components of self-perception of leadership skills

Self-perception of leadership skills components
- Leaders as role models - Inspiring a shared vision - Moral intelligence - Enabling others to act - Motivating

Source: Adapted from Kouzes and Posner (2002) and Lennick and Kiel (2005).

There is a debate in current literature concerning whether EI is more important than intellectual intelligence (IQ) and whether an effective leader should possess more EI than IQ (see Chapter 2). It is possible that anything that can be done to enhance EI could potentially help to improve the self-perception of leaders working in a business setting. In the literature review (see Chapter 2) evidence was presented to argue that EI could be increased by self-testing (questionnaire completion) and training, and that a connection may exist between EI and meditation. However, although the connection may exist it was argued that self-testing and other related tests can only acquire temporary benefits and then tend to be soon forgotten. In self-testing, the results only show the level of the actual scale of what the participant was supposed to be, based on the information given. The results received by the participant only reflect a possible description of their status and situation, individually. It is not an actual means to create the tools to enhance what they may have wanted to achieve. Therefore, it is proposed that, through meditation, leaders may improve concentration, self-awareness and reduce stress levels, helping to increase their EI and enhancing their self-perception of

leadership skills. However, no researcher has demonstrated that meditation has a direct impact on increasing EI and self-perception of leadership skills in a business context.

Hence, the problem that underpinned this study was to establish a link among the three variables: meditation, EI, and self-perception of leadership skills. Most research on meditation has been conducted for clinical reasons, to determine the impact of meditation on physiological and neurological functions (see Chapter 2). For example, Holzel *et al.,* (2007) by comparing 15 experienced meditators with 15 non-meditators, found that meditation can alter the neurological and physical structure of the brain. This study, however, was different because it focused on the impact of meditation on business leaders and contributes to the business, rather than clinical, area of study.

3.6 - Research questions

The study focused on addressing the following research questions (RQ):

RQ1:   Can meditation enhance emotional intelligence?
RQ2:   Can meditation enhance self-perception of leadership skills?

The characteristics of 'good research questions', as defined by Fraenkel and Wallen (2007, p.35), were incorporated. The questions were:
1. Feasible, this included capability of being investigated using available resources and accepted research methodologies;
2. Clear and unambiguous;
3. Significant, or worth investigation;
4. Ethical, in that the subject did not involve harm to the participants, or their environment; and
5. They suggested the existence of relationships among variables.

3.6.1 - The justification of developing the research question

Though emphasis is on the focus of research design and research method rather than on the process of developing research questions, on the other hand, it is also argued that the most essential part of doing research is the process of formulating and developing

research questions (Cambell *et al.,* 1982; Bryman, 2008), as it is a prerequisite for conducting any research (Bryman, 2008).Therefore, it is necessary that the process of formulating and developing research questions is presented. Many research studies begin with the idea that there are many excellent ideas emerging everyday along with more complex global activities, which may seem dull to begin with but are in fact the basis of 'truth' for conducting research.

The beginning of any study starts with the researcher's own interest, or existing knowledge. This needs to be further developed to a more insightful understanding. Therefore information synthesising is required. A process of discovering the research question is adopted in Table 3.3 below. The proposed meditation model is developed while adopting the technique throughout the systematic search.

Table 3.3 - The process of discovering a research question

Source	Discovery
1. Own interest	2. Meditation
3. Books, Articles, Conversation and News	4. EI + Meditation (Connection)
5. Journal Articles, (Meditation + EI + Self-perception of leadership skills)	6. EI is more important than IQ for leader
7. Journal Articles, (Peer reviews, books)	8. Leader with EI tends to have a potential to success in their work life
9. Journal Articles, more reviews	10. [?] How can EI increased / How can Self-perception of leadership skills increased
11. Articles reviews	12. No evidence or research suggested how can EI and Self-perception of leadership skills increased
13. Journal articles reviews	14. Yes, EI can be increased through self report and training but argued to have a temporary benefits
15. Journal articles reviews	16. The beginning of research questions

Table 3.3 shows the stages that refine a research question. The process starts with meditation as the subject which is the area of the researcher's own interest. At this stage the idea of interest was still vague and broad. Therefore, books, articles, conversation and news became the sources that refined and added to the existing knowledge and became the next stage of discovering the connection between emotional intelligence (EI) and meditation, positing that meditation can reduce stress and, therefore, increase EI (Chapter 2 - Literature Review). The connection with EI and meditation led to a more specific search from specialised meditation literature, but no papers claimed a direct impact on the term 'emotional intelligence'. A well-known argument that EI is more important that Intellectual Intelligence (IQ) and that successful leaders possess EI

rather than IQ was then discovered. (Goleman, 1995). Hence, the initial idea regarding the links among the three relative variables was supported.

At this stage, the idea gained more gravitas as it showed the possible link between various sources, including information from reliable, peer-reviewed, journal articles. More searches regarding the theory were conducted through examining journal articles, books, journal reviews and continuing through to more specialist books as theoretical support seeking evidence as to whether, or not, the three variables give a possible explanation with regards to the relationship among the three variables, namely, meditation, EI and self-perception of leadership skills.

After an extensive systematic review there was some evidence claiming that EI can be increased by self-testing and training. However, there is no evidence to suggest how to achieve higher EI, and how to manage emotions better. The interest of approaching the issue through a systematic search, supported by empirical and scientific data, has developed the research questions as well as the idea of proposing meditation as a mind-training technique and tool for promoting self-perception of leadership skills. It was also deemed important to investigate whether, or not, it can enhance a leader's emotional intelligence and self-perception of leadership skills.

3.7 - Research design

The research design presents a framework for the data collection and analysis process (Bryman, 2008). The choice of a research design is guided mainly by the research questions (Punch, 1998; Fawcet and Downs, 1992). It is important to select a research design which can answer research questions effectively (Denscombe, 2003; Creswell, 2003) and which facilitates the completion of the research through to the final stage (Adams and Schvaneveldt, 1991; Denscombe, 2003) and which is appropriate for the nature of the research topic (Field and Hole, 2003). It should also take into consideration the concepts of reliability, validity and representativeness (McNeil and Chapman, 2005).

The research questions for this study were primarily addressed using a quantitative research design, that is, the collection and analysis of numerical information in samples drawn from specified target populations.

3.7.1 - Randomised pre-test/post-test design

The primary research design chosen for this study was a 'randomised, pre-test/post-test, control group' experiment (Fraenkel and Wallen, 2007, p. 274). The essential features of this research design were that:

1. The participants were randomly assigned into two mutually exclusive groups - the control group and the experiment group;

2. The control group was not exposed to a prescribed treatment. The word 'treatment' in this study refers to the meditation technique taught by Pramongkolthepmuni Sod Chandaraso;

3. The experimental group was exposed to a prescribed treatment; and

4. The responses of both groups were measured twice using valid and reliable instruments, before and after intervention. The instruments in this study referred to (1) Emotional Intelligence Questionnaire (EQ-i Bar-On), (2) Self-perception of Leadership Skills Questionnaire (the reliability and validity test were presented in section 3.9.1). Bar-On EQ-i and self-perception of leadership skills' questionnaires have been used in this study, and reliability and validity tests were conducted, as reported in Chapter 3, to ensure that the measurement tools meet the standard of the measurement instruments. The criticisms often made about this type of questionnaire rest on (1) the ability to prove that the questionnaire was completed by the respondent for whom it was intended, and (2) the fact that the responses for a self-administered questionnaire may, or may not, be based on the true feelings of the respondents and, therefore, could affect the outcome of the analysis (Bryman, 2008). In this study, the researcher was witness to the fact that the true respondents completed the questionnaires. According to the attribution theory, originated by Weiner (1980), the idea is emphasised that the current self-perception of the learner is powerfully influenced by the way they construct their capability, or their efficiency, towards success or failure of their performance

behaviour. This is similar to the theory of self-efficacy described in Chapter 2. 'Feeling good' towards particular activities affects their perception of their efficiency in carrying out these activities. The attribution theory made an important assumption 'that people will interpret their environment in such a way as to maintain a positive self-image'. On the other hand, people will also distribute causes of failure, or success, either on themselves or on other external environments, in order to make themselves 'feel good' (Weiner, 1980, 1992).

With this theory, it can be inferred that participants may want to gain positive outcomes greater than what they had already expected from the activities they are undertaking. They then might try to be more positive with regards to their emotional intelligence and their perceived leadership skills when answering the questionnaires. In this case, participants may, or may not, provide their true feeling when they complete the questionnaires. Therefore, it is important to address this issue in self-administered questionnaires as it may affect the interpretation of the responses; and

5. The first set of measurements, collected before treatment, was named 'the pre-test', and the second set of measurements, collected after treatment, was named the 'post-test'.

This was experimental research because the treatment, or factor, whose effects were of interest (meditation) were controlled. For instance, in this study, there was only one type of meditation. Other kinds of meditation, apart from the meditation technique taught during the study such as breathing meditation and transcendental meditation, were manipulated. This is to ensure that any changes caused were from the specified type of meditation studied in this study. As stated above, the participants were randomly assigned into groups and random assignment is at the heart of ensuring a true experiment (Coolican, 2004). It was assumed that that all variables, other than the effects of the factor or treatment, in this case 'meditation', were controlled or constant (Coolican, 2004, McNeill and Chapman 2005). Examples can be seen in the form of any other related confounding variables, such as the control of other possible matters that could be sources of increased EI and self-perception of leadership skills, such as, attending classes on leadership skills and EI development, undertaking other tests

related to the topic studied, or attending additional meditation practice at a temple or home.

3.7.2 - Justification of research design

The research design included between-subject variance, because participants were randomly assigned to different groups; and also within-subject variance, because repeated measures were collected on two occasions from the same participants, before and after treatment (Field, 2009). This research design was justified due to the successful answering of research questions necessitating a powerful quantitative research methodology. An experimental technique was essential in order to explore the potential cause and effect relationships among meditation, EI, and self-perception of leadership skills. Another advantage of experimental research, apart from the control of all possible competing variables, is that the method may be repeated. As a result of this, it offers a high level of reliability (Mead, 1998).

Furthermore, experimental design increases the possibility of quantifying data (Coolican, 2004; Adams and Schvaneveldt, 1991) that may help to identify a correlation between cause and effect (Mead, 1988). However, Meads (1988) noted that the main disadvantage of this design is the involvement of people as participants. Due to the multiplicity of nuanced factors involved in the participants' thought processes, it is impossible to find social characteristics, such as gender, age, and ethnicity, between the two groups and to control these specific characteristics. As a result it is possible that these demographic results may indicate unequal distribution. However, when interpreting the results we cannot assume that differences between the two groups are according to the variables that were introduced (Mead, 1998). Gomm (2004) also support that it is always not possible to find exactly similar demographics between two groups. It is argued that even though this uncontrollable behaviour may influence the results, at least the outcome occurs naturally within the real world. However, this issue has been left open to appraise whether outcomes from artificial settings or outcomes from natural behaviour are more effective in the real world, than in theory (Gomm, 2004). He also argued that experiment is the focus on:

<div align="center">'interesting bits of reality'</div>

<div align="right">(Gomm, 2004, p. 43)</div>

A survey could have been employed in this study, considering that it might be quicker, cheaper and easier to perform than an experiment, but was deemed inappropriate for the purposes of this study. Although it may be possible to identify a statistically significant correlation or relationship between two or more variables using a survey, it is not possible to use the results of a survey to explore a cause and effect relationship as it is not possible to manipulate any of the variables. An experimental design is necessary to study causal relationships, in order to answer the research question, 'Does a change in variable A cause a change in variable B?' (Bailey, 1994; Moore, 2000; Fraenkel and Wallen, 2007). Additionally the researcher can manipulate the causes to generate corresponding effects. In this study it was hypothesised that meditation caused a change in EI and/or self-perception of leadership skills. It was proposed that if meditation, the cause, was manipulated then EI and/or self-perception of leadership skills, the effect would improve. Nevertheless, as pointed out by Bryman and Cramer (2009), a statistical relationship between two variables does not always imply a causal relationship. A summary of other possible research methods is shown in Table 3.4.

Table 3.4 - Comparison of possible research methods

	Possible research method	Strengths	Limitations	Forms of research question	Possibility to answer research questions			When applied to the study
					Yes	No	Yes but	
1.	Case Study	Investigate phenomenon in depth and within its real life context;	1) Cannot control variables that might have caused a real effect; 2) Not critical for defining method in detail as a result its design cannot be replicated;	How, Why			X	A use of case study is to understand the real life phenomenon in depth. Therefore, the control of variables is not possible.
2.	Field Study	1) Attractive, as it takes place in the real world; 2) Produces more naturalistic conditions; 3) Easy to generalise results to the real world;	1) Less control of possible confounding variables; 2) Ethical problems for researchers as it involves deception.	How, Why			X	Not appropriate because: 1) It is impossible to study a group of leaders who regularly practice meditation; 2) Cannot control the study.
3.	Experimental Research	1) The method can be quantified therefore minimising subjectivity; 2) The knowledge obtained is factual and objective; 3) Logical, controlled variables; 4) Identifies patterns of social behaviour and correlations among phenomena.	Human beings' study is always difficult to control.	How, Why	X			Appropriate as: 1) Is able to study causal relationship of cause and effect; 2) Controlled variables.
4.	Survey	Data can be collected similarly resulting in the ability to conduct a comparative study	1) It is not possible to draw A causal relationship among variables; 2) A large amount of sampling must be ensured; 3) Inflexible as tools and design method must remain unchanged throughout the study.	Who? What? Where? How many? How much?		X		Not possible to use the results of a survey to explore a cause and effect relationship. This is because: 1) It is not possible to manipulate any of the variables; 2) Ability to investigate is limited.

3.7.3 - Research stance

This study applied the positivist or hypothetical-deductive paradigm, that the relationships between variables could be explained in terms of statistics (numbers that summarise samples), parameters (numbers that summarise populations), and hypotheses (predictions based on the laws of probability) that exist outside human feelings (Giddens, 1974; Coolican, 2004; Fraenkel and Wallen, 2007, Bryman, 2008). Gidden's theory of positivism (1974) has strongly encouraged the use of quantitative methods in social sciences since the 1970s. This study applied the post-positivist claim for developing knowledge, requiring judgments concerning cause and effect (Adams and Schvaneveldt, 1985; Creswell, 2003; Denscombe, 2003). Post-positivism was justified for the purposes of this study since a highly structured, experimental design, objective measurements, and sound hypotheses testing procedures were essential to quantify and understand the potential cause and effect relationships among meditation, EI, and self-perception of leadership skills. This philosophy permits the researcher to remain objective and neutral so that the interpretation of the results IS not biased by personal value judgment or prejudice.

Many social scientists recognise that positivism cannot explain all cases of human perception and behaviour. Positivism only seeks to collect and analyse information from part of a phenomenon, but in doing so may miss other important aspects. Although the perceptions and behaviour of a defined group of individuals can be summarised, predicted and generalised in terms of statistics, parameters, and the laws of probability, it is much more difficult to explain the perceptions and behaviour of each individual person (Cohen *et al.,* 2007). Therefore, it is accepted that a further explanation from the external environment may overcome this difficulty by applying an interpretation or description which assumes that to understand a phenomenon better (Clough and Nutbrown, 2007), the wider picture must be examined from the point of view of each individual.

Nevertheless, this research mainly presents the results obtained through quantitative analysis. Interpretivism aims to achieve a comprehensive understanding of the whole, through exploring and discovering the richness, depth and complexity of qualitative data, rather than by testing hypotheses. Unlike positivism, which assumes that facts and

feelings are separate and that an objective reality exists outside the human mind, Interpretivism asserts that knowledge is socially constructed through the numerous perceptions and experiences of each individual (Palinscar, 1988; Cohen *et al.,* 2007). This theory is, however, criticised by positivist researchers because the validity and reliability of qualitative analysis depend entirely upon the integrity of the researcher, and researcher bias is a common source of error. Furthermore the researcher must reflect on what role he/she played in constructing the knowledge. For example, by explaining the reasons why he/she allowed certain voices to be heard and/or dwelled on certain topics rather than others (Cohen *et al.,* 2007). The findings of qualitative research generally apply only to the participants and cannot usually be generalised to apply to other individuals. Since emphasis is not always given to reliability and validity, qualitative researchers are less certain about their conclusions and tend to view the outcomes of their research as ideas to be investigated further rather than as definitive answers to research questions (Onwuegbuzie and Teddlie, 2003; Fraenkel and Wallen, 2007).

Having referred to the strengths and weaknesses of quantitative and qualitative research methodologies, they are not necessarily relevant with respect to which methods are chosen for a particular study. The nature and objectives of the research are more important (Bryman, 2008; Onwuegbuzie and Teddlie, 2003; Sarantakos, 1998). A pure, qualitative research design was not considered practical to achieve the objectives of this study. Thus, we justify why a quantitative research methodology was the primary approach. However, an explanation from the external environment, such as cultural differences, values, and beliefs, was also considered necessary in order to complement the results of the quantitative analysis.

It is assumed that the combined method approach, utilising both quantitative and qualitative method used in this study was not useful, since the research questions lend themselves to a quantitative study. The weakness of mixed methods is that it may be difficult to analyse a combination of quantitative and qualitative data, particularly if one method is preferred over the other. This can result in a possible misinterpretation (McNeill and Chapman, 2005). The findings of qualitative and quantitative research may sometimes contradict each other leading to confusion (Devine and Heath, 1999).

Having considered the 'pros and cons' of a mixed method, it was decided that a quantitative approach was suitable, main method of study for acquiring meaningful results.

3.8 - Participants

The participants in this study were drawn from two mutually exclusive populations working in different countries. The first population consisted of business executives/leaders working in large companies in Bangkok, Thailand. This population comprised a very Eastern culture, with customs, lifestyles, language and beliefs that were uniquely Asian. The second population comprised business executives/leaders working at large companies in London, UK. This population represented a western culture in terms of its customs, lifestyles, language and beliefs. Nevertheless, both London and Bangkok are both highly regarded commercial cities where it is possible to find many business executives working for successful multi-national corporations with cross-cultural awareness. Only one leader, or chief executive, represented each company. The reason for studying two, diverse populations in social science is to obtain a better understanding of a phenomenon from differing socio-cultural perspectives (Bryman, 2008).

Conducting the same experiment in the two different populations for this study was beneficial in determining whether the relationships among mediation, EI and self-perception of leadership skills were confused by socio-cultural differences. The comparative experimental design facilitated the comparison of the responses of the population in Bangkok, where Vipassana meditation is well known and widely practiced amongst Buddhists, with the population in London, where Vipassana meditation is not so well known and is considered to be unconventional in western practice.

3.9 - Sampling methods

The participants were drawn randomly from two populations of chief executives/leaders working for companies in Bangkok and London. Those two populations were given a participant information sheet and a consent form (Appendix

D) to be included in the experiment without knowing in advance which group they belonged to.

Figure 3.2 - Bangkok sampling procedure
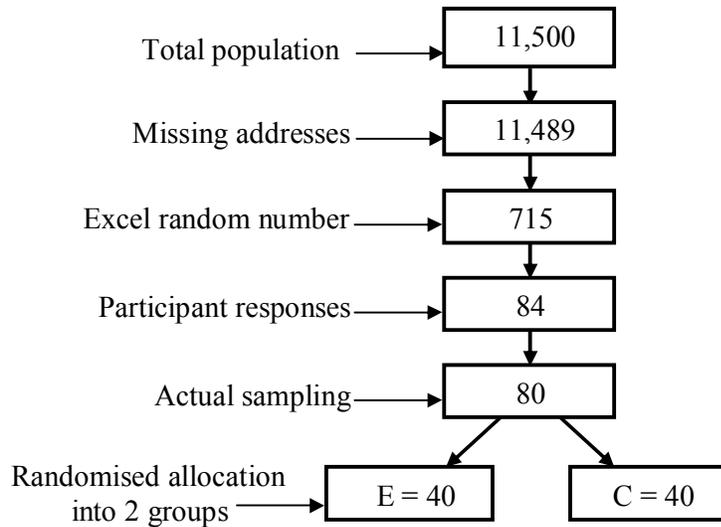
For practical reasons a mailing list of 11,500 was obtained; it was not possible to perform a census-based search on a mailing of all 11,500 companies as some addresses were missing. Therefore, 11,489 companies were on the list and from that a random sample was taken using an Excel programme; 715 companies were randomly selected. At this stage invitation letters were sent out to all 715 companies, resulting in 84 respondents with 80 people agreeing to participate. At that stage random allocation into an experimental group and a control group was generated, resulting in a balanced of the two groups.

Figure 3.3 - London sampling procedure
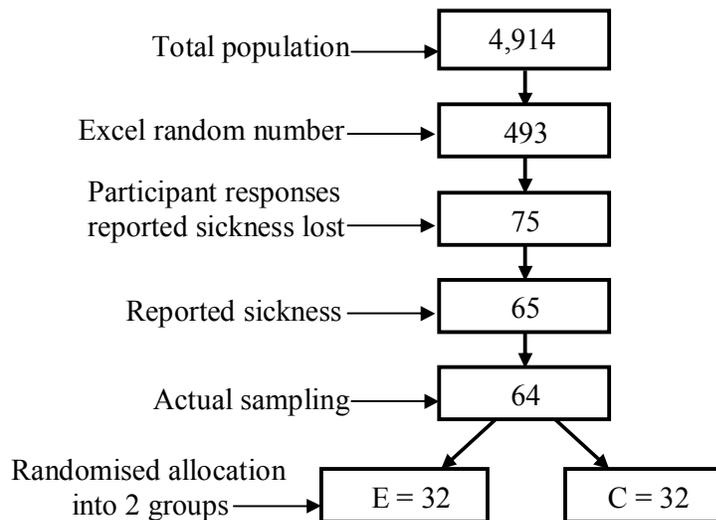
The same selecting sampling procedure was applied in Bangkok and London. In London, a mailing list of 4,914 was obtained. Only 493 companies were randomly selected using Excel generator. At this stage invitation letters were sent out, and only 75 were responded. Due to all limiting circumstances only 64 people agreed to participate. From that stage, random allocation into an experimental group and control group was generated, resulting in 32 people being allocated to the experimental group and an equal 32 people to the control group.

3.10 - Sampling frame

The sampling frame was a list of chief executives in Bangkok and London derived from lists of companies registered. The sampling frame was categorised into sampling units, referring to the participants to be studied. In this study, an individual chief executive from each company was the sampling unit. To clarify this statement; one leader or chief executive represented one company. A sample of participants was taken from the mailing list in an Excel spreadsheet. After that the participants were randomly assigned into experimental and control groups. Having a random assignment of participants into two groups ensured that no sampling bias occurred (Coolican, 2004) and therefore promoted reliability and validity of the outcome (Hicks and Turner, 1999).

The sample design matrix (Table 3.5) contained 144 participants, with 72 randomly assigned into the control group and 72 to the treatment group. The control group consisted of 40 randomly selected chief executive/leaders in Bangkok and 32 chief executive/leaders in London. The experimental group also consisted of 40 randomly selected chief executive /leaders in Bangkok and 32 executive leaders in London. The design matrix was therefore relatively well balanced with respect to the number of subjects in each group, and the number of subjects at each location.

Table 3.5 - Sample design matrix

Group	Treatment	Location		Total
		London	Bangkok	
Control	No meditation	32	40	72
Experimental	Meditation	32	40	72
Total		64	80	144

The three stages in the sampling of the participants were as follows:

Stage 1: Screening:

A list of potential participants in the sampling frame, identified by number, was stored in a spreadsheet. A simple random sample was obtained using the random number generator in Excel. The assumption was that each member of the target population in the mailing list had an equal probability of being selected (Coolican, 2004). The screening process consisted of sending three letters in one envelope to each randomly sampled participant from mailing lists: (1) An invitation letter (Appendix C) introducing the researcher and the project but not the aims and objectives of the research; (2) a participant information sheet (Appendix D) describing the project research but not the research questions and objectives; and (3) a demographic questionnaire, including questions about meditation (Appendix E). Screening was conducted by post because it was considered cheaper and quicker than other contact methods such as interviews for example. However, A disadvantage of questionnaires is the low response rate, which is normally less than 50% (McNeill and Chapman, 2005), which was taken into consideration when selecting the method.

The screening process in this study provided 80 participants in Bangkok and 64 in London. The participants were informed of the general purpose of the research and that 'every participant would now participate in the purpose of the research study', so that the congruence between the frame of reference of the researcher and the respondents was achieved. However, the participants were not informed in advance of the specific objectives and aims of the research, or the expected results, as the researcher was aware of the potential for subject bias which may result from giving information in advance. All respondents were assured that their responses were anonymous and that their answers would be kept confidential and used only for research purposes.

Stage 2: Receipt of consent and demographic questionnaire:

Consent forms were received from each participant stating their agreement to take part in the study and awareness of the conditions of the study. At this stage, participants were not informed whether they would be in the experiment or the control group. They did not know which group they would be in to ensure that participants would not have any bias towards the group of the study. The participants were provided with a pre-paid envelope to mail their responses back to the researcher.

Stage 3: Random assignment participants into groups:

The consent participants were randomly assigned to the experimental group or the control group. Random assignment is important in all experiments (Coolican, 2004; Mcneille and Chapman, 2005; Cramer, 1994). Coin tossing was used to assign the participants because it is a simple, valid, classic technique for randomly assigning subjects into two groups (Cramer, 1994; Coolican, 2004; Machin *et al.,* 2009). One unbiased coin was used in which the 'head' represented the experimental group whilst the 'tail' represented the control group. Before assigning which faces represented which groups two numbered sheets of paper, '0' indicating experimental group and '1' indicating control group were randomly chosen. The reason was to help minimise researcher bias in selecting which faces represented which groups. If the coin landed with head up, then the first person of two people was assigned into the experimental group whilst the second person was assigned to a control group. On other hand, if the coin landed with tail up the first person was assigned to the control group while the

second was allocated to the experimental group. The use of one coin and assigning two people at a time ensured that both groups had the same number of people.

Random assignment of participants into groups was an attempt to ensure that the control group and the experimental group each contained a representative sample of subjects with respect to their demographic and other baseline characteristic. In a truly representative sample no particular group of participants is over- or under-represented (Coolican, 2004). No attempt was made to harmonise the demographic characteristics of the participants across the control and experimental groups by use of matched pairs. Matched pairing is the manipulation of a sample which aims to assign participants into two groups in order to ensure that their demographic characteristics are equivalent. Each participant in the control group is paired with each participant in the experimental in terms of, for example, their gender, age, ethnicity, religion, and occupation (Fraenkel and Wallen, 2007).

3.11 - Design of the questionnaires

In designing the questionnaire, great effort was made in ensuring that the language used was easy to understand and free from any implicit negatives or mispronounced words which might lead to misinterpretation of questions.

3.11.1 - Demographic questionnaire

The demographic questionnaire was created based on the findings of previous research and a study of current academic meditation literature. After the 'transfer to PhD interview', it was recommended that minor changes be incorporated in the demographic questionnaire, especially in the meditation section, by adding more on compounding variables. Question 2.5 was replaced with a multiple choices format. The revisions were made and justified (Appendix G).

A. The first section: demographic characteristic
In this section, the aim is to collect demographic information from the respondents. The question concerns issues of gender, age, education, religion, marital status, position and respondents' experiences.

B. The second section : meditation characteristic

This part of the questionnaire included the meditation experience with a variety of closed response questions. They produce greater uniformity in the answers, hence aiding the requirement for justification purposes (Colman *et al.,* 1997)) in collecting the data for the experiment. This part included the questions to be assessed as compounding variables.

3.11.2 - Design of the self-perception of leadership skills questionnaire

The self-perception of leadership skills questionnaire uses Likert's five point scale (discuss in section 3.12.1) to collect the data regarding various self-perception of leadership skills actions and behaviour. It is adapted from the Leadership Practice Inventory (LPI) by Kouzes and Posner (2002). A growing body of research concerning leadership issues found that self-perception of leadership skills development is a challenge to the future of every organisation. Leaders who perform exceptionally well can be of great benefit to the organisation. Lennick and Kiel (2005) agree, however, they asserted that a special kind of intelligence is needed to make leaders perform outstandingly well. Therefore, they proposed that moral intelligence is the key to enhance self-perception of leadership skills effectiveness.

Lennick and Kiel (2010) defines moral intelligence as a moral positioning system with accounted with deeply held principles and values that determine sustainable success. It is a central intelligence that directs other forms of behaviour thought to be worthwhile, resulting in constructive values and gaining positive aspiration (Lennick and Kiel, 2010). Moral intelligence is associated with emotional intelligence in heightening emotionally intelligent performance related to the development of organisational values (Sivanathan and Fekken, 2002). Though criticism is made on the assesment of moral intelligence due to the fact that it is difficult to measure quantitatively (Lennick and Kiel, 2005), it is still an advantage for the business profile in terms of improving a company's image. Leaders with moral intelligence can be role models, inspiring long-term business success by creating and organisation culture that possesses high moral values which reflects the company image, which may result in gaining trust and long-term sustainable development within the business (Lennick and Kiel, 2010; Sivanathan and Fekken, 2002). Goleman (1995) and Lennick and Kiel (2005) asserted that moral

intelligence is associated with emotional intelligence. A person who is morally aware of their own emotions can help heighten the emotional intelligence among others in a constructive way.

Goleman (1995) affirmed that the business world would be improved if leaders were to take moral intelligence into account. Lennick and Kiel (2005) asserted that emotional intelligence is not enough for today; trust and commitment are a foundation for business leaders who have strong moral intelligence. For these reasons the self-perception of leadership skills questionnaire has been adapted from the Leadership Practice Inventory developed by Kouzes and Posner (2002), by adding the moral intelligence issue in order to fit with the world today. Having adapted the self-perception of leadership skills questionnaire, moral intelligence was included as one of the five components. The aim of the self-perception of leadership skills questionnaire is to understand better the role of an effective leader. Kouzes and Posner (2002) argued that it is not just about the personality test, but the practice and the way leaders mobilise others.

The statements were modified by adding moral intelligence. Leaders with a strong moral intelligence can build trust and commitment that are the basis for the organisation. (Goleman, 1995; Lennick and Kiel, 2005). The moral intelligence inventory mainly assesses personal awareness of the individual values and goals which are conceptualised as principles and values, building trust through reliability, integrity, responsibility, compassion and forgiveness. Moral intelligence was taken from the Moral Competence Inventory (MCI) by Lennick and Kiel (2005). It is not a test but it is a self-development tool designed to help leaders to strengthen their moral skills (Lennick and Kiel, 2005). After combining the leadership and moral intelligence, the new version of self-perception of leadership skills inventory (Appendix G) was created and included, following interactive feedback, reliability, and validity of the questionnaire itself.

An ongoing reliability test including content validity (Appendix H) in the instrument was conducted (N=71) with an internal reliability of Cronbach alpha =.906 (Table 3.6). The reliability measures the consistency of the instrument measurement so that the instrument should produce the same outcomes either across testing or within itself

(Coolican, 2004). (Coolican, 2004). Reliability and validity are discussed in more detail in section 3.21. The item-total statistics table shows the value of Cronbach Alpha if an item is deleted (Table 3.7). The column 'corrected item-total correlation' in table 3.7 shows that the value of each item was above 0.2, which indicated good correlation between each item (Kitpredaborisood, 2006).

Table 3.6 - Reliability Coefficient

Case Processing Summary				Reliability Statistics	
		N	%	Cronbach's Alpha	N of Items
Cases	Valid	71	100.0	.906	25
	Excluded(a)	0	.0		
	Total	71	100.0		

Table 3.7 - Item-Total Statistics for self-perception of leadership skills questionnaire

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No1	.473	.903
No2	.578	.901
No3	.484	.903
No4	.483	.903
No5	.477	.903
No6	.513	.903
No8	.406	.905
No9	.355	.906
No10	.611	.901
No11	.648	.900
No12	.547	.902
No13	.502	.903
No14	.385	.905
No15	.398	.905
No16	.614	.901
No17	.571	.901
No18	.466	.904
No19	.475	.904
No20	.485	.903
No22	.476	.904
No23	.246	.908
No26	.641	.900
No27	.518	.903
No29	.561	.902
No30	.731	.898

The self-perception of leadership skills questionnaire had its reliability tested three times (Table 3.8) (Appendix I) before the final version was released. It also had content validity tests to ensure readability and the congruent validity of the questionnaire. The reason for triple-testing is because of (a) the number of people (N) must be at least 30. It is clear that the first reliability test had 25 people, which was not enough, however the internal reliability of Cronbach alpha =.782 implied good reliability. Average reliability over .76 implies good reliability (Guilford and Fruchter, 1978). Nevertheless, the value of some item-total correlation was less than .02 which implied that the specific items had not shown a correlation. As a result the deletion of items less than .02 must be performed (Kitpredaborisood, 2006). The assumption of questionnaire creation is applied to all reliability tests. Therefore the internal consistency of the questionnaire was ensured.

Table 3.8 - Reliability test of self-perception of leadership skills questionnaire

	Number	Cronbach alpha
1st.	(N=25)	.782
2nd	(N=32)	.817
3rd	(N=71)	.906

3.11.3 - Emotional intelligence questionnaire

In order to develop a new instrument, time is a limitation, as the method of developing a new measurement instrument requires a valid methodology in terms of validation of the contents, testing its reliability. Since a leadership skills questionnaire had been developed and the process of validating a questionnaire was time consuming, it was decided that the EI test should be obtained from a reliable source, Multi Health Organisation (MHS). An EI instrument called BarOn Emotional Intelligence Quotient Inventory (EQ-i™) (125 items) was the first scientifically developed and validated measure of EI worldwide. This test has been done on over 110,000 people (BarOn, 1997b) (Appendix J). It is intended to help manage emotional intelligence as it reflects one's abilities to deal with daily emotional challenges as well as helping to predict one's performance in work. The development of BarOn EQ-i was based on the emotional intelligence theory and the concept of cognitive intelligence and IQ, scaling from 1 to 5, and consisting of five major scales and 15 subscales. BarOn EQ-i has been used in this study as a measurement instrument because it has already been widely used and can initiate change to understand better emotions as well as social functioning.

The justification in choosing this instrument is discussed in Chapter 2. The EQ-i Bar-on inventory was tested with numerous statistical analyses to obtain information on its content, face validity and construct validity as well as convergent validity and test-retest internal reliability to ensure its psychometric properties. The results gave an overall internal consistency coefficient of =.76 which indicates a good reliability (Guilford and Fruchter, 1978). Both emotional intelligence and self-perception of leadership skills questionnaires were measured using a Likert-type five point scaling method.

3.12 - Instrument measurement

The four instruments administered in the study were:

(1) The screening questionnaire;

(2) The demographic questionnaire;

(3) 125 items in the EQ-i Bar-On Emotional Quotient Inventory (Bar-On EQ-i); and

(4) 25 items in the self-perception of Leadership skills Inventory, adapted from the Leadership Practice Inventory (LPI) instrument.

A pilot study was conducted, as recommended by McNeill and Chapman (2005), to test the quality of the screening and demographic questionnaires as well as the self-perception of leadership skills questionnaires, before the real study was undertaken. The pilot study tested the readability and other related issues concerning the wording of the draft questions. The first part of the pilot questionnaire included demographic questions. The second part elicited relevant information regarding meditation. For the pilot study an opportunistic sampling strategy was employed. An introductory letter, project information and screening questionnaires were distributed via an e-mail to 47 managers of large companies. The draft questionnaires were administered to 20 participants in London and 27 in Bangkok. The questionnaires were revised according to the responses of the participants. Feedback was obtained regarding sentence clarity as well as understanding and or misunderstanding of the questions. After gaining useful feedback, the final versions of the screening and demographic questionnaires were produced.

The demographic questionnaire collected personal information from the respondents, including their gender, age, education, religion, marital status, position and experience of meditation. Before and after the meditation sessions all participants in the experimental and control groups completed the 125 items in the EQ-i Bar-On Emotional Quotient Inventory (Bar-On EQ-i) and the 25 items in the self-perception of leadership skills Inventory, adapted from the Leadership Practice Inventory (LPI) instrument.

The construction of the Bar-On EQ-i was based on a comprehensive concept of emotional intelligence inventory developed in the 1980s. The Bar-On approach to

describing and assessing EI has been evaluated using over 110,000 people at many testing locations around the world, both in cross-section and longitudinal studies (Bar-On, 1997). Bar-On EQi was based on theoretical and multi-factorial tests of EI and brings a broad view of the factors involved in EI. The instrument is designed to assess quantitatively non-cognitive competence and skills that can influence an individual's ability to succeed in dealing with environmental demands, as well as psychological well-being (Bar-On 1997).

Five components are measured 1) intrapersonal components; 2) interpersonal components; 3) adaptability components; 4) stress management components; and 5) general mood components. There are 15 emotional intelligence subscale scores describing the components of EI (Table 3.19). The EQ score is based on a mean of 100. The interpretation of the scores is that EQ scores of individuals above 100 are considered emotionally intelligent, whereas scores less than 100 indicate a need to change in a specific area. Internal consistency reliability, a psychometric property, estimates of the Bar-On EQ-i, using Cronbach's alpha, ranged from .69 to .86, with an overall average internal consistency of .76, implying a good reliability (Guilford and Fruchter, 1978). The interpretative guideline for EQ-i scores is attached (Appendix K).

Table 3.9 - The components of 'Emotional Quotient Inventory' (EQ-i): Corporate subcomponent

Emotional Intelligence	Conceptual Components of Emotional Intelligence
A). Intrapersonal Components	- Self-Regard - Emotional Self-Awareness - Assertiveness - Independence - Self-Actualisation
B). Interpersonal Components	- Empathy - Social responsibility - Interpersonal relationship
C). Adaptability Components	- Reality Testing - Flexibility - Problem Solving
D). Stress Management Components	- Stress Tolerance - Impulse Control
E). General Mood Components	- Optimism - Happiness

In the self-perception of leadership skills questionnaire, some modifications were made by the addition of items from the Moral Intelligence Inventory, because moral intelligence is reputed to be beneficial for a successful leader. Leaders with a strong moral intelligence can build trust and commitment (Goleman, 1995; Lennick and Kiel, 2005).

After combining the self-perception of leadership skills and moral intelligence inventories the new version of the leadership inventory was created, following interactive feedback with respondents. All of the items consisted of closed response questions, which are easier to answer and analyse and produce greater consistency of responses (Bryman, 2008). The responses to each item were measured using ordinal five point Likert-type scales (1 to 5). The item scores were summed to compute the composite scales of emotional intelligence and self-perception of leadership skills, which were considered to be interval measures for the purposes of statistical analysis.

3.12.1 - Five-point Likert-type scale

This research used the original five-point Likert-type scale in the EQ-i and self-perception of leadership skills questionnaire. This was deemed appropriate since these scales have been found to communicate interval properties to the respondents, and may, therefore, produce data that can be assumed to be intervally scaled (Easterby-Smith *et al.*, 1991). As discussed by Churchill (1995), there is some controversy regarding the number of points to have on a Likert scale; these issues fall into two main categories: those involved with the total number of points; and those involved with the decision to have an even, or odd, number of points.

An even number of points does not allow the respondent to identify a middle or neutral position, but forces them to adopt a position which, at a minimum, indicates support for one, or other, side of a debate, or decide to become a 'non-responder'. With regard to the total number of points, more points give the respondent a better selection from which to make a choice. However, this greater choice may confuse the respondent, and not necessarily produce richer data. For this study it was decided that a minimalist and simple approach would be taken, in that a neutral position was available from within the five-point scales offered.

Colman, Norris and Preston (1997) demonstrated 'that scores from five-point Likert and seven-point Likert scales are virtually equivalent and it is unlikely that a five-point scale will produce uni-dimensional data.' To further support the selection of five-point Likert-type scales, Petrides and Furnham (2000) also found that these two Likert-type scales did not produce different outcomes.

In this study, all the data from the responses has been entered to ensure that a higher value is always a more positive statement about the variable. Whereas, the numerical scores given to the responses have no actual value, except for being useful to compare with other scores, the SPSS software has allowed mean score values to be calculated and comparisons made within various sub-samples and differing variables.

3.13 - Experimental procedure and data collection

The three stages in the experimental procedure and data collection are illustrated in Figure 3.3 and are described as follows:

Stage 1: Assignment

The participants randomly assigned to the experimental group (E) had Vipassana meditation taught to them by a highly trained monk, who had been meditating for more than 20 years. In Bangkok the meditation was conducted at Mongkolthep Temple in Chachengsao province. The primary reason for selecting this place was that the monk at Monkolthep temple is well known for teaching of Vipassana Meditation. Secondly, for practical reasons, it was not possible for the monk to travel between Chachengsao province and Bangkok. Thirdly, there was no appropriate place for arranging a meditation course in Bangkok. The participants randomly assigned to the control group (C) were not taught meditation and were monitored during this period to ensure that they did not do so. In Bangkok, the subjects meditated at a temple during weekend. In London, the subjects meditated in a quiet classroom in the basement of the University of Westminster, in the evenings.

Stage 2: Treatment

The treatment here refers to Vipassana Meditation. Both experimental groups practiced Vipassana Meditation for 12 weeks, whereas the control group did not practice meditation. The meditation session for the experimental group was conducted for one hour, every week, for three months. The members of the control groups in both Bangkok and London did not practice any kind of meditation and were monitored to confirm that they did not do so.

Stage 3: Questionnaires

Each member of the group completed two instruments, the emotional intelligence questionnaire, (EQ-i) which consisted of 125 items, and the leadership inventory (LPI) which consisted of 25 items. The pre-test was administered before the first session

began (Week 1). At this stage the order of the items was low to high, 1 to 25, and the post-test was administered after 12 weeks (Week 12), when the sessions had finished, with the items ordered from 25 to 1. Changing the order of the items helped to minimise the problem of an order effect in which the participants may remember the content due to past experience that came from the first administration of the questionnaire (Coolican, 2004), in doing so it is assumed that participants may not be biased by this issue. Since EQ-i questionnaire consisted of 125 items the problem of order effect should not be so pronounced, therefore the items of EQ-i were not reversed. The experimental and control groups both completed the same questionnaires. The same questionnaires were also used for the pre-test and the post-test.

Order effect can be considered as one of the possible confounding variables for pre-test and post-test in which one needs to perform the task twice. This may be caused by the concentration of improvement or the earlier test being remembered. The problem of order effect is said to be a disadvantage of a pre-/post-test. Coolican (2004) noted that by reversing the item order, the problem of item ordering biases could be minimised. If the order effect occurs, either due to fatigue or memory of the item questionnaire, the researcher has reduced this problem by reversing the order of the emotional intelligence questionnaire, to be completed before the self-perception of leadership skills questionnaire. As the self-perception of leadership skills questionnaire was distributed first before the emotional intelligence questionnaire for the first session of meditation practice, because the EI questionnaire comprises of 125 items, the memory of the self-perception of leadership skills questionnaire should be weak. The most important reason for reversing the order of self-perception of leadership skills questionnaire is justified is due to the benefit and the objective of the meditation practice itself. The benefit of practicing meditation is said to calm the mind and free people from the distraction and disturbance of their present surroundings (Goleman, 1998; Marques *et al.*, 2005). The completion of the Week 12 questionnaire was done after meditation practice, therefore, the mind of the subject should be clear, calm and fresh, which can be posited as a reason to minimise not only the possible order effect but also other critical reasons that could be controlled.

Figure 3.4 - Experimental procedure and data collection

Participants are required to complete both questionnaires for the 1st week of the experiment

The same questionnaire were applied again after the completion of the experiment

N = 32

E

Week 1 Questionnaire
EQ-i
+
Self-perception of leadership skills inventory

Meditation 12 weeks 1 hour / week

Week 12 Questionnaire
EQ-i
+
Self-perception of leadership skills inventory

R

R = Randomised assignment
E = Experimental Group
C = Control Group

C

N = 32

Week 1 Questionnaire
EQ-i
+
Self-perception of leadership skills inventory

Controlled

(Do not meditate)

Week 12 Questionnaire
EQ-i
+
Self-perception of leadership skills inventory

Participants are required to complete both questionnaires for the 1st week of the experiment

The same questionnaire were applied again after the completion of the experiment

(B) = Bangkok, (L) = London

3.13.1 - Meditation experiment in Bangkok

With regard to the experimental research that was conducted in Bangkok, Thailand for three months during October 2007- January 2008, there were two important tasks set out as a procedure for obtaining the end result as follows :

The experiment took place in Bangkok, Thailand and commenced with a planning period between June – September 2007. The actual experiment itself took place between October 2007 – January 2008 as shown in the following Table 3.10:

Table 3.10 - Experimental phase in Bangkok

BANGKOK EXPERIMENT

Phase I Preparation Stage Location : London	JUN'07	JUL'07	AUG'07	SEP'07
	♦ Preparation of emotional intelligence questionnaire	♦ Design of demographic questionnaire + validation ♦ Design Self-perception of leadership skills questionnaire +reliability and validity test 1st reliability test of questionnaire with 25 people	♦ 2nd reliability test of Self-perception of leadership skills questionnaire with 32 people ♦ Pilot study ♦ Locating experimental group	♦ 3rd reliability test of Self-perception of leadership skills questionnaire with 71 people ♦ Contact location + meditation expert ♦ Sampling method

Phase II Experimental Stage Location : Bangkok	OCT'07	NOV'07	DEC'07	JAN'08
	♦ 1st week of experiment	Continuation of experiment	Continuation of experiment	♦ 12th week of experiment

Phase III Analytical Stage Location : London	FEB'08 – APR'08
	♦ Preparation for data analysis and analytical process applying SPSS program

3.13.2 - Meditation experiment in London

The experiment took place in London, United Kingdom and commenced with a planning period between February-August 2009. The actual experiment itself took place between May 2009-August 2009 as shown in table 3.11. The process of sampling selection was the same as the Bangkok experiment in order to compare the results. Even though all the sampling selection processes had been repeated to ensure the effectiveness of the two cultures comparison, the screening questionnaire and compounding variable questionnaire have been modified according to suggestions from the research supervisors. (Appendix L). For clarification, the second meditation experimental research in London followed the first meditation experimental research in Thailand. The methodology has been repeated to compare the results between Thailand and London. The sample selection method has been done through the process of randomisation of the samples into the experimental group and control group. This is to minimise the possible biases that may cause irrelevant results to the research. As a result of these steps the adaptation of the screening questionnaire has been

appropriately edited to complement the nature of this research as well as making it more substantial and relevant to the objectives of the research.

Table 3.11- Experimental phase in London

LONDON EXPERIMENT

Phase I Preparation Stage Location : London	FEB'09	MAR'09	APR'09	MAY'09
	♦ Preparation of sampling selection process ♦ Performing a random selection of the companies using excel program ♦ Revision of screening questionnaire (revised version after received a comments and suggestion from the examiners) ♦ Preparation of the invitation letter to the monk to be a guest meditation teaching ♦ Preparation of participant information sheet	♦ Revision of compounding variable questionnaire (revised version after received a comments and suggestion from the examiners) ♦ Preparation of the invitation letters to chief executive from different companies within London ♦ Contacting research ethical committee for the London experimental approval ♦ Launching the invitation letters to selecte companies	♦ Preparation of EQ-i questionnaire, Self-perception of leadership skills questionnaire, Compounding variable questionnaire ♦ Locating experimental group and control group by randomly allocated sampling into groups ♦ Preparation of the experimental location ♦ Preparation of the final experiment	♦ Preparation of the meditation experiment in London
Phase II Experimental Stage Location : London	MAY'09	JUN'09	JUL'09	AUG'09
	♦ 1st week of experiment	Continuation of experiment	Continuation of experiment	♦ 12th week of experiment
Phase III Analytical Stage Location : London	OCT'09 – JAN'10			
	♦ Preparation for data analysis and analytical process applying SPSS program			

3.13.3 - Experimental phase

The design of this experiment was based on Hick and Turner (1999) and Coolican (2004) as these authors are cited most often in research regarding experimental design. All the confounding variables, the variables that are controlled such as not to practice other types of mediation, not to participate in other training courses related to emotional intelligence and leadership, doing questionnaire related to emotional intelligence and self-perception of leadership skills, not to participate in any relaxation class, not to participate in a yoga class, not to attain the religious activities related to meditation, are identical, except for the temperature of the room, the monk who taught meditation and the timing of practicing meditation. Though the meditation teacher is different, the

meditative technique offered is the same, and consequently so is the meditation teaching technique.

The timing of the meditation was controlled. The participants in both the experimental and control groups normally worked during weekdays for 8-10 hours per day. In Bangkok, meditation was practiced on weekends only when neither participants in the experimental nor control group were working. In London, meditation was arranged after work so that it did not conflict. Regarding the timing for meditation practice, as this is a human experiment, it is difficult to set the exact time frame for both countries. They were initially asked what was the most suitable time frame that each of the participant could participate without the subject dropping out of the study.

Taken cultural differences into account, in Bangkok, it was not possible that leaders would participate on weekdays after work as their work time is flexible. Meetings often arise unexpectedly and it was therefore considered inconvenient for them to participate during the weekday. In contrast, leaders in London preferred to participate after work, as their weekends are regarded as family/social time. Considering the issue of tiredness, fatigue or stress after work, there is raised in the questionnaire. This was all undertaken to minimise a problem of fatigue after their work and to ensure that the feelings before practicing meditation of the two populations were not biased by the negative expressions caused by the different timing of the two cultures.

3.14 - Null hypotheses

A null hypothesis is a statement that proposes a negative default situation amongst observed data, for example, that there is no difference between two measurements, or that a prescribed experimental treatment has no effect (Field, 2009). This study was based on 13 null hypotheses (Table 3.12). Null hypothesis significance tests (or inferential tests) work by collecting data and performing calculations to estimate the values of test statistics that indicate whether or not the probability (on a scale from 0 to 1) of collecting the observed data was due to chance. If there was a high probability that the data were collected by chance then the researcher has confidence not to reject the null hypothesis. Conversely, if there was a low probability that the data were collected by chance then the researcher has confidence in rejecting the null hypothesis.

Many researchers have suggested that the concept of the null hypothesis is peculiar, confusing, convoluted and illogical and its use should be banned, especially in the social sciences (Loftus, 1991; Carver, 1993; Cline, 2004). Null hypothesis significance tests are notoriously difficult to interpret because they apply a convoluted reverse logic, by which it is impossible to prove that anything is true. It is not theoretically possible to accept a null hypothesis. It is only possible to provide statistical evidence to reject or not reject a null hypothesis. Rejecting a null hypothesis does not imply that the opposite is true. It implies only that statistical evidence is available to conclude that the results of the null hypothesis significance test were not due to chance.

Table 3.12 - Null hypotheses

Population to which each null hypothesis applies	Null hypotheses	
(a) London	$H_0 1$	Meditation does not enhance emotional intelligence and self-perception of leadership skills (simultaneously)
(b) Bangkok	$H_0 2$	Meditation does not enhance emotional intelligence
	$H_0 3$	Meditation does not enhance self-perception of leadership skills
	$H_0 4$	Meditation does not enhance intrapersonal emotional intelligence
	$H_0 5$	Meditation does not enhance interpersonal emotional intelligence
	$H_0 6$	Meditation does not enhance adaptability (a component of emotional intelligence)
	$H_0 7$	Meditation does not enhance stress management (a component of emotional intelligence)
	$H_0 8$	Meditation does not enhance general mood (a component of emotional intelligence)
	$H_0 9$	Meditation does not enhance leaders as a role model (a component of self-perception of leadership skills)
	$H_0 10$	Meditation does not enhance inspiring a shared vision (a component of self-perception of leadership skills)
	$H_0 11$	Meditation does not enhance moral intelligence (a component of self-perception of leadership skills)
	$H_0 12$	Meditation does not enhance enabling others to act (a component of self-perception of leadership skills)
	$H_0 13$	Meditation does not enhance motivating others (a component of self-perception of leadership skills)

In this study there were three possible answers for the research questions. The first possible answer was 'No, meditation cannot enhance emotional intelligence and/or self-perception of leadership skills'. The second possible answer was that 'Yes, meditation can enhance emotional intelligence and/or self-perception of leadership skills'. The final possible answer was that 'It is not certain whether meditation enhances emotional intelligence and self-perception of leadership skills'. These questions could not be answered definitively by a null hypothesis significance test. The only question that could be answered was 'Assuming that the samples represented the populations, then what was the probability that chance factors were responsible for the data?' Nevertheless, the testing of null hypotheses, despite many shortcoming, remain a widely used approach in social sciences and so the testing of null hypotheses was applied in this study. The research questions are re-stated in the form of thirteen null hypotheses in Table 3.12. Each hypothesis applies to two groups of subjects, the population located in Bangkok and the population located in London. Consequently, there were 2 x 13 = 26 null hypotheses tested in this study.

3.15 - Specification of variables

The dependent variables included Emotional Intelligence measured using the Bar-On EQ-i and self-perception of leadership skills measured using the self-perception of leadership skills inventory (Table 3.13). Emotional Intelligence was measured at the scale/interval level and computed as the total score based on the mean measurements of five components, namely:

(a).   Intrapersonal; (Self-Regard, Emotional Self-Awareness, Assertiveness, Independence, Self-Actualization)

(b).   Interpersonal; (Empathy, Social responsibility, Interpersonal relationship)

(c).   Adaptability; (Reality Testing, Flexibility, Problem Solving)

(d).   Stress Management; (Stress Tolerance, Impulse Control)

(e).   General Mood; (Optimism, Happiness)

Each dimension of Emotional Intelligence was further sub-divided into two to five components (Table 3.13). Self-perception of leadership skills was measured at the scale/interval level as the total score based on five components, namely:

(a). Leaders as role model;

(b). Inspiring a shared vision;

(c). Moral intelligence;

(d). Enabling others to act; and

(e). Motivating

Table 3.13 - Dependent variables

Dependent variables	Dimensions	Components
Emotional Intelligence	Intrapersonal Interpersonal Adaptability Stress General Mood	
Emotional Intelligence (Intrapersonal)	Intrapersonal	Self-Regard
		Emotional Self-Awareness
		Assertiveness
		Independence
		Self-Actualization
Emotional Intelligence (Interpersonal)	Interpersonal	Empathy
		Social responsibility
		Interpersonal relationship
Emotional Intelligence (Adaptability)	Adaptability	Reality Testing
		Flexibility
		Problem Solving
Emotional Intelligence (Stress Management)	Stress Management	Stress Tolerance
		Impulse Control
Emotional Intelligence (General Mood)	General Mood	Optimism
		Happiness
Self-Perception of Leadership Skills		Leaders as role models
		Inspiring a shared vision
		Moral Intelligence
		Enabling others to act
		Motivating

- **Independent variables**

The independent variable (Table 3.14) was the treatment which was divided into two levels (meditation or no meditation) requiring two groups of subjects, that is, the experimental group, who practiced Vipassana Meditation for 12 weeks, and the control

group, who did not practice meditation. The measurement of all the dependent variables were repeated before and after the treatment. Consequently, time was also an independent variable. Whereas in the methodology, it is clear that time was an independent variable, in the analysis, the outcome did not show. This is because the dependent variable was the change in the score between the pre-test and the post-test. The two tests were separated by time. Time is therefore an implicit variable in the pre-test post-test design. If there is a change in the test scores between the pre-test and the post-test then time is the significant underlying factor.

Table 3.14 - Independent variables

Independent variables	Categories
Group	Control group
	Experimental group
Treatment	Before meditation
	After meditation
Location	London, UK
	Bangkok, Thailand

3.16 - Null hypothesis significance tests

The null hypothesis significance tests, or they may be called inferential tests, used in this study and the dependent variables and null hypotheses to which they applied are listed in Table 3.16. The statistical analysis was performed using SPSS version 17.0, using the methods described by Field (2009).

Table 3.15 - Null hypothesis significance tests

Null hypotheses	Dependent variable	Test
$H_0 1$	Emotional Intelligence and self-perception of leadership skills (simultaneously)	MANOVA
$H_0 2$	Emotional Intelligence	ANOVA
$H_0 3$	Self-perception of leadership skills	ANOVA
$H_0 4$	Intrapersonal emotional intelligence (a component of emotional intelligence)	ANOVA
$H_0 5$	Interpersonal emotional intelligence (a component of emotional intelligence)	ANOVA
$H_0 6$	Adaptability (a component of emotional intelligence)	ANOVA
$H_0 7$	Stress management (a component of emotional intelligence)	ANOVA
$H_0 8$	General mood (a component of emotional intelligence)	ANOVA
$H_0 9$	Leaders as a role model (a component of self-perception of leadership skills)	ANOVA
$H_0 10$	Inspire a shared vision (a component of self-perception of leadership skills)	ANOVA
$H_0 11$	Moral intelligence (a component of self-perception of leadership skills)	ANOVA
$H_0 12$	Enable others to act (a component of self-perception of leadership skills)	ANOVA
$H_0 13$	Motivating (a component of self-perception of leadership skills)	ANOVA

When measurements of the same variable are repeated on two or more occasions using the same subjects, as performed in the randomised pre-test post-test control group design, then a general linear model (GLM) including repeated measures (ANOVA, ANCOVA, MANOVA, or MANCOVA) can be used to analyse the responses. The repeated measures design takes the variability in the responses between the control and the experimental group (the between subjects variance) and also individual variability (the within subjects variance) into account. Standard ANOVA, ANCOVA, MANOVA, or MANCOVA are inappropriate. The reason is because the correlations between repeated measures are not modeled (Tabachnik and Fidell, 2007). A MANOVA model with repeated measures is applicable if there are two or more correlated dependent variables. A multivariate (MANOVA) model including repeated measures (pre-test and

post-test) was used in this study to test H_01, in which Emotional Intelligence and self-perception of leadership skills were the two dependent variables and the groups (experimental and control) were the main effect (Table 3.15). A univariate ANOVA model including repeated measures (pre-test and post-test) was used in this study to test H_02 to H_013, with the groups (experimental and control) as the main effect (Table 3.15).

Since there were two dependent variables in the MANOVA model, and the independent variable consisted of two groups (experimental and control), Hotelling's Trace is used as the multivariate test statistic to determine if the main effect was significant. The p values of the F statistics were interpreted to test for the main effects of the independent variable on each of the dependent variables using ANOVA.

ANCOVA and MANCOVA are applicable if the GLM model includes a covariate. A covariate is an extraneous variable that is correlated with a dependent variable and its influence needs to be controlled, such as held statistical constant, because it confounds the relationship between the dependent and the independent variables. The inclusion of a covariate increases statistical power by accounting for some of the unexplained variance and increasing the ratio of the variance explained by the independent variable(s) (Tabachnik and Fidell, 2007). No covariates were identified for the purpose of this study.

3.17 - Significance level

The null hypothesis significance tests were involved in the making of decisions as to whether to reject or accept the null hypotheses, using a dichotomous decision rule. The significance level used to test the null hypotheses in this study was $\alpha = .05$. This is only an arbitrary value, but is nevertheless the most conventional significance level used by most researchers (Cohen, 1994). The decision rule was to reject the null hypothesis if the probability (p value) of the test statistic was $< .05$, but the null hypothesis was not rejected if $p \geq .05$. It is a commonly held misconception that $p < .05$ implies some kind of meaningfulness, importance and credibility to data analysis, whereas in reality it does not (Cohen, 1994). The interpretation of $p < .05$ was that the data was collected by chance less than 5% of the time, whilst $p \geq .05$ implied that the data was collected by

chance 5% or more of the time. The prescription of α = .05 implied that a Type I error would occur in 1 in 20 tests. A type I error occurs if a null hypothesis is falsely rejected, when it is in fact true, such as a difference between variable is declared to be statistically significant when in reality there is no difference. When multiple hypothesis tests are performed on one set of data there is an increased chance of incorrectly rejecting a null hypothesis. In ten tests the probability of a Type I error increases to 0.40, which is less than 1 in 2 (Abdi, 2007). Since 26 null hypothesis tests have already been performed in this study, the chance of making Type I errors was acceptable. Therefore, the interpretation of the results needs to be undertaken very carefully.

3.18 - Theoretical assumptions of ANOVA and MANOVA

ANOVA and MANOVA are parametric tests that theoretically assume normally distributed variables. To check this assumption frequency distribution histograms of the dependent variables were constructed and their shapes were compared visually against simulated bell-shaped curves. Visual examination of a frequency distribution has been used as a method of testing for normality. It is obvious from looking at the shapes of the distributions that the modes are generally near the centre. Statistical tests for normality such as Kolmogorov-Smirnov, Anderson-Darling, Shapiro-Wilk could be used but are not necessary. This is because ANOVA and MANOVA are robust to deviations from normality, as long as the distributions are relatively dome shaped and contiguous. The interpretation of the variables is based on the results of the descriptive statistics and tests (ANOVA and MANOVA).

MANOVA assumes that linear relationships exist amongst all pairs of dependent variables used in the analysis, but works best in situations where the correlations are moderate. If the correlations are weak, for example, correlation coefficients < .2, then the power of MANOVA is compromised. However, if the variables are very strongly inter-correlated, for example, correlation coefficients > .8, then they merely become linear combinations of each other, so that one or more of them becomes redundant (Tabachnik and Fidell, 2007). The results of correlation analysis were therefore used to test the assumption of MANOVA that Emotional Intelligence and self-perception of leadership skills were significantly correlated. Pearson's correlation coefficients assumes normally distributed variables range between -1.0 (perfect negative

correlation, through 0 (no correlation) to +1.0 (perfect positive correlation). The decision rule was to reject hypothesis of no correlation if the $p < .05$ for Pearson's coefficient.

ANOVA and MANOVA assume homogeneity of variance across the groups in the sample design matrix. The null hypothesis of homogeneity of variance was tested using Levene's statistic. Welch's correction, a robust test for equality of means, was applied to interpret the results of ANOVA if the variance was not homogeneous.

ANOVA and MANOVA are sensitive to outliers, that is, extreme values at the tail ends of the distributions which represent extremely or unusual responses. The presence of even a few outliers may bias the test statistics and p values (Tabachnik and Fidell, 2007). Multivariate outliers were identified as cases with $p < .001$ for Mahalanobis D^2 statistics. Univariate outliers were identified as cases with Z scores greater than 3.3.

MANOVA assumes that the covariance matrices are homogeneous across the groups. The null hypothesis of equality of covariance matrices was tested using Box's M statistic. The null hypothesis was rejected if $p < .001$.

3.19 - Sample size

The results of null hypothesis significance tests are dependent upon the sample size (Cohen, 1992). The larger the sample size, the more likely it is that a statistically significant result will be declared. However, the power of a null hypothesis significance test to reject a null hypothesis decreases when the sample size is smaller. The larger the sample size, especially if the subjects of the study are equal across the groups, the more robust ANOVA and MANOVA are against violation of their theoretical assumptions. In this study, the sample sizes are equal across groups, therefore the assumption of MANOVA obtains benefits for this study. The rule of thumb for comparing the responses of two groups is that the minimum sample size in each group should be at least 30 (Fraenkel and Wallen, 2007). However, this rule of thumb does not take the effect size into account. Cohen (1992, p.158) computed the minimum sample sizes adequate to reject the null hypotheses of ANOVA at $\alpha = .01$ and $\alpha = .05$ with a power of 0.8 for two to seven groups. The data are reproduced in table 3.16.

Table 3.16 - Minimum sample size for ANOVA

N for Small, Medium, and Large ES at Power = .80 for α = .01, .05, and .10

	α								
	.01			.05			.10		
Test	Sm	Med	Lg	Sm	Med	Lg	Sm	Med	Lg
ANOVA									
$2g^a$	586	95	38	393	64	26	310	50	20
$3g^a$	464	76	30	322	52	21	258	41	17
$4g^a$	388	63	25	274	45	18	221	36	15
$5g^a$	336	55	22	240	39	16	193	32	13
$6g^a$	299	49	20	215	35	14	174	28	12
$7g^a$	271	44	18	195	32	13	159	26	11

Note. ES = population effect size, Sm = small, Med = medium, Lg = large, diff = difference, ANOVA = analysis of variance. ᵃ Number of groups.

The research design of this study included two groups, control and experimental, and consequently, according to Cohen (1992 p.158), the minimum sample size in each group at α = .05 should be 393 if the effect size is small, 64 if the effect size is medium, or 26 if the effect size is large. The sample design matrix of this study included 32 in each group in London and 40 in each group in Bangkok. At α = .05, according to Cohen (1992), sample sizes of 32 and 40 exceed the minimum if the effect size is large, but not if the effect size is small or medium.

There are other considerations to be taken into account when considering sample sizes which are not related to the power of null hypothesis significance tests. It is not always possible in social science to comply with the sample size requirements of statistical analysis. Experiments involving human subjects often use small sample sizes since it is necessary to gain informed consent from the participants as well as their commitment to the study (Fraenkel and Wallen, 2007). A small sample size may be enough if the characteristics of the sample are fairly consistent (Anderson, 2004). Coolican (2004) argued that samples that are too large may produce a weak design in terms of the control of the equivalence of the participants in each group. Small samples can be better controlled than large samples. Essential differences between the characteristics of many individuals in large groups may produce unwanted effects resulting in unclear differences between the experimental and control groups. In the context of this study, small groups were considered better controlled because the teaching of meditation to a small group would be more effective than teaching a large group. The meditation

teacher could approach everyone, detecting the feelings of the participants, listening to and reflecting on each participants' responses and emotion during their meditation.

3.20 - Effect size

The rejection of a null hypothesis implies statistical significance but not practical significance. Statistical significance and practical significance are widely misrepresented as if they are the same, but they certainly are not (Cline, 2004). Statistical significance implies that the result did not happen by chance, whereas practical significance implies meaningful differences and/or relationships among variables. Practical significance implies an effect with sensible and important implications which was not an accident of sampling. Practical significance has nothing to do with the magnitude of the test statistic, the p value, the sample size or the rejection of a null hypothesis.

Null hypothesis significance tests do not measure the effect size, for instance, how big the difference was, or how strongly related the variables were. A lot more information can be extracted from statistical analysis if the focus is on understanding the size of the effect, rather than deciding whether or not to reject a null hypothesis. This study therefore followed the recommendation of Cohen (1994), Wilkinson (1999) and Cline (2004) that effect sizes must be reported in addition to the test statistics and p values. The distinction between small, medium and large effects, indicated by eta squared (η^2) statistics, was defined by Cohen (1992). Therefore when interpreting the results, effect size should be taken into account.

3.21 - Validity and reliability

Validity is defined as the degree to which unbiased inferences can be extracted from observed measurements. Validity reflects the extent to which an instrument measures accurately what it was designed to measure. Reliability is the degree of consistency or reproducibility of observed measures. Reliability reflects the extent to which an instrument measures what it was designed to measure with respect to different participants and/or different times. The randomised pre-test post-test control group design used in this study was based on underlying assumptions which must be

considered in order to determine how much the validity and reliability of the observed measurements were threatened (Bryman and Bell, 2007; Fraenkel and Wallen, 2007).

Firstly, in order to avoid biased results, the members of the control and experimental groups should, as far as possible, be equivalent with respect to their sample sizes and demographic characteristics. This study benefitted from the sample sizes of the two groups being equal. It is said that equal sample sizes are not essential, but are beneficial, because they increase the power of statistical tests to test the null hypotheses (Tabachnik and Fidell, 2007). If, due to an accident of sampling, the control and experimental groups are not equivalent, then any differences in the responses of the two groups could potentially be attributed to the differences in their demographic characteristics, rather than to the direct effects of the prescribed treatment. For example, if all the members of the control group were males below the age of 25 and all members of the experimental group were females above the age of 50, then the effects of the treatment could potentially be biased by intrinsic differences between the responses of younger males and older females. The assumption of equivalent ages and genders amongst the control and experimental groups used in this study was tested using a Chi-square 'goodness of fit' test. The null hypothesis was that there was no significant difference between the observed frequencies, in the experimental group, and the expected frequencies, in the control group.

Secondly, there should be no unknown pre-test treatment interaction. Exposure to both the pre-test and the treatment should not alert the subjects in the experimental group to feel that they are in some way required to perform better on the post-test than the members of the control group, who were not exposed to the treatment. Otherwise, the post-test measurements may be biased by subjects feeling that they must react positively to whatever is being measured, rather than responding directly to the effects of the prescribed treatment.

Thirdly, there should be no instrument implementation threat, referring mainly to difficulties interpreting the measurements if the constructs being measured lack evidence of reliability and/or validity. The implementation threat may also refer to difficulties that may occur if different instruments are administered to the control group and the experimental group, and/or if the instruments change between the pre-test and

post-test, and/or if the participants were sensitized in some way by the pre-test when they completed the post-test For the pre-test, the EQ-i questionnaire was administered to participants in both the experimental and control groups at the same time, followed by the self-perception of leadership skills questionnaire.

For the post-test, after the treatment finished, the same questionnaires were administered but in the reverse order. The EQ-i contained 125 items so it was assumed that the participants would forget the items in the post-test that they answered in the pre-test. For the self-perception of leadership skills questionnaire the order of the items was changed from 1 to 25, to 25 to 1, in order to minimise the problem of remembering ordered items. It was assumed that the participants did not remember their responses to the pre-test when they completed the post-test.

To ensure that that there was no implementation threat the validity and reliability of the EQ-i and self-perception of leadership skills instruments used in the pre-test and post-test were checked for the purposes of this study. Values of Cronbach's alpha were estimated to determine the internal consistency reliability of the dependent variables which contained more than one component. The use of Cronbach's alpha was justified because it is the most common statistic applied to estimate the internal consistency reliability of variables measured using questionnaires (Hogan *et al.,* 2000). This study adopted the convention that Cronbach's alpha must be at least 0.7 before reliability could be considered as adequate and 0.8 or over before reliability could be considered as good (Tabachnik and Fidell, 2007).

In order to ensure objectivity the experiment should be carried out under controlled conditions so that only the factor or treatment under the study and no other extraneous variables influenced the responses of the experimental and control groups. This would help to maintain reproducibility, so if the research was repeated by others using the same methods then they should obtain the same results (McNeill and Chapman, 2005). In this study it was hypothesised that meditation might enhance the emotional intelligence and self-perception of leadership skills of the experimental group. It was assumed that no other causes enhanced emotional intelligence and self-perception of leadership skills other than meditation. Nevertheless, several extraneous or

confounding variables posed a threat to the internal validity of the results (McNeill and Chapman, 2005; Fraenkel and Wallen, 2007).

Physical scientists have the advantage that they can conduct experiments in laboratories where extraneous or confounding variables can be eliminated or controlled. However, social scientists must conduct experiments on people in natural settings outside laboratories where it is difficult or even impossible to control all the variables (Moore, 2000; Field and Hole, 2003). Since it was impossible to carry out this experiment in controlled laboratory conditions, alternative methods for controlling extraneous variables were necessary. Some extraneous or confounding variables could not be controlled, of which the most important was the quality of treatment. Treatment in this study refers to a specific technique taught, which was, 'Imagine you have a clear crystal ball inside your body, two inches above your abdomen'. A very difficult question posed by other researchers (Chapter 2) is, 'How can meditation be measured?' There appears to be no reliable method of determining whether one meditation achieves effective outcomes whilst another meditation does not. For example, external stimuli such as noise or other disturbances during mediation or damaging circumstances, such as illness, which could vary from one individual to another, may have influenced the quality of the meditation.

In medical research, the quality of a treatment, medication or therapy, is commonly controlled by use of a placebo, such as a false treatment that appears to be identical to the real treatment, but in fact is known to be ineffective (Margo, 1999). However, in this study, meditation was a real treatment which could not be substituted by any kind of placebo. However, to minimise the question above, 'How can meditation be measured', this research applied the quality of expression that each meditator experiences whether they are in a meditative stage or not. Such words, for instance, calmness and mindfulness, are described earlier in section. All the places where participant meditate were set to be as quiet as possible. For instance, in Bangkok, the room was situated in a temple, which is normally quiet in nature. In London, the room was in the basement of University of Westminster. Apart from the participants who took part in the study during the 12-week period of the meditation experiment, there was no one else present. Therefore, it was assumed that all external disturbances were minimised during the study.

It was not possible to control the different locations where the participants meditated in London and Bangkok. The artificial situation in which the treatment was administered to two populations at different times and in different places may have influenced the results (Field and Hole, 2003). Consequently it was necessary to consider the two populations as separate entities for the purposes of statistical analysis. This is the reason why this study cannot combine the two populations for analysing the data. Regarding the issue of different settings between the two populations, it was argued that the experiment regarding people was impossible for the two groups of people to be identical (Mead, 1998; Saunders *et al.,* 2000; Gomm 2004). However, it was argued to be beneficial as the outcomes gained are more natural, this issue has been addressed earlier.

The timing of the meditation was controlled, however, the period of practicing meditation, weekday and weekend, was impossible to control as explained in section 3.13.3. As far as possible the environmental conditions, under which the participants meditated, were controlled. The meditation environment from both cultures was a square room located in a peaceful area. The room did not contain a Buddhist statue since this could have a significant impact on the participants' state of mind before the start of meditation. The temperature was controlled by air conditioning at $23^{o}C$ in Bangkok. The reason for fixing the temperature at $23^{o}C$ was to ensure the comfort of all participants. In London, the experiment was arranged during the summer where the room temperature varies between 20 to 25 ^{o}C.

Before the experiment, the participants were asked to vote for the most comfortable temperature. The reason for the vote was because each participant's level of comfort may differ. The temperature should not be too hot or too cold because it could have an impact on the quality of the meditation.

Other extraneous or confounding variables were assumed to be eliminated or their effects were reduced because the researcher asked all the participants, both in the experiment and control group, **not** to:

    1 Participate in other meditation activities, no matter what type of meditation;

    2 Go to a temple during the experiment;

3 Have group discussions regarding extra topics concerning meditation, EI and self-perception of leadership skills;

4 Watch any TV channels regarding meditation, EI and self-perception of leadership skills; or

5 Participate in other similar techniques; for instance, yoga, relaxation techniques or take any other tests related to meditation, EI and self-perception of leadership skills.

3.22 - Chapter summary

This chapter explains the details of the research process relating to planning and investigating the main research question of whether meditation can or cannot enhance emotional intelligence and self-perception of leadership skills in a business environment. The analyses were carried out with the business chief executives from each of several companies, from two major capital cities, Bangkok, in Thailand and London, in the United Kingdom. An experimental research, comparing the mean pre-test/post-test of the two groups between an experimental and control group, was the choice of research design.

In this study, chief executives in an experimental group practiced meditation every week for 12 consecutive weeks, whereas the chief executives from the control group did not meditate. Chief executives were required to complete two measurement instruments, the emotional quotient intelligence (Bar-On EQ-i), and a self-perception of leadership skills questionnaire, before the first and after the last sessions. The justification of the choice of topic, through the completion of the research strategy, needed to obtain the information necessary in completing the study, has been discussed. In order to derive the outcome, MANOVA and ANOVA statistical instrument are the analysis tools. The methods of analysis, as well as the theoretical assumption of the statistical instruments, ANOVA and MANOVA, were also justified.

Chapter 4: Results of the Studies

4.1 - Introduction

This chapter presents the major results obtained from the meditation experiments that have been conducted in two differentt cities, Bangkok and London. All test results have been presented and interpreted according to all 13 hypotheses chronologically, starting from the testing of the basic assumptions with regards to the statistical theory.

The results start from the test of whether, or not, the demographic equivalent of both the control and experimental groups are equal across all groups. (4.2.1); following by the test of normality of the dependent variables (4.2.2). This attempts to test whether further analysis can be performed without violation of the statistical assumptions, MANOVA and ANOVA. Most importantly, the reliability of the dependent variables (4.2.3); in this study referred to in the emotional intelligence (EI) and self-perception of leadership skills questionnaires, have been performed. Even though the EI questionnaire has been substantially validated by the original creator, the reliability and validity tests have been repeated to ensure that the reliability of the questionnaire itself was consistently measured; descriptive statistic results and test of assumptions (4.2.4); the rest of the results (4.3 - 4.15) are presented accordingly to the hypotheses stated in Chapter 3.

Lastly, the chapter summarises the results of the null hypothesis significance tests in table form. The table clearly states which null hypotheses were rejected. The rejection of the null hypotheses means that meditation can enhance all the test variables. In order to indicate more clearly, the effect size of each experiment must be reported (Thomson, 1996; Wilkinson, 1999; Cline, 2004); and a summary table has been prepared.

4.2 - Results of the studies

4.2.1 - Test of demographic equivalence of the control and experimental groups

The experimental research design assumed that the demographic characteristics of the subjects in the control and experimental groups were equivalent. This assumption was tested with goodness of fit tests (Chi-square test). The χ^2 statistics based on the frequency distributions of the subjects from London and Bangkok separately, the χ^2 statistics indicated no significant differences at $\alpha = .05$ between the control and experimental groups with respect to males and females (Table 4.1). There was, however, a significant difference between the ages of the subjects in the experimental and control groups in London. (χ^2 (1, N = 64) = 17.163, p = .001). A significant difference between the ages was not, however, observed in Bangkok (Table 4.2).

Table 4.1 - Chi-square analysis of the distribution of gender between the groups

Gender	Subjects in London		χ^2	p value
	Control (expected)	Experimental (observed)		
Female	9	8	.166	.683
Male	23	24		

Gender	Subjects in Bangkok		χ^2	p value
	Control (expected)	Experimental (observed)		
Female	18	16	.417	.519
Male	22	24		

Table 4.2 - Chi square analysis of the distribution of ages between the groups

| Age (years) | Subjects in London | | χ^2 | p value |
	Control (expected)	Experimental (observed)		
26-35	3	1	17.163	.001*
36-45	2	10		
46-55	18	10		
56+	9	11		

| Age (years) | Subjects in Bangkok | | χ^2 | p value |
	Control (expected)	Experimental (observed)		
26-35	1	2	3.851	.278
36-45	14	9		
46-55	16	19		
56+	9	10		

Note: * Significant at $\alpha = .05$

Evidence is provided to conclude that the control and experimental groups were equivalent with respect to both gender and age for the Bangkok participants. Random assignment was successful in distributing the genders and ages of the 80 subjects equitably across the control and experimental groups. However, it was not successful in equitably distributing the ages of the 64 participants in London. In the London group, there were differences between the 36-45 age range (two in the control group and ten in the experimental group) and between the 46-55 age range (eighteen in the control group and ten in the experimental group). The age difference between the control and experimental group in London was relatively small. The assumption of the research design, that the two groups were demographically equivalent, was not seriously violated. It was assumed that the differences between the responses of the control and experimental groups to the treatment would not be seriously biased by gender or age differences between the groups.

In addition, there were clear differences between the participants in London and Bangkok with respect to their ethnicity, for instance, White/British in London, Asian/Thai in Bangkok. In this study ethnicity was predominantly Christian in London, and Buddhist in Bangkok. These characteristics could not be controlled.

4.2.2 - Test of normality of the dependent variables

In a pre-test/post-test experimental design there are two repeated measures, one before the treatment and one after the treatment. The changes in the responses of the subjects between the post-test and the pre-test, for instance, the post-test measures minus the pre-test measures were therefore considered to be the dependent variable. The dependent variable was zero if there was no change in the test scores between the pre-test and the post-test. The dependent variable was positive if there was an increase between the pre-test and the post-test, or negative if there was a decrease between the pre-test and the post-test. Frequency distribution histograms of the dependent variables, EI and self-perception of leadership skills, were constructed, and their shapes were compared visually against bell-shaped, normal probability curves (Figures 4.1 - 4.2). Although they were not perfectly normal bell-shaped curves, the observed dome-shaped frequency distributions were considered to be sufficiently close to normality to justify the use of parametric descriptive statistics, such as means, standard deviations, and 95% confidence intervals, and parametric inferential statistics (MANOVA, and ANOVA)

All p values for the Mahalanobis distance statistics were > .001, indicating no multivariate outliers, and all Z scores were >3.3 indicating no univariate outliers. Consequently no cases were excluded from the statistical analysis.

Figure 4.1 - Frequency distributions of the post-test minus pre-test measures of emotional intelligence and self-perception of leadership skills for N = 64 participants in London
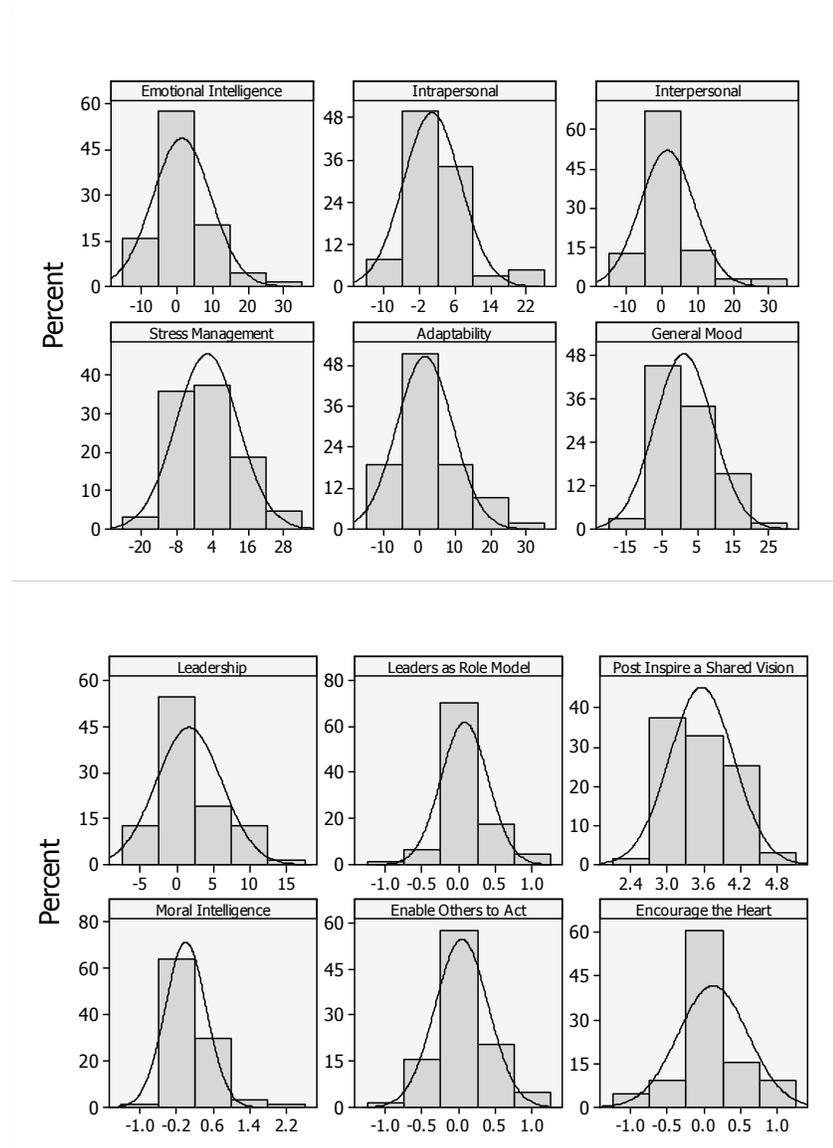
Figure 4.2 - Frequency distributions of the post-test minus pre-test measures of emotional intelligence and self-perception of leadership skills for N = 80 participants in Bangkok
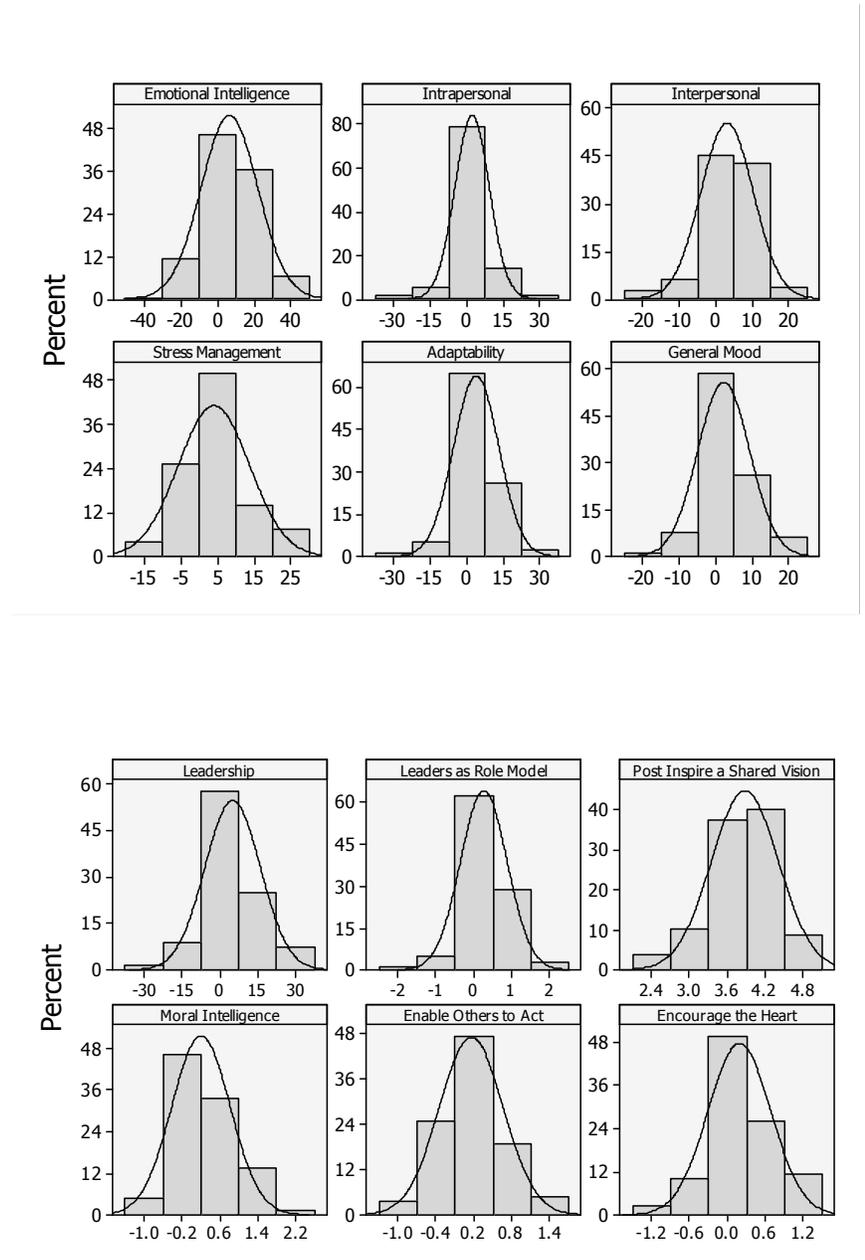
4.2.3 - Reliability analysis

The experimental research design and the use of inferential statistics to test the null hypotheses assumed that the dependent variables were consistently and reliably measured, that is, the components of each variable were strongly inter-correlated so that they consistently measured the same unifying theme or construct. Values of Cronbach's alpha were estimated to determine the internal consistency reliability of all the dependent variables listed in Table 4.3. The use of Cronbach's alpha was justified because it is the most common statistic applied to estimate the internal consistency reliability of variables measured using questionnaires (Hogan *et al.,* 2000). This study adopted the convention that Cronbach's alpha must be at least 0.7, so reliability could be considered as adequate. The Cronbach's alpha above 0.8 indicates that reliability could be considered as good (Tabachnik and Fidell, 2007). Using the 0.8 threshold as a criterion, the internal consistency of all of the dependent variables in Table 4.3 was good, indicated by Cronbach's alpha values ranging from .858 to .934.

Table 4.3 - Reliability analysis of the dependent variables

Variable	Location	Pre-test measurements	Post-test measurements
Emotional Intelligence	London	.934	.931
	Bangkok	.875	.916
Self-Perception of Leadership Skills	London	.929	.929
	Bangkok	.858	.907

4.2.4 - Descriptive statistic results and test of assumptions

As theoretical considerations, the choice of dependent variables also needs to be carefully considered. Highly correlated dependent variables severely weaken the power of the analysis. Pearson's r coefficients between emotional intelligence and self-perception of leadership skills were performed. The test results show that there were significantly correlation between dependent variables at $\alpha = .05$ for the population in London and the population in Bangkok (Table 4.4). However, as Pearson's r did not

show highly correlation on those populations (range from 0.247 to 0.470), then MANOVA can be used.

Table 4.4 - Correlations between dependent variables

Population	Correlations between Emotional Intelligence and Self-Perception of Leadership Skills		
	N	Pearson's r	p
London	64	.470	.000*
Bangkok	80	.247	.027*

Note: * Significant at α = .05

MANOVA assumes that the dependent variables are not correlated with extraneous variables, for example, the ages of the subjects. Spearman's rho correlation coefficient was performed. The test results show that correlation, between emotional intelligence, self-perception of leadership skills and age-group, were not significant at α = .05 (Table 4.5)

Table 4.5 - Correlations between emotional intelligence, self-perception of leadership skills, and age

Population	Correlations Between Emotional Intelligence and Age-group			Correlations Between Self-Perception of Leadership Skills and Age-group		
	N	Spearman's rho	p	N	Spearman's rho	p
London	64	.029	.822	64	.102	.423
Bangkok	80	-.135	.232	80	.070	.538

MANOVA makes the assumption that the within-group covariance matrices are equal. If the design is balanced, so that there is an equal number of observations in each group, the robustness of the MANOVA tests is guaranteed.

ANOVA was used to test whether meditation affects each individual dependent variable. One of the major ANOVA assumptions was that the variances of dependent variable were equal across the groups. The null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ in 4 out of 6 tests (Table 4.6).

Table 4.6 - Levene's test for equality of variance for emotional intelligence and self-perception of leadership skills

Population	Dependent Variable	Levene's F	Degrees of Freedom	p-value
London	Emotional Intelligence	12.365	1,62	.001*
	Self-Perception of Leadership Skills	20.940	1,62	.000*
Bangkok	Emotional Intelligence	.002	1,78	.967
	Self-Perception of Leadership Skills	17.878	1,78	.000*

Note * Significant at $\alpha = .05$

The mean (post-test minus pre-test) measures in emotional intelligence and self-perception of leadership skills were consistently higher in the experimental groups than in the control groups (Table 4.7). Thus, it can be inferred that subjects in an experimental group were enhanced by meditation practice.

Table 4.7 - Descriptive statistics for emotional intelligence and self-perception of leadership skills

Population	Dependent variable	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Emotional Intelligence	Control	32	-4.38	3.108
		Experimental	32	7.34	7.412
	Self-Perception of Leadership Skills	Control	32	-1.00	2.155
		Experimental	32	4.41	4.585
Bangkok	Emotional Intelligence	Control	40	-.40	14.025
		Experimental	40	13.50	13.790
	Self-Perception of Leadership Skills	Control	40	.15	5.981
		Experimental	40	10.53	11.447

4.3 - The effects of meditation on emotional intelligence and self-perception of leadership skills (simultaneously)

In view of the violations of the assumptions which could elevate the chance of making a Type I error, the significance level to reject the null hypothesis was reduced from the conventional $\alpha = .05$ to $\alpha = .001$. The Hotelling's T and Multivariate F statistics were significant at $\alpha = .001$ (Table 4.8). The null hypothesis was rejected (P value = 0.000). The alternative hypothesis, that meditation does simultaneously enhance emotional intelligence and self-perception of leadership skills, was accepted. The effect size was large in the London population ($\eta^2 = 0.616$), but medium in Bangkok population ($\eta^2 = 0.363$).

Table 4.8 - MANOVA statistics for emotional intelligence and self-perception of
leadership skills

Population	Hotelling's T	Multivariate F	p	Effect size η^2
London	1.601	48.838	.000**	.616
Bangkok	.571	21.973	.000**	.363

Note: ** Significant at α = .001

4.4 - The effects of meditation on emotional intelligence

ANOVA assumed that the variances in the measures of emotional intelligence were equal across the groups. The null hypothesis of equality of variance using Levene's test was not rejected at α = .05 for the Bangkok population (P value = 0.967), so the variances were equal (Table 4.6).   The null hypothesis was rejected at α = .05 for the London population (P value = 0.001), so the variances were not equal (Table 4.6).

The null hypothesis of ANOVA was rejected for both two populations (Table 4.9). The alternative hypothesis was accepted (P value = 0.000). Hence, meditation does enhance emotional intelligence for both population groups.

Table 4.9 - ANOVA statistics for emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	68.023[a]	1,41.575	.000*	.523
Bangkok	19.977	1,78	.000*	.204

Note: * Significant at α = .05   [a] Using Welch's correction (robust test for equality of means)

Table 4.10 - Mean statistics for emotional intelligence of experimental group

Population	Dependent Variables	Pre-value	Post-value	Post-minus Pre-	Increase %
Bangkok	Emotional Intelligence	87.8	101.3	13.5	15.38%
London	Emotional Intelligence	85.31	92.66	7.34	8.60%

For the Bangkok population, the descriptive statistics (Table 4.7) indicated that the mean (post-test minus pre-test) measures of emotional intelligence in the experimental group were consistently higher than in the control group. It means that the meditation does enhance emotional intelligence level in the experimental group by 15.38% (Table 4.10)

For the London population, the descriptive statistics (Table 4.7) indicated that the mean (post-test minus pre-test) measures of emotional intelligence in the experimental group were consistently higher than in the control group. It means that the meditation does enhance emotional intelligence level in the experimental group by 8.60% (Table 4.10)

4.5 - The effects of meditation on self-perception of leadership skills

ANOVA assumed that the variances in the measures of self-perception of leadership skills were equal across the groups. The null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ for both populations (P value = 0.000), so the variances were not equal (Table 4.6).

The null hypothesis of ANOVA was rejected for both two populations (Table 4.11). The alternative hypothesis was accepted (P value = 0.000). Hence, meditation does enhance self-perception of leadership skills for both population groups.

Table 4.11 - ANOVA statistics for self-perception of leadership skills

Population	F	Degrees of Freedom	p	Effect size η^2
London	36.437[a]	1,44.061	.000*	.370
Bangkok	25.814[a]	1,58.818	.000*	.249

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

Table 4.12 - Mean statistics for self-perception of leadership skills of experimental group

Population	Dependent Variables	Pre-value	Post-value	Post-minus Pre-	Increase %
Bangkok	Self-Perception of Leadership Skills	96.58	107.1	10.52	10.89%
London	Self-Perception of Leadership Skills	85.09	89.5	4.41	5.18%

For the Bangkok population, the descriptive statistics (Table 4.7) indicated that the mean (post-test minus pre-test) measure of self-perception of leadership skills in the experimental group were consistently higher than in the control group. It means that the meditation does enhance the self-perception of leadership skills level in the experimental group by 10.89% (Table 4.12)

For the London population, the descriptive statistics (Table 4.7) indicated that the mean (post-test minus pre-test) measure of self-perception of leadership skills in the experimental group were consistently higher than in the control group. It means that the meditation does enhance the self-perception of leadership skills level in the experimental group by 5.18% (Table 4.12)

4.6 - The effects of meditation on intrapersonal emotional intelligence

ANOVA assumed that the variances in the measures of intrapersonal emotional intelligence were equal across the groups; however, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.003) with respect to the London population (Table 4.13). The assumption of ANOVA was violated for the London population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.653) in the Bangkok population

Table 4.13 - Levene's test for equality of variance for intrapersonal emotional intelligence

Population	Levene's F	Degrees of Freedom	p
London	9.374	1,62	.003*
Bangkok	.203	1,78	.653

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.000) for the London population (Table 4.14). Hence, meditation does enhance intrapersonal emotional intelligence for London population. The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.004) for the Bangkok population. The effect size was small for the Bangkok population but medium for the London population.

Table 4.14 - ANOVA statistics for intrapersonal emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	55.972[a]	1,45.098	.000*	.474
Bangkok	8.883	1,78	.004*	.102

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.15) indicated that the mean (post-test minus pre-test) measures of intrapersonal emotional intelligence in the experimental group were consistently higher than in the control group in both populations. It means that the meditation does enhance the intrapersonal level in the experimental group by 5.73% for the London population and by 7.22% for the Bangkok population (Table 4.16)

Table 4.15 - Descriptive statistics for intrapersonal emotional intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-3.69	2.934
	Experimental	32	5.13	5.983
Bangkok	Control	40	1.70	7.776
	Experimental	40	6.48	6.496

Table 4.16 - Mean statistics for intrapersonal emotional intelligence

Population	Dependent Variables	Pre-value	Post-value	Post minus Pre-	Increase %
Bangkok	Intrapersonal	89.70	96.18	6.48	7.22%
London	Intrapersonal	89.47	94.59	5.13	5.73%

4.7 - The effects of meditation on interpersonal emotional intelligence

ANOVA assumed that the variances in the measures of interpersonal emotional intelligence were equal across the groups. The null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.128 for London, 0.431 for Bangkok) in both populations (Table 4.17).

Table 4.17 - Levene's test for equality of variance for interpersonal emotional intelligence

Population	Levene's F	Degrees of Freedom	p
London	2.378	1,62	.128
Bangkok	.627	1,78	.431

* Significant at α = .05

The null hypothesis of ANOVA was rejected at α = .05 (P value = 0.000) for the London population (Table 4.18). Hence, meditation does enhance interpersonal emotional intelligence for the London population. The null hypothesis of ANOVA was not rejected at α = .05 (P value = 0.389) for the Bangkok population. The effect size was small for the Bangkok population but medium for the London population.

Table 4.18 - ANOVA statistics for interpersonal emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	21.093	1,62	.000	.254
Bangkok	.750	1,78	.389	.010

Note: * Significant at α = .05

The descriptive statistics (Table 4.19) indicated that the mean (post-test minus pre-test) measures of interpersonal emotional intelligence in the experimental group were consistently higher than in the control group in the London population. It means that the meditation does enhance interpersonal level in the experimental group by 5.96% (Table 4.20)

Table 4.19 - Descriptive statistics for interpersonal emotional intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-2.47	4.859
	Experimental	32	5.19	8..082
Bangkok	Control	40	2.35	1.247
	Experimental	40	3.75	1.030

Table 4.20 - Mean statistics for interpersonal emotional intelligence

Population	Dependent Variables	Pre-value	Post-value	Post-minus Pre-	increase %
Bangkok	Interpersonal	79.73	83.47	3.75	4.70%
London	Interpersonal	87.13	92.31	5.19	5.96%

4.8 - The effects of meditation on adaptability emotional intelligence

ANOVA assumed that the variances in the measures of adaptability emotional intelligence were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.000) with respect to the London population (Table 4.21). The assumption of ANOVA was violated for the London population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.959) for the Bangkok population.

Table 4.21 - Levene's test for equality of variance for adaptability

Population	Levene's F	Degrees of Freedom	p
London	15.666	1,62	.000*
Bangkok	.003	1,78	.959

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.000) for the London population (Table 4.22). Hence, meditation does enhance adaptability emotional intelligence for the London population. The null hypothesis of ANOVA was not rejected at $\alpha = .05$ (P value = 0.295) for the Bangkok population. The effect size was small for the Bangkok population but medium for the London population.

Table 4.22 - ANOVA statistics for adaptability emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	26.440[a]	1,43.283	.000*	.299
Bangkok	1.110	1,78	.295	.014

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.23) indicated that the mean (post-test minus pre-test) measures of adaptability emotional intelligence in the experimental group were consistently higher than in the control group in the London population. It means that the meditation does enhance the adaptability level in the experimental group by 6.55% (Table 4.24)

Table 4.23 - Descriptive statistics for adaptability emotional intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-2.88	3.883
	Experimental	32	5.66	8.544
Bangkok	Control	40	2.68	1.634
	Experimental	40	4.88	1.299

Table 4.24 - Mean statistics for adaptability emotional intelligence

Population	Dependent Variables	Pre-value	Post-value	Post - minus Pre	Increase %
Bangkok	Adaptability	95.50	100.37	4.88	5.11%
London	Adaptability	86.41	92.06	5.66	6.55%

4.9 - The effects of meditation on stress management emotional intelligence

ANOVA assumed that the variances in the measures of stress management emotional intelligence were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.004) with respect to the London population (Table 4.25). The assumption of ANOVA was violated for the London population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.254) for the Bangkok population.

Table 4.25 - Levene's test for equality of variance for stress management emotional intelligence

Population	Levene's F	Degrees of Freedom	p
London	9.207	1,62	.004*
Bangkok	1.322	1,78	.254

* Significant at α = .05

The null hypothesis of ANOVA was rejected at α = .05 (P value = 0.000) for the London population (Table 4.26). Hence, meditation does enhance stress management emotional intelligence for the London population. The null hypothesis of ANOVA was rejected at α = .05 (P value = 0.000) for the Bangkok population. The effect size was small for the Bangkok population but medium for the London population

Table 4.26 - ANOVA statistics for stress management emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	69.030[a]	1,51.281	.000*	.527
Bangkok	13.735	1,78	. 000*	.149

Note: * Significant at α = .05   [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.27) indicated that the mean (post-test minus pre-test) measures of stress management emotional intelligence in the experimental group were consistently higher than in the control group in both populations. It means that the meditation does enhance stress management level in the experimental group by 11.03% for the London population and by 10.72% for the Bangkok population (Table 4.28)

Table 4.27 - Descriptive statistics for stress management emotional intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-5.19	5.343
	Experimental	32	9.88	8.754
Bangkok	Control	40	2.48	9.061
	Experimental	40	10.52	10.325

Table 4.28 - Mean statistics for stress management emotional intelligence

Population	Dependent Variables	Pre-value	Post-value	Post minus Pre-	Increase %
Bangkok	Stress Management	98.23	108.85	10.53	10.72%
London	Stress Management	89.56	99.44	9.88	11.03%

4.10 - The effects of meditation on general mood emotional intelligence

ANOVA assumed that the variances in the measures of general mood emotional intelligence were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.002) with respect to the London population (Table 4.29). The assumption of ANOVA was violated for the London population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.063) for the Bangkok population.

Table 4.29 - Levene's test for equality of variance for general mood emotional intelligence

Population	Levene's F	Degrees of Freedom	p
London	10.590	1,62	.002*
Bangkok	3.545	1,78	.063

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.000) for the London population (Table 4.30). Hence, meditation does enhance general mood emotional intelligence for the London population. The null hypothesis of ANOVA was not rejected at $\alpha = .05$ (P value = 0.534) for the Bangkok population. The effect size was negligible for the Bangkok population but medium for the London population.

Table 4.30 - ANOVA statistics for general mood emotional intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	34.246[a]	1,48.267	.000*	.356
Bangkok	.389	1,78	.534	.005

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.31) indicated that the mean (post-test minus pre-test) measures of general mood emotional intelligence in the experimental group were consistently higher than in the control group in the London population. It means that the meditation does enhance the general mood level in experimental group by 7.02% (Table 4.32)

Table 4.31 - Descriptive statistics for general mood emotional intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-3.84	8.202
	Experimental	32	5.84	5.956
Bangkok	Control	40	2.63	8.202
	Experimental	40	1.63	5.956

Table 4.32 - Mean statistics for general mood emotional intelligence

Population	Dependent Variables	Pre-value	Post-value	Post minus Pre-	Increase %
Bangkok	General Mood	85.65	87.28	1.63	1.90%
London	General Mood	83.22	89.06	5.84	7.02%

4.11 - The effects of meditation on the 'self-perception of leadership skills' by leaders in their capacity as role models

ANOVA assumed that the variances in the measures of self-perception of leadership skills for role models were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.001) with respect to the Bangkok population (Table 4.33). The assumption of ANOVA was violated for the Bangkok population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.199) for the London population.

Table 4.33 - Levene's test for equality of variance for the 'self-perception of leadership skills' by leaders in their capacity as role models

Population	Levene's F	Degrees of Freedom	p
London	1.682	1,62	.199
Bangkok	11.243	1,78	.001*

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.000) for the Bangkok population (Table 4.34). Hence, meditation does enhance self-perception of leadership skills for role models for the Bangkok population. The null hypothesis of ANOVA was not rejected at $\alpha = .05$ (P value = 0.358) for the London population. The effect size was negligible for the London population but small for the Bangkok population.

Table 4.34 - ANOVA statistics for the 'self-perception of leadership skills' by leaders in their capacity as role models

Population	F	Degrees of Freedom	p	Effect size η^2
London	.857	1,162	.358	.014
Bangkok	16.477[a]	1,57.425	.000*	.174

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.35) indicated that the mean (post-test minus pre-test) measures of self-perception of leadership skills for role models in the experimental group were consistently higher than in the control group in the Bangkok population. It means that meditation does enhance role model level in the experimental group by 13.57% (Table 4.36).

Table 4.35 - Descriptive statistics for the 'self-perception of leadership skills' by leaders in their capacity as role models

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	.037	.271
	Experimental	32	.113	.369
Bangkok	Control	40	.000	.359
	Experimental	40	.515	.714

Table 4.36 - Mean statistics for the 'self-perception of leadership skills' by leaders in their capacity as role models

Population	Dependent Variables	Pre-value	Post-value	Post-minus Pre-	Increase %
Bangkok	Role Model	3.80	4.31	0.52	13.57%
London	Role Model	3.31	3.42	0.11	3.42%

4.12 - The effects of meditation on inspiring a shared vision

ANOVA assumed that the variances in the measures of inspiring a shared vision were equal across the groups; however, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.003 for the London population, 0.019 for the Bangkok population) for both two populations (Table 4.37). The assumption of ANOVA was violated for both populations.

Table 4.37 - Levene's test for equality of variance for inspiring a shared vision

Population	Levene's F	Degrees of Freedom	p
London	9.718	1,62	.003*
Bangkok	5.772	1,78	.019*

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.007) for the London population (Table 4.38). Hence, meditation does enhance inspiring a shared vision for London population. The null hypothesis of ANOVA was not rejected at $\alpha = .05$ (P value = 0.091) for the Bangkok population. The effect size was small for both populations.

Table 4.38 - ANOVA statistics for inspiring a shared vision

Population	F	Degrees of Freedom	p	Effect size η^2
London	7.858[a]	1,48.271	.007*	.112
Bangkok	2.943[a]	1,69.048	.091	.036

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.39) indicated that the mean (post-test minus pre-test) measures of inspiring a shared vision in the experimental group were consistently higher than in the control group in the London population. It means that the meditation does enhance inspiring a shared vision level in experimental group by 7.67% (Table 4.40).

Table 4.39 - Descriptive statistics for inspiring a shared vision

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-.037	.280
	Experimental	32	.250	.508
Bangkok	Control	40	.125	.375
	Experimental	40	.305	.547

Table 4.40 - Mean statistics for inspiring a shared vision

Population	Dependent Variables	Pre value	Post value	Post- minus Pre-	Increase %
Bangkok	Inspiring a Shared Vision	3.75	4.06	0.31	8.13%
London	Inspiring a Shared Vision	3.26	3.51	0.25	7.67%

4.13 - The effects of meditation on moral intelligence

ANOVA assumed that the variances in the measures of moral intelligence were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.000) with respect to the Bangkok population (Table 4.41). The assumption of ANOVA was violated for the Bangkok population. However, the null hypothesis of equality of variance using Levene's test was accepted at $\alpha = .05$ (P value = 0.211) for the London population.

Table 4.41 - Levene's test for equality of variance for moral intelligence

Population	Levene's F	Degrees of Freedom	p
London	1.598	1,62	.211
Bangkok	16.131	1,78	.000*

Note: * Significant at α = .05

The null hypothesis of ANOVA was rejected at α = .05 (P value = 0.002 for Bangkok, 0.011 for London) for both populations (Table 4.42). Hence, meditation does enhance moral intelligence in both populations. The effect size was small for both populations.

Table 4.42 - ANOVA statistics for moral intelligence

Population	F	Degrees of Freedom	p	Effect size η^2
London	6.923	1,62	.011*	.100
Bangkok	10.102[a]	1,59.790	.002*	.115

Note: * Significant at α = .05   [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.43) indicated that the mean (post-test minus pre-test) measures of moral intelligence in the experimental group were consistently higher than in the control group in both populations. It means that the meditation does enhance moral intelligence level in experimental group by 3.96% (Table 4.44) for the London population. In addition, the meditation does enhance the moral intelligence level in the experimental group by 10.58% for the Bangkok population.

Table 4.43 - Descriptive statistics for moral intelligence

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-.140	.350
	Experimental	32	.140	.493
Bangkok	Control	40	.000	.391
	Experimental	40	.410	.727

Table 4.44 - Mean statistics for moral intelligence vision

Population	Dependent Variables	Pre value	Post value	Post-minus Pre-	Increase %
Bangkok	Moral Intelligence	3.88	4.29	0.41	10.58%
London	Moral Intelligence	3.53	3.68	0.14	3.96%

4.14 - The effects of meditation on enabling others to act

ANOVA assumed that the variances in the measures of enabling others to act were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.041) for the Bangkok population. The assumption of equality of variance was not violated for the London population (Table 4.45).

Table 4.45 - Levene's test for equality of variance on enabling others to act

Population	Levene's F	Degrees of Freedom	p
London	.734	1,62	.395
Bangkok	4.299	1,78	.041*

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.002) for the Bangkok population (Table 4.46). Hence, meditation does enhance enabling others to act in the Bangkok population. However, The null hypothesis of ANOVA was not rejected at $\alpha = .05$ (P value = 0.054) for the London population. The effect size was small for both populations.

Table 4.46 - ANOVA statistics on enabling others to act

Population	F	Degrees of Freedom	p	Effect size η^2
London	3.846	1,62	.054	.058
Bangkok	10.647[a]	1,67.446	.002*	.097

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.47) indicated that the mean (post-test minus pre-test) measures of enabling others to act in the experimental group were consistently higher than in the control group in the Bangkok population. It means that the meditation does enhance enabling others to act level in experimental group by 8.38% (Table 4.48).

Table 4.47 - Descriptive statistics on enabling others to act

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-.050	.356
	Experimental	32	.125	.358
Bangkok	Control	40	-.020	.373
	Experimental	40	.125	.567

Table 4.48 - Mean statistics on enabling others to act

Population	Dependent Variables	Pre-value	Post-value	Post-minus Pre-	Increase %
Bangkok	Enabling Others	3.94	4.27	0.33	8.38%
London	Enabling Others	3.49	3.61	0.13	3.58%

4.15 - The effects of meditation on motivation

ANOVA assumed that the variances in the measures of motivation were equal across the groups. However, the null hypothesis of equality of variance using Levene's test was rejected at $\alpha = .05$ (P value = 0.03 for London, 0.040 for Bangkok) in both populations (Table 4.49).

Table 4.49 - Levene's test for equality of variance on motivation

Population	Levene's F	Degrees of Freedom	p
London	9.346	1,62	.003*
Bangkok	4.360	1,78	.040*

Note: * Significant at $\alpha = .05$

The null hypothesis of ANOVA was rejected at $\alpha = .05$ (P value = 0.000 for Bangkok, 0.028 for London) for both populations (Table 4.50). Hence, meditation does enhance motivation in both populations. The effect size was small for both populations.

Table 4.50 - ANOVA statistics on motivation

Population	F	Degrees of Freedom	p	Effect size η^2
London	5.149[a]	1,47.892	.028*	.077
Bangkok	28.568	1,71.202	.000*	.268

Note: * Significant at $\alpha = .05$ [a] Using Welch's correction (robust test for equality of means)

The descriptive statistics (Table 4.51) indicated that the mean (post-test minus pre-test) measures of motivation in the experimental group were consistently higher than in the control group in both populations. It means that the meditation does enhance motivational level in the experimental group by 11.27% (Table 4.52) for the Bangkok population. In addition, the meditation does enhance motivational level in the experimental group by 7.27% for the London population.

Table 4.51 - Descriptive statistics on motivation

Population	Group	N	Mean (Post-test minus pre-test)	Standard Deviation
London	Control	32	-.013	.313
	Experimental	32	.250	.574
Bangkok	Control	40	-.070	.358
	Experimental	40	.445	.493

Table 4.52 - Mean statistics on motivation

Population	Dependent Variables	Pre value	Post value	Post-minus Pre-	Increase %
Bangkok	Motivation	3.95	4.40	0.45	11.27%
London	Motivation	3.44	3.69	0.25	7.27%

Table 4.53 - Summary of the results of the null hypothesis significance tests

Null hypotheses		Populations	
		London	**Bangkok**
$H_0 1$	Meditation does not enhance emotional intelligence and self-perception of leadership skills (simultaneously)	Rejected	Rejected
$H_0 2$	Meditation does not enhance emotional intelligence	Rejected	Rejected
$H_0 3$	Meditation does not enhance self-perception of leadership skills	Rejected	Rejected
$H_0 4$	Meditation does not enhance intrapersonal emotional intelligence	Rejected	Rejected
$H_0 5$	Meditation does not enhance interpersonal emotional intelligence	Rejected	Not rejected
$H_0 6$	Meditation does not enhance adaptability (a component of emotional intelligence)	Rejected	Not rejected
$H_0 7$	Meditation does not enhance stress management (a component of emotional intelligence)	Rejected	Rejected
$H_0 8$	Meditation does not enhance general mood (a component of emotional intelligence)	Rejected	Not rejected
$H_0 9$	Meditation does not enhance self-perception of leadership skills for leaders in their capacity as role models(a component of self-perception of leadership skills)	Not rejected	Rejected
$H_0 10$	Meditation does not enhance inspiring a shared vision (a component of self-perception of leadership skills)	Rejected	Not rejected
$H_0 11$	Meditation does not enhance moral intelligence (a component of self-perception of leadership skills)	Rejected	Rejected
$H_0 12$	Meditation does not enhance enabling others to act (a component of self-perception of leadership skills)	Not rejected	Rejected
$H_0 13$	Meditation does not enhance motivation (a component of self-perception of leadership skills)	Rejected	Rejected

4.16 - Summary of effect size with regards to Bangkok and London

Tables 4.54 and 4.55 present effect sizes listed according to the magnitude of the test results. The effect sizes, indicating the proportion of the variability in the dependent variables explained by the independent variable, were computed by SPSS for the purpose of this study (Field, 2009). Higher practical significance was attributed to results with large effect size which are not relevant with the magnitudes of the test statistic and the p values. The distinction between small, medium, and large effects, defined by Cohen (1992), is based on values of the effect size statistics computed by SPSS.

The two tables summarised the effect sizes sorted into their order of magnitude and indicated that, with respect to the London population, meditation had large effects on enhancing interpersonal intelligence, emotional intelligence and self-perception of leadership skills (simultaneously) and stress management and medium effects on enhancing emotional intelligence, self-perception of leadership skills, general mood, adaptability and interpersonal emotional intelligence. All the other effects were small (Table 4.54).

Table 4.54 - Effects of meditation on the London population

Effect of Meditation on:	Effect size	
Intrapersonal emotional intelligence	.630	large
Emotional intelligence and self-perception of leadership skills(simultaneously)	.616	large
Stress management	.527	large
Emotional intelligence	.523	medium
Self-perception of leadership skills	.370	medium
General mood	.356	medium
Adaptability	.299	medium
Interpersonal	.254	medium
Inspiring a shared vision	.112	small
Moral intelligence	.100	small
Motivation	.077	small
Enabling others to act	.058	small
The 'self-perception of leadership skills' by leaders in their capacity as role models	.014	negligible

With respect to the Bangkok population, meditation had a large effect on enhancing emotional intelligence and self-perception of leadership skills (simultaneously) and medium effects on enhancing motivation, self-perception of leadership skills, and emotional intelligence. All the other effects were small or negligible (Table 4.55).

Table 4.55 - Effects of meditation on the Bangkok population

Effect of Meditation on:	Effect size	
Emotional intelligence and self-perception of leadership skills(simultaneously)	.616	large
Motivation	.268	medium
Self-perception of leadership	.249	medium
Emotional intelligence	.204	medium
The 'self-perception of leadership' by leaders in their capacity as role models	.174	small
Moral intelligence	.115	small
Enabling others to act	.097	small
Intrapersonal	.080	small
Inspiring a shared vision	.036	small
Stress management	.027	small
Adaptability	.014	negligible
Interpersonal	.010	negligible
General mood	.005	negligible

4.17 - Chapter summary

This chapter aimed to test the research hypotheses regarding whether, or not, meditation can enhance emotional intelligence and self-perception of leadership. This was done through the experimental pre-test/post-test research design and conducting the meditation experiment in two different perspective's background. The primary purpose of conducting meditation in two different atmospheres was to compare the two countries.

The results of the meditation experimental in both cases, namely, Bangkok and London, were presented. Using MANOVA and ANOVA statistical analysis methods, thirteen hypotheses were tested. The statistical findings raise a number of interesting business implications. The evidence provided led to the conclusion that two null hypotheses were not rejected with respect to the London population, specifically, that

meditation does not enhance self-perception of leadership skills for leaders in their capacity as role models, and does not enhance their ability to enable others to act (Table 4.53). Four null hypotheses were not rejected with respect to the Bangkok population, specifically, meditation does not enhance interpersonal intelligence, adaptability, general mood, and inspiring a shared vision.

Chapter 5: Discussion and Implications

5.1 - Introduction

The primary goal of this chapter is to discuss and elaborate on the results from Chapter 4. The study was conducted in two locations, Bangkok and London, where cultural values and lifestyles have a number of observable differences between them. Therefore, the discussion of the results will be divided into two countries. Overall results indicate that meditation enhances both Emotional Intelligence (EI) and Self-Perception of Leadership Skills (SPLS) in both locations and in the majority of the components that were studied. However, it was noted that the two countries provided different meditation outcomes in some specific components of EI and SPLS, such as 'adaptability' and 'leaders acting as role models', leading to different effects on the two sets of participants being observed. The issue of differences in demographic measures, cultural values, belief systems and lifestyles will be taken into account in the discussion and interpretation of the results with reference to the assumptions discussed in Chapter 3.

The discussion is structured into relevant sections: Discussion of overall results (5.2); Subcomponents of emotional intelligence (5.3); Subcomponent of self-perception of leadership skills (5.4); Comparison of the results from Bangkok and London (5.5); Factors influencing the contrasting results between the Bangkok and London studies (5.6); Other issues in relation to the study (5.7); the implication of the study (5.8); and chapter summary (5.9).

5.2 - Discussion of overall results

Based on the conceptual framework, the study hypothesises that meditation may enhance emotional intelligence and leadership skills. Therefore Multivariate Analysis of Variance (MANOVA) was performed to test whether EI and SPLS may be enhanced by meditation. Statistical analysis of the data from Chapter 4 indicates that regular meditation practice has shown an enhancement of leaders' EI and SPLS (Bangkok and London). A total number of 80 chief executives (n=80) in Bangkok participated in the meditation study, and 64 chief executives (n=64) participated in the London study.

Evidence from a MANOVA analysis demonstrated a simultaneous increase in EI and SPLS when practicing meditation. In particular, the impact of meditation was found to be moderate on EI in Bangkok whilst the London-based meditation study produced the greatest effect in the London subjects. The moderate to high effect size indicates that the results are meaningful. This rationale underpinning the research hypothesis has been addressed in the literature review (Chapter 2).

This section enables further discussion with regard to the rationale underpinning the increase in EI. The process of practicing meditation enables mind to be 'still' and not to flit from thought to thought. This is possible because the technique is a means, focusing on the inside of the visualisation technique, crystal clear ball inside the centre of the body, to help the mind to remain focused and to be aware of the present emotions. Meditation can gradually cultivate consciousness that is the step towards self-awareness of the present thoughts, emotions and actions. The EI components' basic quality involves the ability to be aware of one's own emotions, personal and social interactions. The concept of EI comprises components based mainly on the ability that one is able to be aware of the reactions, emotions and thoughts towards other people, which is vital in dealing with everyday issues and difficulties coping with stress. The sub-structure of the components based on EI requires a basic awareness and consciousness for dealing with emotions. At the same time, meditation's basic principle of practice is to create awareness and consciousness, which is also the basic mechanism of all the components of EI. Therefore, the process of meditation may enable the increase of EI for leaders in both the Bangkok and London studies.

With regard to self-perception of leadership skills, 80 chief executives from Bangkok (n=80) and 64 chief executives (n=64) from London participated in meditation programmes in their home cities. The results from the Analysis of Variance (ANOVA) indicated that meditation also enhanced self-perception of leadership skills for both countries. The effect was found to be greater in London compared to Bangkok. The empirical analysis of ANOVA fits with the conceptual framework which states that the meditation principle, based on mindful attention, will systematically cultivate the appropriate attitudes, bringing about positive emotions (Ballentine, 1986).

The technique of practice and the means to achieve mindfulness is based on enhancing consciousness and developing a sense of responsibility towards oneself in that one is aware of the present thoughts, emotions and actions, and to be able to respond to what is appropriate occurring at any point in time. This results in the subjects responding with positive thoughts and actions, enabling the motivation and encouragement of positive interaction among people.

Effective leadership is characterised by a set of competency skills, for example, the ability to motivate, to understand one's own emotions and others, and to act upon as well as to solve problems. Therefore, those competencies or skills share the same concept of the basic benefits resulting in self-perception of leadership skills (SPLS) enhancement. Insight gained from meditation practice, therefore, is a principle which allow for the ability to understand what constitutes 'good' and 'bad' behaviour. The above discussion, as well as the results of the two studies in Bangkok and London, have shown that the statistical analysis rejects the null hypotheses. In other words, the analysis supports the alternative hypothesis that meditation may enhance both EI and SPLS in the subject participants:

H_a1: The hypothesis was tested by used of the MANOVA analysis which supported the proposition that meditation may enhance EI and SPLS simultaneously. This hypothesis was supported in both cases.

H_a2: Results from the ANOVA analysis supports the proposition that meditation may enhance EI in both studies.

H_a3: Analysis of the study, by means of ANOVA testing, supported the proposition that self-perception of leadership skills may be enhanced by meditation practice.

5.2.1 - Correlation analysis between emotional intelligence and self-perception of leadership skills

The statistical evidence shows that there is a significant statistical correlation between emotional intelligence and self-perception of leadership skills at $p < .05$. However this statistically significant correlation does not imply any kind of cause and effect relationship. It merely implies only that the result was not expected by random chance. It takes more than statistical analysis to conclude that a change in one variable is a step

towards, or an explanation for, a change in another variable. Therefore, it is suggested that future research would benefit if the study of meditation, with regard to the variable of success on leaders who possess EI, is undertaken. To recommend this, it is necessary to define the operational meaning of the word 'success'. How to measure success? How may meditation determine the 'success' of an individual? It is recommended that the study should be done separately with regard to meditation and success.

5.3 - Sub-components of emotional intelligence

Analysis has shown that the intrapersonal component is the first observable component to be enhanced by meditation in both countries; in particular, the London study exhibited the greatest effect. The stress management component indicates an increase in both the Bangkok London studies. Specifically, the stress management component shows a greater impact in the London study. The general mood, adaptability and interpersonal components also show enhancement in the London study with moderate effects, but not in Bangkok. It may be inferred that meditation is less effective on leaders in Bangkok compared to the London subjects in the study. A summary of the results is presented in Table 5.1.

Findings of the research - Implications of Table 5.1

A summary and comparison of the effects, both in effect and magnitude, on the Emotional Intelligence (EI) components of the two groups, that is Bangkok and London, following the 12-week period of meditation practice is shown in Table 5.1.

Table 5.1: Summary of subcomponents of emotional intelligence enhanced by meditation

	Research Hypothesis	EI Components	Bangkok	Effect Size	London	Effect Size
Meditation	H$_{a4}$	1. Intrapersonal	✓	S	✓	M
	H$_{a7}$	2. Stress Management	✓	S	✓ *	L
	H$_{a8}$	3. General Mood	x	-	✓	M
	H$_{a6}$	4. Adaptability	x	-	✓	M
	H$_{a5}$	5. Interpersonal	x	-	✓	M

✓   Component enhanced by meditation   Effect size S= small, M = medium, L = large
x   Component not enhanced by meditation   * Greatest effect   (-) = no effect

This section will consider each EI component separately.

5.3.1 - Intrapersonal management skills

From the analysis of the questionnaires, both the Bangkok and London groups have shown that their intrapersonal management skills have been improved following the 12-week period of meditation practice.

However, it is noticeable that the enhancement effect is considerably higher in the London group than in the Bangkok group.

The analysis has shown that meditation enhances the leaders' intrapersonal management skill which conceptualises as emotional self-awareness, self-regard, assertiveness, independence and self-actualisation. Awareness is the basic requirement of 'good' deeds in terms of thoughts, feelings and actions in Buddhist philosophy, whilst science regards awareness as part of the subconscious mind. When awareness is cultivated by practicing meditation, the participant is gradually becoming aware of 'good' and 'bad' in terms of what they are thinking and doing. In view of the findings of this enhanced EI component, it is seen that meditation heightens the level of

awareness and ability to control and reduce external disturbances that disrupt mind and emotions. Thus, meditation enhances mindfulness and awareness, resulting in the direct effect of increased ability to control one's general perceptions associated with feelings and emotions, and gaining the ability to recognise the causes of very negative emotions as well as overreaction to positive emotions. These results can be related back to the assumptions considered in Chapter 3.

In London, the levels of intrapersonal management skills were increased by a greater amount than in Bangkok. It is a fact that the meditation practice had been taught by a Thai Buddhist monk, who took the lead in the meditation class in London, where people might not have had direct experience of sitting in a quiet environment where they were being led by a monk. They might have a feeling of excitement and expectation of the outcome which may reflect a Hawthorne (Mayo, 1949) effect in terms of their feeling or expectation of the productivity. Once they have had a feeling regarding the outcome, they might try to gain the most benefit from the practice and the teaching of the Thai monk who, they had been told, correctly, had many years of experience.

These circumstances may affect their expectation or their perception to become better. The cultural differences may also play a vital part in creating a different outcome of the meditation in the London group where, as was discussed in Chapter 3, Western culture views meditation differently from the East.

With regard to the issue of culture, the Bangkok group might not feel as excited with meditation practice as the London group. For, although they may not have personally experienced meditation practice, they would probably feel more familiar with it due to the strong Buddhist/meditation ethos in Thailand.

In summary, based on the data presented, the alternative hypothesis Ha4, that meditation enhances emotional intelligence, specifically the intrapersonal components which comprise self-regard, emotional self-awareness, assertiveness, independence, and self-actualisation, was supported in both the Bangkok and London studies.

5.3.2 - Stress management skills

From the analysis of the questionnaires, both the Bangkok and London groups have shown that their stress management skills have been improved following the 12-week period of meditation practice. It was shown that, overall, the greatest effect of meditation practice on the EI components was experienced in the stress management skills.

It was observed that the enhancement was considerably higher in the London group than in the Bangkok group. The actual improvement in stress management skills exhibited by the London group showed the greatest increase in effect by both groups for all the EI components.

The concept of stress tolerance is directly associated with the ability to assess situations and face difficulties calmly and effectively. Stress, in Buddhist philosophy, is regarded as a natural disease of the mind and body that penetrates deep to the inner core of human beings (Ballentine, 1986) and inhibits well-being. Buddhism would argue that, over time, meditation practice gradually creates a natural way of relieving stress.

These results can be related back to the assumptions considered in Chapter 3 section 3.2.

When considered in conjunction with the East/West cultural factors and the possibility of the Hawthorne effect, similarly to intrapersonal skills above, the value of the 12-week meditation practice period is probably shown to maximum effect in these component results. A shorter time period would probably not have produced the significant, positive effect enjoyed by the London group. Future research may consider if there is a shorter, optimum time period for meditation practice that can produce even better enhancement for this and other components.

Based on the results obtained and the analyses made, the hypothesis Ha7 that meditation enhances emotional intelligence, specifically the stress management skills ability, was supported in both the Bangkok and London studies.

5.3.3 - General mood

From the analysis of the questionnaires the London group has shown a good improvement in their general mood EI component following the 12-week period of meditation practice.   However, by way of contrast, during a similar 12-week period, the Bangkok group showed no positive enhancement in their general mood EI component.

The effect on the London group being considerably greater than the Bangkok group may be caused by the reality of having to sit in a quiet room with a Buddhist monk whose characteristics were viewed as calm, peaceful and supportive. They may feel calm and relaxed at the time they came to participate in a meditation class. Moreover, the timing of their meditation session was set to happen on a weekday, after work. Even though there was negative comment with regard to their feelings of being tired after work, these comments of negative feelings did not diminish their pleasure and relief in again seeing, meeting and working with the monk.

These results can be related back to the assumptions considered in Chapter 3.

In all the responses given by the participants, there is an assumption of honest responses; false responses would bias the results.   However, it is argued that the benefits of the 12-week practice period would include building, subconsciously, a team spirit within the group.   This group would tend to work together, support each other and, in simple terms, tell the truth about their feelings and emotions.

Regarding the 12 week-period of meditation practice, it has been suggested by the monks, one with nine years of meditation experience, and the other one with 25 years meditation experience, and regarded as one of the most highly qualified and experienced meditation gurus, that meditation requires time for practice, and the more one practices, the more likely one is to obtain a greater, more positive effect. From this proposition it is possible the period of the meditation practice reflects the positive responses in the participants' overall, general mood, taking a more positive attitude in business and life.

In contrast, there is no positive effect in the Bangkok group. There are two main factors that could result in this lack of enhancement. One reason can be related to the attitude of the cultural differences between Bangkok and London. The second reason may be the effect of the statistical analysis.

As discussed above in previous EI components, cultural differences play a major part in influencing the different outcomes between the Bangkok and the London groups. For Bangkok, with its culture of Buddhist ethos and viewing meditation as a normal everyday practice, there may not be any feeling of something new and exciting. It is more likely that the attitude of participants in London towards meditation practice, being a new and exciting activity, influences and results in creating feelings, perceptions and probably a mind-set of expecting a positive outcome from their experiences.

Based on the results obtained and the analyses made, the alternative hypothesis Ha8 that meditation enhances emotional intelligence, specifically the general mood component, was supported in the London study, but not supported in the Bangkok study.

5.3.4 - Adaptability

From the analysis, following the 12-week period of meditation practice, the results show that there was no enhancement in the Bangkok group in the adaptability component that refers to the ability to change emotions and feelings according to the situation, whereas a significant enhancement of this component was enjoyed by the London group.

The failure in enhancement in the Bangkok group compared to the London group may reflect the assumption of cultural differences between Bangkok and London, in which the Bangkok group is considered, because of Thai culture, as a family-based, collective social group. Any decision made is mostly based on several opinions, seeking a consensus before making the final decision.

Thai people are generally considered to be considerate and to have respect for seniority. Therefore, they are more likely to arrive at a decision related to problem solving, which could involve either a personal or group situation, as a group or organisation decision, rather than a decision made by an individual.

This concept is in total contrast with the West where the characteristic of adaptability is viewed as individualistic and where an immediate action in decision making and being responsible for oneself plays a more important part in Western life and business culture.

With the characteristics of Eastern people, the Bangkok group may not have received the positive outcome from meditation practice due to their exhibiting the mind-set and culture that reflects their cultural background. For instance, after meditation practice, the Bangkok group may feel a positive effect from the meditation. This may be related to the concept that when they are working and participating in real situations, the Thai Buddhist culture in which they have been raised plays an important role in issues related to the adaptability component.

Based on the results obtained and the analyses made, the hypothesis Ha6 that meditation enhances emotional intelligence, specifically the adaptability component, was supported in the London study, but not supported in the Bangkok study

5.3.5 - Interpersonal management skills

From the analysis following the 12-week period of meditation practice, the results show that there was no enhancement in the Bangkok group in the interpersonal management skills component that refers to the concepts of social responsibility, interpersonal relationships, communication and empathy, whereas a significant enhancement of this component was enjoyed by the London group.

Again, the failure in enhancement in the Bangkok group compared to the London group may reflect the assumption of cultural differences between Bangkok and London, in which the Bangkok group is considered, because of Thai culture, as a collective social group as discussed in the adaptability component.

Thai people, with their background of being considerate and reserved and having respect for seniority and a person's individual position, may find it difficult to communicate with strangers. Sometimes they may even find that, because of this, they are unable to empathise with people, even those they suspect to be from a lower social class, or in need of help. Consequently, there are no feelings of empathy with the person whose characteristics and behaviour are viewed as coming from a stranger to them, particularly on a one-to-one basis, where the other 'one' is an individual and not part of a group.

They may have a mind-set that the interpersonal relationship needs to be carefully approached, until they find that the person they are approaching may definitely be trusted. Even though they find that they can gain trust with someone, they may require some gap between them. They will protect their group's interest. In general, Thai people have difficulty in undertaking their socialising responsibilities, specifically to a group to which they do not belong, as commonly accepted in the West. They may require '*lebensraum*', or 'living space' around them. However, once mutual trust is established, as with other people, their personality will develop.

This attitude is in total contrast with the West, and more so in US than UK, where, usually, people are more friendly, relaxed and informal and find it relatively easy to communicate with other individuals. For the Westerner, this may be not a problem in quickly building a relationship and communicating and having empathy with another person, even a complete stranger, on a one-to-one basis where Easterners have a feeling of empathy in case by case selection process.

The analysis may also reflect the 12-week period of meditation practice as well as a Hawthorne effect in which participants in London may feel excited in handling a new experience, meditating, and meeting new people. These effects may also influence the London participants towards the perception of an increase in their interpersonal management skills. This is in contrast to the Bangkok participants. The feeling of experiencing a 'new' activity, meditation, and meeting with new people may not be of interest to them. For some, or all, of these reasons, the Thai participants may not find an enhancement in their interpersonal management skills.

Based on the results obtained and the analyses made, the alternative hypothesis Ha6, that meditation enhances emotional intelligence, specifically the interpersonal management skills component, was supported in the London study, but not supported in the Bangkok study.

5.4 - Sub-components of self-perception of leadership skills

All components of SPLS, such as encouragement or motivational skills, leaders as role models, moral intelligence, enabling others to act, inspiring a shared vision, were all enhanced by meditation in the Bangkok study. The same components of SPLS (except leaders as role model) were also enhanced by meditation in the London study.

Evidence from the statistical analysis shows that meditation may enhance each component of SPLS in the Bangkok study, but not in the London study. 'Leaders as role models' was the only sub-component that was not enhanced by meditation in the London study.

Table 5.2 shows a summary of SPLS presented in sequential order showing how meditation produced AN effect on leaders' ability to motivate themselves; moral intelligence was a secondary benefit of meditation. Though 'leaders as role models' was only enhanced in Bangkok, taking effect size (small, medium and large) into consideration, this component was still ranked number three followed by 'enabling others to act' and 'inspiring a shared vision'.

Findings of the research – Implications of Table 5.2

A summary and comparison of the effects, both in effect and magnitude, on the 'self-perception of leadership skills' (SPLS) components of the two groups, that is Bangkok and London, following the 12-week period of meditation practice is shown in Table 5.2.

Table 5.2: Summary of 'self-perception of leadership skills' components enhanced by meditation

Meditation	Research Hypothesis	SPLS Components	Bangkok	Effect Size	London	Effect Size
	H$_a$ 13	1. Motivation	✓ *	M	✓	S
	H$_a$ 11	2. Moral intelligence	✓	S	✓	S
	H$_a$ 9	3. Leaders as role models	✓	S	x	-
	H$_a$ 12	4. Enabling others to act	✓	S	x	-
	H$_a$ 10	5. Inspiring a shared vision	x	-	✓	S

✓ Component enhanced by meditation   Effect size S = small, M = medium, L = large
x   Component not enhanced by meditation   * Greatest effect   (-) = no effect

This section will consider each SPLS component separately.

5.4.1 - Motivation skills

From the analysis of the questionnaires, both the Bangkok and London groups have shown that their motivation skills have been improved following the 12-week period of meditation practice. However, it is noticeable that the enhancement effect is higher in the Bangkok group than in the London group.

The analysis has shown that meditation enhances the self-perception of leaders' motivational skills that comprise the ability to motivate and encourage themselves and others to carry on towards completion of the goal. Self-perception of leaders towards their motivational skills is perceived on the basis of ability to recognise contributions by showing appreciation for individual excellence as well as to celebrate value and victories by creating the appropriate nurturing atmosphere for their subordinates.

Self-efficacy theory plays an important role in explaining the increase in perception changes in an individual's task and activity (Bandura, 1997). It attaches or connects behaviours, cognitions and the environment and, therefore, has an effect on one's

perceptions. The thoughts, behaviours and expected outcomes from activities or a specific task as well as a length of time influence an individual's perception. Therefore, a perception change relies on a specific task or activities in which that individual is involved (Bandura, 1997). In this case, it can be said that meditation acted as a task that influenced one's perception. Meditation, as a specific task or activity, conveys positive thinking and belief towards leaders while meditating. It can be inferred that positive thinking and a belief system while meditating allows one to transfer the positive thoughts towards one's own situation. The changes of an individual's perception occurs through positive feelings, thoughts and behaviour from meditation practice, and can be a key explanation of the changes in a situation with regard to motivational skills of leaders as well as the other self-perception of leadership skills components. These results can be related back to the assumptions considered in Chapter 3.

Response honesty, 12-weeks practice and the expected outcome from meditation practice can affect the results for participants in London and Bangkok. With regard to the responses to the self-perception of leadership questions, it may be queried whether, or not, the participants respond honestly to the change in their perception of motivation skills. Self-efficacy theory assumes that the importance of the specific task or activities significantly influences perception changes in one's own situation (Bandura, 1997). In this case, it can be said that meditation creates positive thoughts and, therefore, influences perception changes. So, it is assumed that the positive outcomes created by meditation, such as calm, tranquil, mindful, and stress-free feelings, generate positive thoughts that enable them to respond honestly to their perception. Positive thinking could then affect the ability to motivate oneself and others in a real situation without presuming the action of motivation.

The length of the 12-week practice could be another reason for a perception change. The length of the time can also be one of the factors that could change one's behaviour or feelings. In Bangkok, the levels of motivational skills were increased by a greater amount than in London. This can be related to the cultural issues which are considered to play a vital role in explaining the differences between the London and the Bangkok situation. Since Bangkok culture is dominated by a collective behaviour, the encouragement and motivation are needed mostly within a group. So the feelings to motivate and encourage either themselves or others are exhibited within the group. The

other reason that could cause an increase in self-perception of leaders in Bangkok, rather than in London, may reflect the feelings of attachment to the benefits of meditation practice that Thai people have always had. The positive effect of meditation, therefore creating more positive thoughts towards motivational skills and other components in the self-perception of leadership skills in the Thai group than in the London group.

In summary, based on the data presented, the alternative hypothesis Ha13, that meditation enhances self-perception of leadership skills, specifically the motivational component that comprises the ability to motivate and encourage themselves and others, was supported in both the Bangkok and London studies.

5.4.2 - Moral intelligence

From the analysis of the questionnaires, both the Bangkok and London groups have shown that their moral intelligence skills have been improved following the 12-week period of meditation practice. The enhancement effect has shown a slight increase for both the Bangkok and the London group.

The analysis has shown that meditation enhances the leaders' moral intelligence skills that comprise the role of being able to be aware of an individual's emotions and reasoning. The ability to be able to reason referred to the ability to differentiate from what is right and what is wrong (Lennick and Kiel, 2010). The moral judgement usually concerns the relationship between conscious and unconscious procedure in justifying before or after the judgement is formed (La Forge, 2004). Meditation plays an important role in enhancing awareness and self-consciousness (Lazar, 2005), therefore it is possible that the practice itself could encourage awareness of a reason for believing what is right or wrong. However, the formation of moral judgement is set with the universal principles, allowing for the differences in culture setting (Hofstede, 1981)

From the analysis, both the Bangkok and London groups have shown an increase in the perception of having ability to reason and differentiate what could be right or wrong and these results can be associated directly with the training of the mind to become aware of the feelings, emotions and behaviour of themselves and others. Therefore,

meditation practice gradually cultivates the belief system dealing with the ability to reason, more than emotion towards the assessment of situations.

The cultural factors may not apply to the issue of cultivating moral awareness as the moral judgement is said (La Forge, 2004) to be a universal principle of judgement. This can be one of the reasons that there is no difference in the effect size shown in the two groups, even though there are cultural differences between the two groups of the study.

The issue of the 12-week practice could be another reason that helps participants to keep on cultivating the positive thinking towards a specific task or activities. The longer the period continues, the more expectation of the efficacy on an individual's expectation.

In summary, based on the data presented, the alternative hypothesis Ha11, that meditation enhances self-perception of leadership skills, specifically the moral intelligence component that comprises the ability to be aware of what is 'good' and what is 'bad', was supported in both the Bangkok and London studies.

5.4.3 - Leaders as role models

From the analysis of the questionnaires, whereas the Bangkok group has shown that their 'leaders as role models' skills have been improved following the 12-week period of meditation practice, it is noted that there was no enhancement effect in the London group.

The analysis has shown that in Bangkok meditation has enhanced the perception of leaders towards 'leaders as role models' skills that comprise the ability to not only motivate and encourage themselves and others but also to create the desire for people to follow their instructions and suggestions effectively with efficient outcomes. They must be role models for the behaviour they expect of others.

It is interesting that there is no significant increase in the London group with regard to the self-perception of leadership skills on the component 'leaders as role model'. In contrast, the increase in this component was significant for the Bangkok group.

These results may be associated with the cultural factors influencing the result differences between the two groups. In London, the effect of meditation practice did not influence the perception change in the perceived role models. It is possible that leaders in London are normally seen as role models and therefore they already have a relatively high perception of this characteristic before they meditate. This perception of the role model could produce the high result when they first completed the questionnaire. Therefore, there is no significant impact from meditation on this component in the London population. Since, in Western culture, it is common for a leader to be seen as a role model, compared to the Bangkok group, where in Thai culture, being a role model is less likely to be recognised. There is no prominent characteristic of being a role model in the Bangkok group compared to the London group, therefore it is more likely that there will be a perception of an enhancement in the concept of the role model which is applied to an individual. Therefore, it is understandable that a particular component is not really enhanced as it is already there and the chance to achieve enhancement in the London group is less likely than in Bangkok in this particular component.

In summary, based on the data presented, the alternative hypothesis Ha9, that meditation enhances self-perception of leadership skills, specifically the 'leaders as role models' component, was supported in Bangkok but not in London.

5.4.4 - Enabling others to act

Once again, from the analysis of the questionnaires, where the Bangkok group has shown that their 'enabling others to act' skills have been improved following the 12-week period of meditation practice, it is noted that there was no enhancement effect in the London group.

The analysis has shown that in Bangkok, meditation has enhanced the perception of leaders' 'enabling others to act' skills that comprise the ability to inspire and envision

for the future. The self-perception of leadership is that they should be able to foster collaboration and build trust and encourage others towards a successful goal. The sense of teamwork is really important for this component.

With regards to the concept of 'enabling others to act', it can be seen that the result appeared to be the same with 'leaders as role models', namely, that meditation did not produce any effect or positive thought towards the perception changes in the London group whereas the effect has shown a slight increase in the perception changes in the Bangkok group. These two components of self-perception of leadership skills have demonstrated the act of behaviour or skills of the individual rather than their feelings or thoughts. Self-efficacy theory is related to the perception towards the change in a specific task or activities rather than the actual behaviour towards a particular task (Bandura, 1997). Unlike 'motivation' and 'moral intelligence', 'enabling others to act' and 'leaders as role models' are the actual skills or characteristics rather than thoughts and feelings. Therefore, it could be possible that the participants may have a mind-set that their action is improved, even though it is not. This argument may be related to the honesty of the response that takes into account whether, or not, participants in the Bangkok and the London groups have taken this into consideration.

On the other hand, if the self-efficacy theory has been taken into account, these two components might not be increased by meditation practice but only the positive feelings reported by the two participant groups, for instance, calmness, freshness, relaxation, and positive attitude could be the reason that transfer to the feelings and perception of the changes happen in the Bangkok group.

The cultural factors and the Hawthorne effect may also be taken into account for the reason the Bangkok group responded positively to the perception changes in this component. Since Thai people enjoy collective behaviour, such as working in a team rather than as an individual, the actual skills or behaviour on these particular component are still less compared to the London people. After having mindfulness and calm feelings reported from meditation practice, the positive feelings are transferred to encourage the changes in what they are doing. In contrast, in London, 'enabling others to act' already exists. They may not feel enthusiastic about engaging in meditation, therefore there is no positive change in this component.

In summary, based on the data presented, the alternative hypothesis Ha12, that meditation enhances self-perception of leadership skills, specifically the 'enabling others to act' component that comprises the ability to inspire and envision for the future, was supported by the Bangkok group but not by the London group.

5.4.5 - Inspiring a shared vision

From the analysis of the questionnaires, the London group has shown that their 'inspiring a shared vision' skill has been improved following the 12-week period of meditation practice. However, it is noted that meditation did not produce an enhancing effect in this skill for the Bangkok group.

The analysis has shown that, in the London group, meditation enhanced the self-perception of leadership 'inspiring a shared vision' skill showing how certain people could inspire a shared vision; they have a vision of what can be achieved. These people, with a perception of inspiring a shared vision, may enlist others in a common vision.

The effect of mediation on the London group enhancing the self-perception of leadership skills in this component, compared with the Bangkok group, may be caused by the differing sets of behaviour; these results can be related back to attitude and cultural factors as being the main differences between the two groups.

In Bangkok, the concept of inspiring employees by appealing to shared aspiration is less likely to occur when compared to the Western culture. The basis of sharing and accepting an idea seems to occur less in the Thai culture where seniority is paramount. Thus, the perception of the inspiration of a shared vision within the group is rarely found in Bangkok culture. It is possible that in the Bangkok group, there is little perception of leaders being an inspiration, therefore, they do not perceive how important this component is, resulting in no enhancement in this specific component for the Bangkok group.

In contrast, in the London group, the concept of team leaders is normal and the concept of inspiring people is a common practice. People have an equal expression where seniority is not emphasised, as compared to the Bangkok group. This vision probably

already existed in the view of the London group. After gaining a positive experience from meditation practice, it may have generated a positive perception towards the existing task. Therefore, it is possible that the feelings of having perceived the virtue of meditation practice may enhance the existing perception of this skill to greater effect in the London group compared to the Bangkok group.

In summary, based on the data presented, the alternative hypothesis Ha13, that meditation enhances self-perception of leadership skills, specifically the 'inspiring a shared vision' component that comprises the ability to inspire and envision for the future, was supported in the London study but not in the Bangkok study.

5.5 - Comparison of the results from Bangkok and London

Evidence is provided to support that practicing meditation may enhance leaders' EI and SPLS in both the Bangkok and London studies. Though EI and SPLS were enhanced by meditation, it is noteworthy that some components in each study show contrasting results. The analyses, indicate in Chapter 4, that meditation produces an impact on two major components: EI and SPLS.

5.5.1 - Areas of enhancement/contrast in both studies

(1) Stress management component was the area of greatest enhancement in the London study, whereas intrapersonal management was the most enhanced component in the Bangkok study.

(2) Encouragement, or motivation, was the component most enhanced by meditation in the Bangkok study whilst the component inspiring a shared vision is the self-perception of leadership skills' component which achieved the most enhancement in the London study.

These findings are noteworthy as they show distinct differences between the research studies in the two cities. This dichotomy may be explained by cultural differences and other issues, such as physical discomfort and emotional distress that might be related. The argument is that this is socio-cultural and the origins of subject difference between

the Eastern and Western ways of life, values and belief systems may indicate A possible explanation as to why the results of the two countries are at variance in some areas. This argument has been supported by Vygotskii (1978) and Hwang and Chang (2009).

5.6 - Factors influencing the contrasting results between the Bangkok and London studies

The components of EI such as adaptability, interpersonal management, and general moods showed no enhancement due to mediation in the Bangkok study, whereas there is an indication of enhancement in the London study. The results of the empirical study did not support the hypotheses that meditation may enhance adaptability, interpersonal management and general moods in the Bangkok study. In contrast, the meditation theory supports the hypothesis in the London study. The reason for this difference may be explained by the meditation theory regarding physical discomfort, emotional distress and factors that prevent effective meditation. Taking into consideration the differences between the two countries' perspectives towards meditation, cultural values and attitudes were taken into account.

5.6.1 - Cultural values, beliefs, and lifestyles between the two countries

Considering the fact that a Bangkokian's values and beliefs are mostly Buddhist, the perspective and concept of meditation practice can be assumed to be part of their general social conditioning. Though some families are Buddhist, it is not a definite conclusion that Buddhist people will have practiced meditation since they were young. However, they will, in all likelihood, be more familiar with Buddhist reactions and practices environment. Since Bangkok is viewed as an Eastern culture, it has been considered as exhibiting collective behaviour and, thus, the influence of friends and peer group behaviour will be dominant (Hofstede, 1981). This should have led to the result that in the Bangkok study, meditation has a greater effect on SPLS and EI than in London. However, this is not the case. One possible reason for this may be related to culture and general lifestyle of Bangkokians themselves.

In Bangkok, meditation has been widely practiced, but different types of meditation may have influenced the results. Even though the demographic questionnaire does not produce a bias with regard to meditation techniques, the meditation technique part was not included in the statistical analysis as the data did not suit the MANOVA model. However, this has been done by qualitative interpretation, that is, by calculating the percentage of people that were previously exposed to meditation. The results show that 80 subjects from the Bangkok study have heard of meditation, but only seven subjects used to practice meditation. This figure reflects the fact that although Buddhist people have long been living in a culture where meditation has a strong influence, although not all of the people are actually engaged in meditation practice. But for those people who really engage in meditation practice, most will practice breath meditation, which is different from the technique introduced in this study.

The reasons why this specific technique was chosen for this study have been discussed in detail in Chapters 2 and 3. The use of different techniques may be one reason that may have produced the ineffective result of certain components of meditation in the Bangkok study. For example, the participants may have had experience in practicing other techniques before participating in this study. However, it is difficult to adapt to new concepts in meditation technique, even though the quality and benefits provides the same objectives as any other meditation technique.

This compares with children who may learn new things easily even though they are exposed to many different lessons in life. This is because their brains and minds are still extremely malleable and unaffected by years of special conditioning as adults are. This is like the meditation concept that has largely been misunderstood by people, even by Thais. Many believe that different meditation practices provide different outcomes. In fact, meditation theory based on Buddhist philosophy emphasises that, although they have different techniques, the outcome, at some level, will be the same. Having referred back to the beliefs in different techniques as a possible reason that meditation does not provide a greater effect in Bangkok, participants may be biased against the technique.

If attitudes are biased, it is difficult for only 12 weeks of meditation practice to alter those attitudes. If the attitude of previous meditation techniques has influenced the results whilst practicing meditation, this reason may also be applied to the London

study. In the London study, 90% of subjects have heard of meditation practice (10% less than in Bangkok), however, less than 20% have been practicing meditation. Less than 5% have been seriously involved in meditation practice, which is different from the Bangkok study. Since none of the London subjects are Buddhist, and the cultural environment is not primarily involved or surrounded by Buddhist influences, many people may not know about or fully understand what meditation really is and how to meditate and they may not realise how many types of meditation exist. Therefore, on this assumption, they are not biased by a variety of meditation information. Thus, it is easier for them to understand and to start learning the new concept. This may be a possible reason that the one technique they were taught has significantly influenced the outcome.

This builds on the other key factors that could be reasons for the differences in the results. That is, the intention of the subjects when meditating may be one of the reasons that affect outcomes. When meditating, the effect will be greater if these people really intend to practice meditation. The intention may be said to be concentrating on that specific idea.

A London subject may feel that this is an interesting and novel activity enabling focus on the practice in order to gain maximum benefits. This may be considered to be a rare opportunity to meditate with a guru. In terms of this research study, this could be a bias occurring during the experiment with regard to subjects being exposed towards the perceived positive outcomes from meditation practice. By way of contrast, when considering the other positive side, in terms of the practice, the intention and concentration of the activity of leaders supports meditation theory. The theory proposes that concentration helps to enhance the mind to stay focused and aware of what it is doing. Thus, increasing and improving clarity of the mind results in diverse positive intrapersonal management of emotional awareness, concentration and motivation. The benefits of practice may not say that the intention of the subject of study is biased. The same theoretical assumption of the study, with regard to the issue of perceived attention towards meditation study, that it will create bias in the outcome, does not always apply in this study, because theory sometimes does not work well in practice.

The same discussion may be applied to the Bangkokians as they may not have a real intention to focus and easily lose concentration, due to their previous experience with other types of meditation. This particular type of meditation produced less effect with regard to certain variables, such as, adaptability, interpersonal skills, and general moods. Therefore, it may be inferred that, in this study, the Bangkok subjects show less concentration whilst practising meditation compared to London subjects. However, meditation is about individual practitioners who need to prepare their mind and keep their minds and keep them clear whilst meditating. That is the core principle of meditation. The benefits occur according to the level that their minds may reach. If practiced regularly, just like any other activity, improvement and success should follow.

In conclusion, the attitude of the participants to different meditation techniques may be one of the reasons that meditation produces less effect in the Bangkok study than in the London study.

5.6.2 - Physical discomfort

In meditation theory, meditation principle is based on the mind that being still. When 'mind' is at the centre, and at a certain period of time, it will not be distracted by internal and external disturbances. Physical discomfort is one of the main obstacles encountered during meditation. This hindrance creates an unstable state of mind which produces uneven results. Ineffective results from meditation practice merely occur during the meditative stage, one element of which is physical discomfort. It has been reported that:

(I) physical discomfort may have occurred before meditation sessions such as back pain. However, there was no physical pain reported in the London study. Although this issue may not be controlled, results were expected to affect subjects during meditation; and

(II) subjects in the Bangkok study reported physical discomfort while meditating. Taken on board the issue a physical discomfort during meditation, especially the posture of meditation sitting, sit crossed legged, could be a reason that may have caused uncomfortable sensations in subjects. Therefore, the study indicates distraction

occurred during meditation. In contrast, there was no reported on physical discomfort in the London study.

5.6.3 - Emotional distress

During the three month meditation period there were no obvious or significant factors relating to stress occurring in the Bangkok study. Although there was no stress, the subjects still may not be able to deal with stressful situations. In contrast, it has been reported that subjects in London expressed that their stress came from work situations and their clients. They articulated that they felt calmer and fresher after meditation practice. This could be one of the results that produced differences in the London study.

In conclusion, the attitude of the participants to different meditation techniques may be one of the reasons that meditation produces less effect in the Bangkok study than in the London study.

5.7 - Other issues in relation to the study

This section contains some short discussions on several different issues that may affect the results of this study such as gender/age and religion issue.

5.7.1 - Gender/age

Both the control and experimental groups contained males and females. No differences were observed between males and females regarding the practice of meditation. Therefore, it may be inferred that gender does not cause a bias between the two subject groups in the Bangkok and London studies. As a result, the study shows that meditation may be of benefit to both males and females. It is important to emphasise that significant age differences did occur in the London study, but not in the Bangkok study, although the effects were minimal. The results show that it is not possible to establish a causal relationship between the relative ages of the subjects in the two populations and their responses to the meditation experiment. The results suggest that the age issue should be further investigated to identify whether there is a causal relationship with the subjects as to whether they were affected by meditation practice or not.

5.7.2 - Religion

There are clear differences with regard to religion, between the participants in both the Bangkok and London studies. In this study, this variable could not be controlled. The Bangkok subjects were clearly Buddhist, whereas the London subjects were mostly Christian. However, in practice, comparison between the different cultures meant that it was impossible to make demographic profiles identical, besides, this study did not aim to investigate whether religion has any impact on the meditation experiment. However, the successful distribution of the sampling and the results shown in each case of meditation practice between the two groups implies that both Bangkok and London participants seem to benefit from meditation practice, irrespective of their religious beliefs. It may therefore be suggested for future studies to investigate whether differences in religions provide any influence on leaders' EI and SPLS or whilst practicing meditation.

In fact, it is questionable whether a Buddhist practices meditation more successfully than a Christian, due to the differences in beliefs and cultural background. The reason why this study will not consider this issue is simply because the research question deals mainly with the impact of meditation on EI and SPLS in the two cases.

5.8 - Implication of the study

The implication of meditation could be potentially beneficial to the positive perception of leaders' changes towards their leadership skills and their emotional intelligence. Leadership effectiveness requires effective tools for developing the self (Western, 2008) and those tools need to be able to produce the changes towards the development of individual leaders (Botha and Claassens, 2010). Leadership development field has realised the need to develop leaders from within (Harung *et al*., 1995) and produce changes towards more positive attitudes (Dalai Lama and Ekman, 2008). The study of meditation has supported the leadership's inner development, which provides the key to enhance inner human potential. Therefore, it provides the link between the meditation process and its benefits for developing a leader's individual inner self. The positive energy derived from meditation influences the changes in an individual for specific tasks.

Meditation, a new idea for an intrinsic strategy for the leader's inner development, provides benefits to transform leaders from 'within' in positive ways. The current global challenges require leaders to have strong critical, psychological and physical stamina. In a competitive world, raising the level of competition, to differentiate oneself from the rest is a necessity. Perhaps the same fundamentals of self-perception of leadership cannot imply any distinction to a new sophisticated context that demands individuals to have a positive SPLS with insight to increase their performance psychology, ability and efficiency. The competence of self-awareness and the intrapersonal ability to understand and collate the sense of togetherness can be positive aids to drive interpersonal skills and social awareness.

Meditation helps leaders to improve their self-perception to a positive attitude towards achieving their full potential. By cultivating insight into their perceptions, they will be able to discover self-perceptions and the perception of others. A leader's mental health and well-being, free from negative disturbances, assist the overall performance of a leader's EI and their SPLS are enhanced. In particular, raising consciousness and awareness from within are important skills required for effective leadership. Meditation raises important skills such as capability and other characteristics which develop from the 'inner self'. Once cultivated, mindfulness and a resting but alert state of mind increases the capacity to become powerful from 'within'. Leaders with insight will be able to act intelligently, morally and with understanding. 'Leaders as role models' is an important foundation so that these skills are strong enough to lead their followers and to be able to identify effective motivational skills needed to lead.

The implication of this study is not only to benefit the emotional intelligence and self-perception of leadership skills in terms of building a strong awareness, developing active consciousness and generating a positive attitude within others, but also that the leader can benefit as an individual. It is argued that we all have the ability to both lead and follow one another simultaneously. Therefore, it is important that one is able to manage one's emotions as well as understanding the emotions of others.

5.9 - Chapter summary

This chapter has discussed the overall results obtained through the meditation study. The discussion of the results is based on the conceptual framework provided in Chapter 2. The statistical knowledge has also been brought into the discussion in relation to the various issues considered. The overall results conclude that meditation may directly enhance EI and self-perception of leadership skills. However, it may also be able to identify whether high EI is directly correlated to high self-perception of leadership skills and *vice-versa*. However this study cannot conclude that meditation is able to develop a cognitive function as the data are limited and it would require further analysis with careful attention utilising MANCOVA analysis of covariance. However, the main findings conclude that meditation can enhance stress management, intrapersonal management, motivation and inspire the shared vision. The cultural differences may be one of the important factors that differentiated the results from the London and the Bangkok group.

Chapter 6: Conclusions

6.1 - Introduction

This chapter presents the overall conclusions of this thesis, summarising the most important outcomes and discussing its contribution to current knowledge. The thesis began with questions regarding how to enhance emotional intelligence, and the means to enhance self-perception of leadership skills. An attempt to bridge the previous gaps in relation to the subject studied has been focused. At the heart of the thesis, it examines whether, or not, meditation can enhance leaders' emotional intelligence and their self-perception of leadership skills. It has addressed the view that meditation may be regarded as key to leaders' self-development as a process of developing awareness of thoughts, feelings, and actions in which the results could potentially benefit not just leader as the subject of this study, but also others by implication and its use could also be applied widely.

The chapter is structured into: a summary (6.2); addressing research questions (6.3); contributions of the study (6.4); possible limitations of this study (6.5); opportunity for future work (6.6); and conclusions (6.7).

6.2 - Overall chapters summary

Chapter 1 introduced the overall thesis to give a general idea of the research area in which the study was to be undertaken. The research proposition and the key literature in relation to the problem of previous studies were discussed. The chapter provided justification for positing meditation as one of several tools for enhancing leaders' emotional intelligence and self-perception of leadership skills. A psychoanalytic approach was introduced as a means for understanding the contextual background for this research and as support for the analysis of the impact of meditation on leader's emotional intelligence and self-perception of leadership skills. Chapter 1 summarises that leaders play an important role in driving their companies towards success or failure. It is important that leaders work with a positive perception towards their role, their responsible task, since their individual attitudes affect their own and others work

performance. Therefore, considerable research with regard to self-perception of leadership development has been undertaken.

Earlier, from the review of the modern idea of leadership, an important question emerged as a result of extensive discussion regarding what constitutes leadership effectiveness. Put simply, 'What is effective leadership?' The answers have been elucidated by behavioural scientists saying that leadership effectiveness can be achieved by improving some of the learning skills. The studies continue and yet they still have not reached a conclusion on what actually make leaders more effective. It has been argued that leaders need to develop from within so that potential energy can be released (Harung *et al.,* 1995; Dalai lama and Ekman, 2008). This notion of developing people from within has not been paid much attention due to issues of development that have focused on the 'What?' questions rather than 'How?' However, an argument proposed by Goleman, (1995) led to a tremendous interest in the concept of emotional intelligence playing a vital role in being part of leadership effectiveness. The concept that EI is more important than IQ has been a subject of much research. The literature review has not indicated clearly how we can achieve EI and leaders gain a positive self-perception. Therefore, questions have been posed, such as, 'How can we increase emotional intelligence and self-perception of leadership skills?'

Chapter 2 explored the literature on meditation, emotional intelligence and self-perception of leadership skills. The literature review started with meditation as a main area of study with regard to its impact on emotional intelligence of an individual whose role has been to be appointed as a 'chief executive' in the company, specifically focusing on the proposition that leadership effectiveness has lacked the means to develop their self-perception. It is said that the feelings, thoughts, effort and length of time may affect individual self-efficacy and therefore influence perception changes in a specific outcome (Bandura, 1997). Activities experienced through a positive perception and ability can be one of the ways of developing individual efficacy (Bandura, 1994). Therefore, it was assumed that meditation may be one tool for cultivating a positive attitude towards the self. Thus, the first question considered was 'How leaders could achieve a positive attitude?. Hence it was argued that emotional intelligence and other competence skills were required by leaders in order to enjoy success in work life. The second question to emerge was, 'How to achieve the emotional intelligence?'

Past literature contributed to the area of meditation as the conceptual framework of this study and concluded that leadership effectiveness needed to be developed from the inner self. Meditation, a principle of Buddhist psychology is therefore proposed for leaders, as its fundamental assumption is to cultivate the mindfulness and calmness, which is the core of self-awareness. The principle aims are to cultivate awareness of one's own thoughts, emotions and actions.

Chapter 3 described the research design and strategy, and the problems from previous literature. The research design was adapted and structured based on Bryman and Bell (2007). This chapter detailed how the analysis was carried out and how the research hypotheses and requisite outcomes were addressed. The justification of research design, an experimental pre-test/post-test, measurement instruments (Bar-On EQ-i and self-perception of leadership skills questionnaire), and the reliability and validity of the instruments were discussed. A key summary of Chapter 3 follows.

Due to the nature of meditation as a subject of study, most of the research was conducted in clinical and psychological areas of the study. Therefore, it was one of the intentions in this study that an attempt was made to make a contribution to the business area by answering the question focusing on 'how' emotional intelligence and self-perception of leadership skills can be improved. The research method used in this study is said to be more appropriate for meditation study. This is because it is most important that past methodology be taken into account, in order that the present study may overcome past failures. The research method utilised in this study followed a highly structured research methodology suitable for social science (Bryman, 2007). It integrated the key strategies from the clinical study area regarding the limitation of the past meditation research. By integrating the research method from a clinical point of view, the important meditation issues that were lacking from previous research, within the context of a business research method, were highlighted. By addressing this important criticism from both perspectives, the research method adds value to this study.

The thesis conducted meditation based on an experimental pre-test/post-test research design to investigate whether, or not, meditation practice can enhance leaders' emotional intelligence and self-perception of leadership skills. The design allows a

control group to be included in the study so that comparisons may be made between the two groups, namely, the experimental group who did meditation for one hour, on a fixed day, for each of 12 consecutive weeks, and a control group who did not practice meditation but was monitored. The study was conducted in two different capital cities in two different countries, Bangkok in Thailand and London in the United Kingdom, in order to compare and contrast the results of the research.

From the experiment, the findings confirm that meditation can enhance emotional intelligence and self-perception of leadership skills in both countries. With regards to emotional intelligence, the greater effect of meditation was on (1) 'Stress management', which includes stress tolerance and impulse control, and (2). 'Intrapersonal skills', comprising self-regard, emotional self-awareness, assertiveness, independence and self-actualisation. It was noted that 'motivating others' was also enhanced. With regards to self-perception of leadership skills, the greater effect was on (1) Motivation, and (2) Moral intelligence. It will be useful if the findings in this study could be implemented in a business environment to create a positive impact on an organisation where increased leadership effects are required.

Chapter 4 carried out the analysis of meditation on leaders' emotional intelligence and self-perception of leadership skills between the two cities, Bangkok and London. All thirteen hypotheses were tested. MANOVA was justified as a statistical instrument for testing the two dependent variables of whether mediation can or cannot enhance emotional intelligence and self-perception leadership skills simultaneously. In this study the dependent variables referred to the emotional intelligence questionnaire and the self-perception of leadership skills questionnaire. Moreover, ANOVA was the choice of statistical tool for testing whether meditation can or cannot directly enhance emotional intelligence, self-perception of leadership skills and their components.

Chapter 5 further explained and elaborated the results derived from Chapter 4. This chapter described the previous results in more detail, especially to apply a theoretical framework into the discussion. The analysis concluded that meditation can enhance leaders' emotional intelligence and self-perception leadership skills simultaneously. However the results of the analyses showed a contrast between the two countries. As a result, further explanations with regard to cultural differences and values, factors

influencing in the variance of the results have been discussed. Cultural factors seem to be the issue most dominating the contrast between the two cities. The analysis and discussion following the previous assumptions, such as cultural factors, play an important part in the contrast of the results, the assumption of a 12-week period, the honesty of the response and the perception of the participants associated with the Hawthorne effect were taken into consideration. To add value to the study, this chapter discussed the implication of the research into how meditation can integrate into the business environment and how it could potentially benefit individuals. This chapter concluded by proposing the integration of meditation into organisations as key in promoting and instilling positive changes in leaders' perception towards specific tasks.

Finally, Chapter 6 summarises the key conclusions of the overall thesis and findings of each chapter. The major contributions of this study provide an insight into the business environment rather than contributing to the clinical and medical areas. However, possible limitations, such as not analysing the sub-structure of emotional intelligence, the sample size issue, and the combined subjects between two different nations, resulted in suggestions for future study. Other suggestions that could benefit future studies include the concept of conducting longitudinal research at an organisational level, looking into the area, either on an individual level or an organisational level, and whether meditation can be a key performance indicator for organisational success.

6.3 - Addressing research questions

The evidence has supplied answers to the two main research questions based on the concept of pre-test/post-test design. The explanations for all the research questions have been provided using the concepts of meditation practice, which is underpinned by Buddhist philosophy and are supported by the results of the study. When meditation is practiced regularly, the mind will be conscious, concentrating and aware of what is going on, in the moment. One can learn control one's own consciousness to deal and cope with unexpected situations and/or emotions.

Having consciousness within the self, one is aware of the present moment. The process of concentrating on the centre of the body helps to regulate and focus the mind. In contrast, we are still aware if our mind has wandered and that can pull the mind that is

wandering back to the same place. The process of meditation helps our mind to be focused, to be aware of the present thoughts, emotions and actions, calm and still, as a result, the mind is purified. When the mind is calm and purified, insight and a deep understanding may emerge. Based on the principle of meditation practice and meditation study, the findings answer the following research questions:

RQ1: Can meditation enhance emotional intelligence?

Statistical evidence was provided to conclude that meditation enhanced overall emotional intelligence both in Bangkok and in London. From the analysis, it is concluded that meditation significantly enhanced some dimensions of emotional intelligence, and that the greatest effect of meditation was in increasing intrapersonal management and stress management.

RQ2: Can meditation enhance the self-perception of leadership skills?

The results concluded that meditation enhanced overall self-perception of leadership skills in both the Bangkok and the London test groups. The analysis has shown that meditation significantly enhanced some dimensions of self-perception of leadership skills, and that the greatest effect of meditation was on increasing motivation and moral intelligence.

In this study, there are three vital factors that cause positive changes in EI and SPLS. These three factors are key to the answers for all the research questions. From the study, it is concluded that:

1. The 'process' of meditation practice is key in building awareness/consciousness systematically. Both emotional intelligence and self-perception of leadership skills are associated with the awareness of present activities. Awareness is a basic requirement for emotional/rational judgements that play a significant role in whatever one is doing. Having mentioned 'the process', the thesis means the seven points meditation practice that has been introduced in the study. This seven points meditation helps one to systematically focus on the particular points while meditating. This process, while practicing mediation, helps guide and control the mind from wandering and helps one

to become aware of the present task and emotions that occur during mediation. This can be applied to the activities or the feelings that one is focusing on, or doing. The focus of the mind is applied when one is concentrating on specific situations or activities. The process of meditation, seven-points-based, helps one to gain more awareness on what one is doing, thinking or acting, as well as being applied to gain more focus on one's emotions towards oneself and others. Therefore, it answers the research question on, 'Can meditation enhance EI and SPLS'. The process itself allows one to gradually build awareness and consciousness more systematically.

2. The positive effects reported by meditation practice, such as calmness, tranquillity, freshness, stress-free feelings, and happiness, all generate a positive perception towards EI and SPLS, resulting in the constructive changes of leaders' perceptions towards their specific role and activities. The result of meditation practice gradually cultivates positive attitudes and provide systematic learning of mindfulness, ability to freshen themselves, resulting in a clarity of the leaders' perception towards the particular role or a specific task which supports the theory of self-efficacy in terms of the perceived changes in an individual's attitude. It can be said that the benefits of meditation that occur during and after meditation bring positive thoughts and feelings to an individual's perception regarding the activities and task that one is doing. Awareness and consciousness that gradually built up in an individual also helps to enhance the existing awareness of an individual towards activities, promoting positive performance.

3. Apart from the process of meditation practice and the positive outcomes gained while practicing meditation, the cultural factor also plays an important part for the different outcomes occurring in the two cities, Bangkok and London. Perception towards a specific task, based on the differences in belief system, values and norms, could divert the perception of an individual.

6.4 - Contributions of the study

This research has contributed to current knowledge in its attempt at answering 'how' emotional intelligence and self-perception of leadership skills are improved. Particularly, the study has emphasised the contribution made to the knowledge on emotional intelligence. The study has shown that mediation can be used as one of the

tools to enhance emotional intelligence. However, an additional test has been done in this study with regard to the self-perception of leadership skills, which benefits leaders in terms of transferring the positive feelings while meditating effectively encouraging positive changes in their preception towards their assigned role. The testing on hypotheses and the results have shown significant changes in positive self-perception of leadership skills. Both the theories addressed the importance that they both contributed to the areas of the individual's development, but did not address 'how' emotional intelligence and self-perception can be developed. This research, therefore, has contributed to this knowledge. The contributions focused on:

First, the major contributions were to identify 'how' emotional intelligence can be developed, provided that the meditation conceptual framework is one tool that has potential to help the development of the individual leaders. Therefore, this study has contributed to provide a key for establishing emotional intelligence within the individual. Emotional intelligence has proposed to replace IQ for a better social-work success and is reported for its benefit for leadership effectiveness (Goleman, 1998; Western, 2008) Although development training has consistently provided a practical way to develop leadership effectivenes, empirical research has not adequatly addressed the question of 'how' emotional inelligence can be enhanced. This study has provided empirical evidence with regard to the effect of meditation on emotional intelligence. The overall hypotheses suggested that there would be a significant increase in the effect of meditation on leaders' emotional intelligence, providing that the process of meditation practice gradually cultivates mindful awareness and consciousness within an individual. The positive outcomes during and after meditation practice help to generate positive energy and stress-free feelings, resulting in a positive performance by an individual.

The second contribution builds upon the knowledge of the study in self-perception of leadership skills. Little research regarding meditation study has been undertaken on the self-percepion of leadership skills. Therefore, this study expands the knowledge from previous leadership development studies, offering a new way of enhancing self-perception of leaders' effectiveness. The results show meditation can be a means to develop the self-perception of a leader from within. Although the world of business leaders' points of view are very different to the world of the 'middle path' concept of

mindful implementation, their principles share common objectives. That is, to develop success in terms of the individual's ways of life, social interaction, and organisational efficacy. The new way of rethinking leadership development is crucial, in that leaders must develop their own healthy mentality. Instead of leading people with emotions and power, leading with a positive attitude is the way that one can defeat negative aspects, boosting individual inner positive potential and improving individual performance.

Thus, one of the potential uses of this study is that it provides the positive changes in an individual's attitude and emotions towards specific tasks, activities and the surrounding environment. Whilst the application is to a person whose role is chief executive in Bangkok or London, some of its conclusions, maybe in some situations with caution, could be generalised.

Findings from the study can bring a positive impact and application to individuals, where self-perception of leadership effectiveness and ability to cope and understand one's emotion, especially the increase in an ability to cope with stressful demand and environmental difficulties, as well as to manage the negative emotions of the individual, are required. Therefore, this research has proposed meditation as a mind training activity that should now be given some practical significance, as it can be one important tool in enhancing emotional intelligence and self-perception of leadership skills. As the world changes and shifts to meet unexpected phenomena, it is likely that the concept of an attitude of effective leadership will also be altering or adapting to suit these changes. This will result in a need to develop new concepts of positive perception of leaders towards their specific tasks or activities. People's behaviour has always constantly been adapting throughout the centuries across all nations and all cultures. This research may enhance the understanding of leaders who will be required to take their businesses forward into the new and unknown future.

It is believed that knowledge from the study will become more valuable and timely only if it can be used and applied to a real situation in the context of developing the self-perception of leader's effectiveness. Therefore, it is recommended that meditation practice should be included in business knowledge development programmes. Any institution or business can utilise meditation as part of their potential mind training development tools in order to improve or enhance not only their leaders or managerial

team but also anyone who seeks to develop their positive attitude. Consequently, overall, there is an enhancement on emotional intelligence and self-perception of leadership skills. Meditation can be used as a key to enhance a constructive self-perception of leaders towards their emotions and their role to improve competitive advantage.

Leaders will be able to manage intrapersonal level skills which indirectly enhance the communication between multilateral interpersonal communications. The level of motivation will be indirectly enhanced as a result of meditation practice and will, therefore, be able to act as a role model. Leaders with self-motivation will keep working until the results they seek have been successfuly reached. The ability to envisage the comprehension of the future determines an organisation's future direction. Meditation training can be used as part of personal development. Leaders who practice meditation are able to experience a significant difference in non-cognitive capabilities, competencies and skills that can influence how one will be able to regulate, understand and manage one's own emotions as well as those of other people. The importance of non-cognitive competencies and skills are crucial to determine one's ability to succeed in coping with surrounding environmental pressures and demands that will keep rising as the world is rapidly changing, particularly when comparing to others.

6.5 - Possible limitations of the research

Though empirical data from this study have supported the main hypotheses, it is important that the possible limitations derived from this study, with regard to the operational design of the study also be addressed. Limitations have already been discussed in the various chapters when they were relevant. For instance, in Chapter 3, it was noted that the differences in the sampling characteristics between Bangkok and London, resulting in a difference in experimental settings arrangements, could possibly bias the findings. More specific issues of research limitations focused on the following:

(1) A possible limitation of the study could be that the sample size is too small. However, there is ample evidence in the literature to show that studies which involve people as their subjects, often use a small sample size, as it is necessary to gain consent

from the participants as well as their commitment to the study (see Chapter 3: justification on sample size issue).

(2) This study included a questionnaire that measured the meditative stage of each participant. To ensure that subjects had been in a meditative state, the study recognised the need to include a proper meditation measurement instrument that has been psychometrically tested for its reliability and validity. However, this study did not aim to measure how differences in the meditation stage affect work productivity or success. Moreover, it was not possible that a meditation measurement instrument with psychometric property could be included. This was because an ongoing debate of the psychometric property of meditation intrument validation is still unclear. Nevertheless this study has made an attempt to minimise the problem by raising questions with regard to the meditative stage during the meditation experiment, based on previous research.

(3) This study was not specifically measuring each of the sub-components of emotional intelligence. This is because the data existing in the study are not suitable in terms of measuring the sub-components. Measuring the sub-component requires MONCOVA analysis which is another step of statistical knowledge. Experts on the MANCOVA analysis could study this issue in future research. The design of the sampling and research method to cover MANCOVA theoretical assumptions is more complex and substantial experience in MANCOVA analysis is required. Furthermore, MANCOVA analysis needs a large sample size.

(4) The effect of bias towards the meditation technique that was discussed as one of the reasons why meditation produced the differences of an outcome between the two countries, could be considered another limitation of this study. People personal attitudes was another issue, if they are biased towards one technique, it could be proposed for further discussion IF attitudes to different meditation techniques has an effect on the efficiency of the outcome. Therefore, to build on the knowledge, consideration of extending the time of meditation practice may be of interest for future research.

6.6 - Future work

During the undertaking of this study, numerous opportunities to improve the research have been noted, several are for possible future work. Some of the areas include:

(1) Considering the choice of sub-skill components: based on theoretical and empirical development arising from this study, future research should include the influence of meditation on sub-components of each of the main components of emotional intelligence. For instance, the study could focus on which sub-components have the most influence in leadership's development, such as within intrapersonal development itself, and which sub-components have the most influence on a leaders' effectiveness.

(2) Considering the criteria for sampling participants: sample size issue has been widely addressed in past research. A large sample size is likely to provide more generalisation of statistical inference. Therefore, in future research, if possible and appropriate, it is recommended that, in a study of meditation, a larger sample size is used. The increase in the size of the sample could potentially benefit future research.

(3) Building upon this study, other future work could consider the combined sampling between the two different nations, trying to merge the samples by ensuring that they are virtually matched samples, or as close as can be.   An extra, more challenging task could be to conduct a one-time meditation study that could bring everyone to meditate in the same environmental setting so that the problem of different characteristics of sampling will be minimised.

(4) Since meditation study has been growing in interest, future research into the measurement of meditation effectiveness is advised to take the issue of a meditation measurement instrument that has been developed based on proper psychometric validity and reliability, this is to ensure that the subjects are fully involved in the real meditative stage. A meditation measurement instrument needs to be developed based on the real experience of meditation experts. The content and construct validity should be developed based on the original Buddhist meditation philosophy. Testing its reliability and validity should be carried out with large samples of differing populations, whose nations and cultures are different.

(5) Considering the length of time of the meditation practice: since the length of the activities is considered to be one of the important factors in the changes in perception towards self-efficacy, the period of meditation practice should be considered for a different length of time, for instance, less or more than a 12-week period of meditation practice to study the effect of the different time frame.

6.7 - Conclusions

The following conclusions can be made from the research conducted in this thesis:

(1) On balance, it is argued that an examination of the overall data and analyses for all the skill components in both the London and Bangkok studies of this research indicates that meditation practice does enhance emotional intelligence and self-perception of leadership skills of the participants.

(2) Meditation helps to bring a sense of order and stability to the mind, examines thoughts, and increases the ability to concentrate and focus on reality, whilst keeping unrelated thoughts away. Once the mind has stopped 'wandering', the result should be an enhanced ability to deal with change positively.

(3) Meditation helps in terms of the altered state of a deep level of mind enhancement, such as sub-consciousness, consciousness and calmness. The basic concept of emotional intelligence, to understand and be aware of one's emotions, as well as those of others, shares the same basic principle of awareness of thoughts, feelings, and actions that are cultivated while practicing meditation.

(4) The process of meditation practice helps to discipline the mind, and become conscious and systematic in one's awareness of emotions and thoughts.

(5) Leaders with a strong emotional awareness, or EI, are well equipped and more versatile in the business environment.

(6) The result of meditation practice gradually creates a personal self-adjusting system.

Once the mind is calm, free from any disturbances, or stress, the result should be a better understanding of the physical and mental capabilities of one's own faculties.

(7) The positive outcomes occurring during meditation generate positive attitudes, resulting in positive changes in an individual's self-perception of leadership skills.

Appendix A: Table of reviewed articles

Journal Articles	Method	Findings
Schure, M.B., J. Christopher, et al. (2008). 'Mind-body medicine and the art of self-care: Teaching mindfulness to counselling students through yoga, meditation, and Qigong.' Journal of Counselling & Development 86(1): 47-56.	33 participants participated in 15 weeks, the course included twice-weekly 75 minute with 3 mindfulness practice. It	The finding reports positive physical, mental, spiritual, and interpersonal changes.
Hutcherson, C.A., E.M. Seppala, et al. (2008). '*Loving-kindness* **meditation** *increases social connectedness*.' Emotion 8(5): 720-724	93 participants participated in an average meditative practice less than 1.7 hours per month. The research assessed the affective impact of Loving kindness meditation (LKM) on positive and negative mood.	The finding concludes that even a few minutes of Loving kindness meditation (KLM) increase feelings of social emotions and decrease social isolation.
Chambers, R., B. C. Y. Lo, et al. (2008). 'The impact of intensive mindfulness training on attentional control, cognitive style, and affect.' Cognitive Therapy and research 32 (3): 303-322.	20 meditators were tested before and after participate in a 10 days intensive mindfulness meditation. They were evaluated by self report scales assessing sustained attention, working memory and attention switching.	The result indicates positive improvement in depressive symptoms, self-report mindfulness, performance measures of working memory, rumination, and sustained attention.
Travis, F.,D.A.F.Haaga,et al. Effects of Transcendental Meditation▶ Practice on Brain Functioning and Stress Reactivity in College Students.' International Journal of Psychophysiology In Press, Accepted manuscript.	50 students self-selected themselves to be part of the EEG research sections of the study, with 10 weeks of Transcendental meditation (TM) assessing brain functioning and stress activities. Ag/AgCL sensors were applied in 3 areas –the left , right earlobe, left wrist, and on the palm.	

Journal Articles	Method	Findings
Altner, N.(2002). 'Mindfulness practice and smoking cessation: The Essen Hospital Smoking Cessation Study.' Journal for meditation and meditation research 2 : 9-18.	49 employees in an eight week participated in mindfulness-based stress reduction as a therapy for nicotine replacement.	Participants report a number of lifestyle changes during the day through conscious breathing and centering in the present moment and developing more assertive style of communication as well as more attentive.
Kustner, U. (2002). 'Effectiveness of meditative method of therapy based on Buddhist psychology and practices : A pilot study.' Journal for meditation and meditation research 2 : 19-29	74 German participates practiced meditation for 14 months assessed by the Hospital Anxiety and Depression Scale (HADS), the Spielberger Trait Anxiety Inventory (STAI), and the Giessen-Test Personality Inventory (GT).	The findings showed significant reductions in anxiety and depression, and non significant reductions on all six Giessen subscales thought to correlate with neurotic symptoms.
Fredrickson, B. L., M. A. Cohn, et al. (2008). Open Hearts Build Lives: Positive Emotions, Induced Through Loving-Kindness Meditation, Build Consequential Personal Resources. Journal of Personality & Social Psychology. **95:** 1045-1062.	People's daily experiences of positive emotions compound over time to build a variety of consequential personal resources. The authors tested this build hypothesis in a field experiment with working adults (n = 139), half of whom were randomly-assigned to begin a practice of loving-kindness meditation.	Results showed that meditation practice produced increases over time in daily experiences of positive emotions, which, in turn, produced increases in a wide range of personal resources (e.g., increased mindfulness, purpose in life, social support, decreased illness

		symptoms). In turn, these increments in personal resources predicted increased life satisfaction and reduced depressive symptoms.
Wallace, H. (2007). 'Mindfulness-Based Stress Reduction as a Method for Personnel Development : *A Pilot Evaluation*, International Journal of Stress Management, Vol 14(2), pp. 188-198	The authors evaluated the potential of MBSR for stress management. Workers participated in an MBSR training for stress-related problems (N=12), (C=11)Empirical Study; Followup Study; Longitudinal Study; Qualitative Study; Quantitative Study	In the treatment group, positive strategies of coping with stress increased and negative strategies of coping decreased. Eighty-two percent of the participants reported having reached their personal goal.

Appendix B: Meditation technique

    'Step 1: *to visualize an image of a bright and crystal clear cut diamond sphere, with a size of a lens of an eye. Position the sphere precisely at the nostril, the left nostril for women, and the right for men. Fix our mind, which is unsettled and flashing, on the concentration of the object at the nostril, the left nostril for women, and the right for men. The exterior of the sphere has a size of a lens of an eye. Its interior is of the size of a small canna seed. The sphere is clean and clear as a polished mirror. Position the object image at the nostril, the left nostril for women, and the right for men. Contemplate on the clear sphere. Stop in the center of the clear sphere. Be still there. This is Position (l).*

    Step 2: *Move the sphere to Position (2) at the eye socket, the left socket for women, and the right for men. This is the point where the eye discharges, and the entrance of breathing aperture.*

    Step 3: *Then, move the object image from the eye socket to the center of the skull base, without swaying to left or right, to front or back, or to up or down. This is Position (3). To move from this position, there is a ritual technique. One has to involute his/her eyes, like the eyeballs of those about to die. Roll the eyeballs upward tightly, while our eyes still close.*

    Step 4: *Then, gradually slide their perception down and inside the body. As the perception sinks down inside the body, move the object image from Position (3) to Position (4) at the palate terminus, the point where the body throwing out of food. Stay precisely at the position. Keep focusing the object image at the Position (4).*

    Step 5: *Then, move the object image from Position (4) to Position (5) at the entrance of the throat aperture above the Adam's apple line, just like the center of the glass surface placing at the throat aperture. Keep focusing of the object image.*

    Step 6: *Move the object image down to Position (6) at the center of the body, namely, the end point of the breathing. This is the point of the intersection of the lines from the navel to the back and from the right to the left. This is the center of the Dhamma sphere constituting the Human Form, and the point at which to keep our mind stop. Place our mind there and in the clear sphere*

    Step 7: *Then, move upward above Position (6), the center of the body, by two fingerbreadths. This is called Position (7). Our mind is placing at the centre of the sphere. Keep on adjusting the mind until our mind stops. We keep our mind stopping at the centre of the clear sphere. If our mind is not still and wavering, or does not stop, we need to exercise concentration of the words, Samma Araham. Samma Araham. Samma Araham. Regardless of count, be it hundreds or thousands of times. Keep on concentrating on words until our mind is completely still and stops. The concentration of words can be ceased, when our mind rightly stops. Focus and fix our mind stilly at the clear sphere. Stop and keep still our sense of consciousness. 'Stop' is the success'.*

<div align="right">Phramongkolthepmuni (Sod Candasaro, 2549 p.18)</div>

Appendix C: Letter for inviting Business leaders

Dear Business Leaders,

You are invited to participate in a research project undertaken at the University of Westminster. The topic is '**the impact of meditation on emotional intelligence and leadership'**. Meditation, a long-standing Eastern practice, is considered to be the fundamentals of an individual's development: to prosper one's body, speech and mind, the integrals to life management, as well as businesses, societies and nations.

With your participation, it is anticipated that we may understand better the influence of meditation on emotional intelligence and leadership. The majority of previous research in this field has been clinically and medically focused and, it is expected that, the results of this research will provide a valuable contribution to the business sector.

To participate in this program, we are pleased to invite you to attend a series of weekly sessions on guided meditation to be given by a senior Buddhist monk, who has years of experience in meditation teaching from the famous temple, Wat Phra Dhammakaya, London. Scientific literature provides sample evidence on the benefits of meditation and we hope that you will take on this unique opportunity to learn meditation and participate in this study.

Dates   :   **Only on every Wednesday 20 May 2009 to Wednesday 5 August 2009**
                (12 weeks)

Time   :   Evening session **once a week at 5.00 pm. – 6.00 pm.**
                Only for the first and the last sessions will start at 4.30 pm.

Venue   : **University of Westminster, Cavendish Campus,**
                115 New Cavendish Street, London, W1W 6UW
                5 minutes walk from Great Portland Street Tube Station

Guest   :   Phra Sarttra Panya (Thirapanyo Bhikkhu) from Phra Dhammakaya temple.

In order to gain the most effective results, full participation at all session is recommended. However participants may withdraw at any time. Participants do not have to answer particular questions either on questionnaires. The study will not involve participants in any unjustifiable risk, such as unexpected anxiety or distress, nor it will produce any form of psychological or physical harm. Full anonymity of the participants will be respected. All your details will remain confidential and data collected will be used for academic purposes only.

If you would like to participate in this unique study, please complete the short questionnaire attached and return it in the enclosed pre-paid, addressed envelope no later than **18 May 2009.** Further information regarding this study may be obtained from Ms Tanmika Tamwatin t.tamwatin@westminster.ac.uk or tanmika.t@gmail.com .

Yours faithfully

Tanmika Tamwatin
PhD Student
University of Westminster

Map to University of Westminster, Cavendish Campus

Located nearest to Goodge Street (Northern line), Great Portland Street (Metropolitan, Circle and Hammersmith & City lines) and Warren Street (Northern and Victoria lines). Several buses run along Tottenham Court Road and Euston Road that are five minutes' walk away. The Campus is a 15-20 minutes walk from King's Cross, St. Pancras, Euston and Thameslink railway stations. Car parking is available for those with special needs. There are also public car parks nearby.

Appendix D: Participation information sheet and a consent form

The Impact of Meditation on Emotional Intelligence and Leadership

Researcher ___Tanmika Tamwatin___

Staff Supervisor Prof. Vlatka Hlupic_____

You are being invited to take part in a research study on Vipassana meditation (Mindfulness meditation, which involves comparing a group of leaders who practice meditation with a group of leader who will not meditate. The research studies whether meditation can enhance emotional intelligence and leadership, and also to investigate possible links between meditation, emotional intelligence, and leadership.

The study will involve you:

1) Completing two questionnaires before the first meditation session begins and after the last meditation session. The first on emotional intelligence on how you manage your emotion. The second on leadership inventory. They will take around 25 minutes to complete.

2) Participating in an interview with me after the last session of meditation about your emotional intelligence and leadership management. This will take about 20 minutes and will be tape-recorded.

3) Practising meditation on Wednesday evening once a week at 17.00 pm. – 18.00 pm. This is done by sitting meditation with an eye closed. The meditation session will be given by a senior Buddhist monk who is eligible to teach meditation in English. You will need to do this **once a week for twelve weeks**. These will be the times for each participant. The meditation sessions start on every Wednesday 20th May 2009 – 5th August 2009.

1st – 25 minutes emotional intelligence and leadership questionnaires,
      following with Vipassana meditation (16.30 pm. – 18.00 pm.)
2nd – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
3rd – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
4th – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
5th – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
6th – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
7th – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
8th – 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
9th -- 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
10th -- 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
11th -- 1 hour Vipassana Meditation   (17.00 pm. – 18.00 pm.)
12th – 1 hour Vipassana Meditation,   (16.30 pm. – 18.00 pm.)
      following with 25 minutes emotional intelligence and leadership
      questionnaires

You can act normal or do any rigorous routine as usual.

For this study, I will ask you to practise meditation once a week at university of Westminster, in approximately 12 weeks

Please note:

- Participation is entirely voluntary.
- You have the right to withdraw at any time without giving a reason.
- You have the right to ask for your data to be withdrawn as long as this is practical, and for personal information to be destroyed.
- You do no have to answer particular questions either on questionnaires or in interviews if you do not wish to.
- Your responses will be confidential. No individuals will be identifiable from any collated data, written report of the research, or any publications arising from it.
- All personal data will be kept in a locked cupboard on University premises.
- Please notify us if any adverse physical harm arises during or after the research.
- If you wish you can receive information on the results of the research.
- The researcher can be contacted after participation by email t.tamwatin@westminster.ac.uk or tanmika.t@gmail.com

--*please separate*

CONSENT FORM

Title of Study: The Impact of Meditation on Emotional Intelligence and Leadership

Lead researcher:
Tanmika Tamwatin

I have read the information in the Participation Information Sheet, and I am willing to act as a participant in the above research study.

Name: _____

E-mail :   _____

Contact no : _____

Signature: _____ Date: _____

This consent form will be stored separately from any data you provide so that
your responses remain anonymous.

I have provided an appropriate explanation of the study to the participant

Researcher Signature __T. Tamwatin_____

Appendix E: Demographic meditation survey questionnaire version 1

This questionnaire is divided into 2 sections, Background Information and Meditation Survey and should take approximately 5 minutes to complete. In answering the questions, and statements, please provide your personal details below and tick ☑ the circle with appropriate response. Your response will be treated in the strictest confidence and data will only be presented in an aggregated form. Thank you for your co-operation.

---

1. Background Information

1.1 Gender

    ○ Male   ○ Female

1.2 Age

    ○ Less than 25 years   ○ 25 - 35

    ○ 36-45   ○ 46-55

    ○ Above 55 years   ○ Prefer not to respond

1.3 Religion

    ○ Buddhist   ○ Christian

    ○ Hindu   ○ Jewish

    ○ Muslim   ○ Sikh

    ○ No religion   ○ Any other religion

    ○ Prefer not to respond

1.4 Marital status

    ○ Single   ○ Married

    ○ Living with partner   ○ Separated

    ○ Divorced   ○ Widowed

    ○ Prefer not to respond

1.5 Ethnicity

    ○ Asian or Asian British ○ Bangladeshi

    ○ Indian   ○ Kashmiri

    ○ Pakistani   ○ Any other Asian background

    ○ Black or Black British ○ African

    ○ Caribbean   ○ Any other Black background

    ○ Chinese   ○ Any other Chinese

    ○ Chinese British   background

    ○ Mixed/Dual Heritage ○ White and Asian

○ White and Black African   ○ White and Black Caribbean

○ White and Chinese   ○ Any other mixed background

○ White   ○ White English

○ White Scottish   ○ White Welsh

○ White Irish   ○ Any other White background

○ Other (Please specify_____

○ Prefer not to respond

1.6 Educational Background

○ High School   ○ Some College

○ Some College   ○ Associates/Technical Degree

○ Bachelor's Degree   ○ Some graduate work

○ Master's Degree   ○ Doctoral Degree

○ Other   ○ Prefer not to respond

1.7 How many children under 16 years live with you?

○ None   ○ 1

○ 2   ○ 3 or more

○ Prefer not to respond

1.8 Organisational Level

○ Non management   ○ Line management

○ Middle management   (supervision non-management)

○ Senior management   ○ Executive/ Senior Vice President

○ CEO/ President   ○ Owner

○ Prefer not to respond

1.9 Sector

○ Manufacturing/Industrial   ○ Manufacturing/Consumer

○ Retail/Wholesales/Distribution   ○ Construction

○ Public Sector   ○ Financial Services

○ Business Consultancy   ○ Other Services (please specify)

○ Prefer not to respond   _____

1.10 How long is your working week?

○ Up to 20 hours   ○ 21 to 34 hours

○ 35 to 44 hours   ○ 45 to 54 hours

○ 55 hours or more (Please specify)   ○ Prefer not to respond

---
2. Meditation survey

2.1 Have you heard of meditation?

    ○ Yes   ○ No

2.2 Do you know what is meditation?

    ○ Yes   ○ No

2.3 Have you ever practised meditation before?

    ○ Yes   ○ No

---
*If **yes,** please go to question number 2.4.   If **no,** go to question number 2.8.*

2.4 How frequently do you practise meditation from the following places?

	Daily	Weekly	Monthly	Less than once a month
At home (including a home office)	○	○	○	○
At work	○	○	○	○
At temple	○	○	○	○
In other places	○	○	○	○

2.5 How long have you been practicing meditation?

    ○ 1 - 3 months   ○ 4 – 6   months

    ○ 7 – 9 months   ○ 10 – 12 months

    ○ 1 – 2 years   ○ 3 – 5 years

    ○ More than 5 years   ○ Other please specify____

2.6 What type of meditation have you been practising?

_____

2.7 In your understanding, has meditation helped you either in your daily life or in your work life ? If yes, please state how it has done so. (This question is for those have practised meditation).

_____

_____

2.8 Have you ever practised other types of mind and body relaxation in which you understand that it helps reduce stress, anxiety OR it helps improve your physical and emotional well being? For instance; Yoga

    ○   Yes (go to 2.9)   ○ No (go to 2.10)

    If yes, please specify _____

2.9 How much time do you spend on the training?_____

2.10 Are you now in the treatment of headaches, Anxiety, depression, insomnia, and cardiovascular disorders?

    ○   Yes (please specify) _____   ○ No

2.11 Have you been taken another complementary medicine therapy within the last year?

    ○   Yes (please specify) _____   ○ No

2.12 Have you been taken any training course regarding the personal development for The past 6 months; for instance emotional intelligence, leadership?

    ○   Yes (please specify) _____   ○ No

2.13 Have you been taken medication for anxiety/mood/stress/depression/sleeplessness within the last year?

    ○   Yes (please specify) _____   ○ No

2.14 Have you been taken medication for physical treatment for a relief of a chronic pain within the last year?

    ○   Yes (please specify) _____   ○ No

2.15 Have you had any trauma for the past few years?

    ○   Yes   ○ No

2.16 Have you been in any similar research within the last year?

    ○   Yes (please specify) _____   ○ No

END OF QUESTIONNAIRE

Appendix F: Demographic meditation survey questionnaire version 2

This questionnaire is divided into 2 sections, Background Information and Meditation Survey and should take approximately 5 minutes to complete. In answering the questions, and statements, please provide your personal details below and tick ☑ the circle with appropriate response. Your response will be treated in the strictest confidence and data will only be presented in an aggregated form. Thank you for your co-operation.

---

1. Background Information

1.1 Gender

○ Male   ○ Female

1.2 Age

○ Less than 25 years   ○ 25 - 35

○ 36-45   ○ 46-55

○ Above 55 years   ○ Prefer not to respond

1.3 Religion

○ Buddhist   ○ Christian

○ Hindu   ○ Jewish

○ Muslim   ○ Sikh

○ No religion   ○ Any other religion

○ Prefer not to respond

1.4 Marital status

○ Single   ○ Married

○ Living with partner   ○ Separated

○ Divorced   ○ Widowed

○ Prefer not to respond

1.5 Ethnicity

○ Asian or Asian British   ○ Bangladeshi

○ Indian   ○ Kashmiri

○ Pakistani   ○ Any other Asian background

○ Black or Black British   ○ African

○ Caribbean   ○ Any other Black background

○ Chinese   ○ Any other Chinese

○ Chinese British   background

○ Mixed/Dual Heritage   ○ White and Asian

- ○ White and Black African
- ○ White and Chinese

- ○ White and Black Caribbean
- ○ Any other mixed background

- ○ White
- ○ White Scottish
- ○ White Irish

- ○ White English
- ○ White Welsh
- ○ Any other White background

- ○ Other (Please specify_____
- ○ Prefer not to respond

1.6   Educational Background

- ○ High School
- ○ Some College
- ○ Bachelor's Degree
- ○ Master's Degree
- ○ Other

- ○ Some College
- ○ Associates/Technical Degree
- ○ Some graduate work
- ○ Doctoral Degree
- ○ Prefer not to respond

1.7   How many children under 16 years live with you?

- ○ None
- ○ 2
- ○ Prefer not to respond

- ○ 1
- ○ 3 or more

1.8 Organisational Level

- ○ Non management
- ○ Middle management
- ○ Senior management
- ○ CEO/ President
- ○ Prefer not to respond

- ○ Line management
  (supervision non-management)
- ○ Executive/ Senior Vice President
- ○ Owner

1.9   Sector

- ○ Manufacturing/Industrial
- ○ Retail/Wholesales/Distribution
- ○ Public Sector
- ○ Business Consultancy
- ○ Prefer not to respond

- ○ Manufacturing/Consumer
- ○ Construction
- ○ Financial Services
- ○ Other Services (please specify)
  _____

1.10   How long is your working week?

- ○ Up to 20 hours
- ○ 35 to 44 hours
- ○ 55 hours or more (Please specify)

- ○ 21 to 34 hours
- ○ 45 to 54 hours
- ○ Prefer not to respond

2.1 Have you heard of meditation?

○ Yes   ○ No

2.2 Do you know what is meditation?

○ Yes   ○ No

2.3 Have you ever practised meditation before?

○ Yes   ○ No

2.4 What technique of meditation have you practiced?

_____

*If **yes,** please go to question number 2.4.   If **no,** go to question number 2.8.*

2.5 How frequently do you practise meditation from the following places?

	Daily	Weekly	Monthly	Less than once a month
At home (including a home office)	○	○	○	○
At work	○	○	○	○
At temple	○	○	○	○
In other places	○	○	○	○

2.6 How long have you been practicing meditation?

○ 1 - 3 months   ○ 4 – 6   months

○ 7 – 9 months   ○ 10 – 12 months

○ 1 – 2 years   ○ 3 – 5 years

○ More than 5 years   ○ Other please specify____

2.7 What type of meditation have you been practising?

_____

2.8 In your understanding, has meditation helped you either in your daily life or in your work life ? If yes, please state how it has done so. (This question is for those who have practised meditation).

_____

_____

2.9 Have you ever practised other types of mind and body relaxation in which you understand that it helps reduce stress, anxiety OR it helps improve your physical and emotional well being? For instance; Yoga

    ○   Yes (go to 2.9)   ○   No (go to 2.10)

    If yes, please specify _____

2.10 How much time do you spend on the training?_____

2.11 Are you now in the treatment of headaches, Anxiety, depression, insomnia, and cardiovascular disorders?

    ○   Yes (please specify) _____   ○ No

2.12 Have you been taken another complementary medicine therapy within the last year?

    ○   Yes (please specify) _____   ○ No

2.13 Have you been taken any training course regarding the personal development for The past 6 months; for instance emotional intelligence, leadership?

    ○   Yes (please specify) _____   ○ No

2.14 Have you been taken medication for anxiety/mood/stress/depression/sleeplessness within the last year?

    ○   Yes (please specify) _____   ○ No

2.15 Have you been taken medication for physical treatment for a relief of a chronic pain within the last year?

○   Yes   (please specify) _____   ○ No

2.16 Have you had any trauma for the past few years?

    ○   Yes   ○ No

2.17 Have you been in any similar research within the last year?

    ○   Yes   (please specify) _____   ○ No

END OF QUESTIONNAIRE

Appendix G: Self-perception of Leadership skills inventory final version

(1ˢᵗ Final version before meditation session begin)

Leadership Behaviour Inventory

How frequently do you typically engage in the following behaviours and actions?

Instructions

1. There are two main parts of this questionnaire. The first One is related to 'Leadership Behaviour Inventory' using the 5-point Likert scale(described below). The second one contains 4 open – ended questions.

2. Write your name in the space provided at the top of next pages. Below your name you will find 30 items of leadership behaviours. Please read each items carefully, and using *Rating Scale* below.

3. Be realistic about the extent to which you actually engage in the behaviour.

4. DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.

5. DO answer in terms of how you typically behave on most days, with most people, and most situations.

The rating scale runs from 1 to 5 as described below.

1	**=**	**ALMOST NEVER**
2	**=**	**RARELY OR SELDOM**
3	**=**	**SOMETIMES**
4	**=**	**VERY OFTEN**
5	**=**	**ALMOST ALWAYS**

In selecting the response, be realistic about the extent to which you actually engage in the particular behaviour. ***Do not*** answer in terms of how you would like yourself to be or how you would like to see yourself or in terms of what you should be doing. Answer in terms of how you typically behave.

Please turn to the next page to rate your behaviour.

YOUR NAME _____

The rating scale runs from 1 to 5. Please write the number, to the right of each statement, using the scale below, that best applies to each statement.

1	2	3	4	5
ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN	ALMOST ALWAYS

PART A	1	2	3	4	5
1. I always set myself as a good personal example for people around me.	☐	☐	☐	☐	☐
2. I talk about goal and future trends that will influence work success.	☐	☐	☐	☐	☐
3. When faced with an important decision, I consciously assess whether the decision I wish to make is aligned with my most deeply held principles, values, and beliefs.	☐	☐	☐	☐	☐
4. I develop cooperative relationship among the people I work with.	☐	☐	☐	☐	☐
5. I praise people for a job well done.	☐	☐	☐	☐	☐
6. I spend time and energy making certain that people I work with adhere to the principles and standards we have agreed on.	☐	☐	☐	☐	☐
7. I dare to accept my faults I have made eventhough I loose my respectation.	☐	☐	☐	☐	☐
8. I actively listen to vary points of view without an interruption.	☐	☐	☐	☐	☐
9. I always show my beliefs and confidence in my subordinates.	☐	☐	☐	☐	☐
10. I follow through on the promises and commitments that I make.	☐	☐	☐	☐	☐
11. I appeal to my subordinates that I share a dream of their future.	☐	☐	☐	☐	☐
12. I admonish my subordinates if I acknowledge their falseness.	☐	☐	☐	☐	☐
13. I treat others with dignity and respect.	☐	☐	☐	☐	☐
14. I make sure that people are creatively rewarded for their contributions to the success of our projects.	☐	☐	☐	☐	☐

	1	2	3	4	5
	ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN	ALMOST ALWAYS

PART A	1	2	3	4	5
15. I always ask for feedback and improve my actions.	☐	☐	☐	☐	☐
16. I show others how their long-term interests can be realised by enlisting in a common vision.	☐	☐	☐	☐	☐
17. I don't hold on my higher position and consider others equally.	☐	☐	☐	☐	☐
18. I support my team members' decisions.	☐	☐	☐	☐	☐
19. I always show sympathy to others when they feel unhappy.	☐	☐	☐	☐	☐
20. I clearly explain what we aspire to accomplish.	☐	☐	☐	☐	☐
21. I do not blame others or circumstances when things go wrong.	☐	☐	☐	☐	☐
22. I am clear about my leadership pronciples and approaches.	☐	☐	☐	☐	☐
23. I speak with genuine conviction about the higher meaning and purpose of our work.	☐	☐	☐	☐	☐
24. I ensure that people grow in their jobs by learning new skills and developing themselves.	☐	☐	☐	☐	☐
25. I give the members of the team a lot of appreciation and support for their contributions.	☐	☐	☐	☐	☐

250

PART B

Open ended Questions

1. What behaviour do you think best describes yourself?

_____
_____
_____
_____
_____
_____

2. What benefits do you think you have received from the meditation practice in terms of your career position ?

_____
_____
_____
_____
_____
_____

3. In your opinion, what is an effective leadership?

_____
_____
_____
_____
_____
_____

4. In your opinion, in what way do you practice to simplify complex situations for your daily life or in your work life?

_____
_____
_____
_____
_____
_____

END OF QUESTIONNAIRE

THANK YOU VERY MUCH

Tanmika Tamwatin
Research student
University of Westminster
E-mail : tanmika.t@gmail.com

Attachment H: Content validity - Continue from the previous attachment of the instruction to validate the self-perception of leadership skills questionnaire

<u>**Leadership Behaviour Inventory**</u>

How frequently do you typically engage in the following behaviours and actions?

Instructions

1. There are two main parts of this questionnaire. The first one is related to 'Leadership Behaviour Inventory' using the 5-point Likert scale (described below). The second one contains 4 open – ended questions.

2. Write your name in the space provided at the top of next pages. Below your name you will fin 30 items of leadership behaviours. Please read each items carefully, and using *Rating Scale* below.

3. Be realistic about the extent to which you actually engage in the behaviour.

4. DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.

5. DO answer in terms of how you typically behave on most days, with most people, and most situations.

The rating scale runs from 1 to 5. as described below.,

1	**=**	**ALMOST NEVER**
2	**=**	**RARELY OR SELDOM**
3	**=**	**SOMETIMES**
4	**=**	**VERY OFTEN**
5	**=**	**ALMOST ALWAYS**

In selecting the response, be realistic about the extent to which you actually engage in the particular behaviour*. **Do not** answer in terms of how you would like yourself to be or how you would like to see yourself or in terms of what you should be doing. Answer in terms of how you typically behave.

Please respond to every statement. Please turn to other pages to rate your behaviour.

YOUR NAME : ____

The rating scale runs from 1 to 5. Please write the number, to the right of each statement, using the scale below, that best applies to each statement.

1	**2**	**3**	**4**	**5**
ALMOST NEVER	**RARELY OR SELDOM**	**SOMETIMES**	**VERY OFTEN**	**ALMOST ALWAYS**

1. I set a personal example of what I expect of others.   -

+1

2. I talk about future trends that will influence how our work gets done.

+1

3. When faced with an important decision, I consciously assess whether the decision I wish to make is aligned with my most deeply held principles, values, and beliefs.

+1

4. I develop cooperative relationship among the people I work with.

+1

5. I praise people for a job well done.

+1

---

6. I spend time and energy making certain that people I work with adhere to the principles and standards we have agreed on.

+1

7. I describe a compelling image of what our future could be like.

+1

8. .I tell the truth unless there is an overriding moral reason to withhold it.

+1

9. I actively listen to diverse points of view.

+1

10. I make it a point to let people know about my confidence in their abilities.

+1

11. I follow through on the promises and commitments that I make.

+1

12. I appeal to others to share an exiting dream of the future.

+1

13. If I knew my company was engaging in unethical or illegal behaviour, I would report it, even if it could have an adverse effect on my career.

+1

14. I treat others with dignity and respect.

+1

15. I make sure that people are creatively rewarded for their contributions to the success of our projects.

+1

16. I ask for feedback on how my actions affect other people's performance.

+1

17. I show others how their long-term interests can be realised by enlisting in a common vision.

+1

18. When a situation may prevent me from keeping a promise, I consult with those involved to renegotiate the agreement.

+1

19. I support the decisions that people make on their own.

+1

20. I publicly recognise people who exemplify commitment to shared values.

+1

21. I build consensus around a common set of values for running our organisation.

+1

22. I paint the 'big picture' of what we aspire to accomplish.

+1

23. When things go wrong, I do not blame others or circumstances.

+1

24. I give people a great deal of freedom and choice in deciding how to do their work.

+1

25. I find ways to celebrate accomplishment.

+1

26. I am clear about my philosophy of leadership.

+1

27. I speak with genuine conviction about the higher meaning and purpose of our work.

+1

28. I truly care about the people I work with as people – not just as the 'human capital' needed to produce results.

+1

29. I ensure that people grow in their jobs by learning new skills and developing themselves.

+1

30. I give the members of the team lots of appreciation and support for their contributions.

+1

<u>Open ended Questions</u>

1. What behaviour do you think best describes yourself?

    ———

2. What benefits do you think you have received from the meditation practice in terms of your career position ?

    ———

3. In your opinion, what is an effective leadership?

    ———

4. In your opinion, in what way do you practice to simplify complex situations for your
   daily life or in your work life?

    ———

END OF QUESTIONNAIRE

THANK YOU
Tanmika Tamwatin
Research student
University of Westminster

Appendix I: Self-perception of Leadership skills questionnaire 1st version

Your name_____

The rating scale runs from 1 to 5. Please write the number, to the right of each statement, using the scale below, that best applies to each statement.

1	**2**	**3**	**4**	**5**
ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN	ALMOST ALWAYS

PART A	1	2	3	4	5
1. I always set myself as a good personal example for people around me.	☐	☐	☐	☐	☐
2. I talk about goal and future trends that will influence work success.	☐	☐	☐	☐	☐
3. When faced with an important decision, I consciously assess whether the decision I wish to make is aligned with my most deeply held principles, values, and beliefs.	☐	☐	☐	☐	☐
4. I develop cooperative relationship among the people I work with.	☐	☐	☐	☐	☐
5. I praise people for a job well done.	☐	☐	☐	☐	☐
6. I spend time and energy making certain that people I work with adhere to the principles and standards we have agreed on.	☐	☐	☐	☐	☐
7. I always talk about the principle of work and the vision of my subordinates towards organisation.	☐	☐	☐	☐	☐
8. I dare to accept my false I have made eventhough I loose my respectation.	☐	☐	☐	☐	☐
9. I actively listen to vary points of view without an interruption.	☐	☐	☐	☐	☐
10. I always show my beliefs and confidence in my subordinates.	☐	☐	☐	☐	☐
11. I follow through on the promises and commitments that I make.	☐	☐	☐	☐	☐
12. I appeal to my subordinates that I share a dream of their future.	☐	☐	☐	☐	☐
13. I admonish my subordinates if I acknowledge their falseness.	☐	☐	☐	☐	☐
14. I treat others with dignity and respect.	☐	☐	☐	☐	☐
15. I make sure that people are creatively rewarded for their contributions to the success of our projects.	☐	☐	☐	☐	☐

	1	**2**	**3**	**4**	**5**
1	**2**	**3**	**4**		**5**
ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN		ALMOST ALWAYS

PART A	1	2	3	4	5
16. I always ask for feedback and improve my actions	▢	▢	▢	▢	▢
17. I show others how their long-term interests can be realised by enlisting in a common vision.	▢	▢	▢	▢	▢
18. I don't hold on my higher position and consider others equally.	▢	▢	▢	▢	▢
19. I support people's decision.	▢	▢	▢	▢	▢
20. I always show sympathy to others when they feel sorrow.	▢	▢	▢	▢	▢
21. I build consensus around a common set of values for running our organisation.	▢	▢	▢	▢	▢
22. I clearly explain of what we aspire to accomplish.	▢	▢	▢	▢	▢
23. I do not blame others or circumstances when things go wrong.	▢	▢	▢	▢	▢
24. I give people a great deal of freedom and choice in deciding how to do their work.	▢	▢	▢	▢	▢
25. I find ways to celebrate accomplishment.	▢	▢	▢	▢	▢
26. I am clear about my principle of leadership.	▢	▢	▢	▢	▢
27. I speak with genuine conviction about the higher meaning and purpose of our work.	▢	▢	▢	▢	▢
28. I truly care about the people I work with as people – not just as the 'human capital' needed to produce results.	▢	▢	▢	▢	▢
29. I ensure that people grow in their jobs by learning new skills and developing themselves.	▢	▢	▢	▢	▢
30. I give the members of the team lots of appreciation and support for their contributions.	▢	▢	▢	▢	▢

BarOn EQ-i:125™

by Dr. Reuven Bar-On

Introduction

The EQ-i:125™ consists of statements that provide you with an opportunity to describe yourself by indicating the degree to which each statement is true of the way you feel, think, or act most of the time and in most situations. There are five possible responses to each sentence.

1 - Very seldom or Not true of me
2 - Seldom true of me
3 - Sometimes true of me
4 - Often true of me
5 - Very often true of me or True of me

Instructions

Read each statement and decide which *one* of the five possible responses best describes you. Mark your choices on the answer sheet by filling in the circle containing the number that corresponds to your answer.

If a statement does not apply to you, respond in such a way that will give the best indication of how you *would* possibly feel, think, or act. Although some of the sentences may not give you all the information you would like to receive, choose the response that seems the best, even if you are not sure. There are no "right" or "wrong" answers and no "good" or "bad" choices. Answer openly and honestly by indicating how you actually are and *not* how you would like to be or how you would like to be seen. There is no time limit, but work quickly and make sure that you consider and respond to *every* statement.

1. My approach in overcoming difficulties is to move step by step.

2. It's hard for me to enjoy life.

3. I prefer a job in which I'm told pretty much what to do.

4. I know how to deal with upsetting problems.

5. I like everyone I meet.

6. I try to make my life as meaningful as I can.

7. It's fairly easy for me to express feelings.

8. I try to see things as they really are, without fantasizing or daydreaming about them.

9. I'm in touch with my emotions.

10. I'm unable to show affection.

11. I feel sure of myself in most situations.

12. It is a problem controlling my anger.
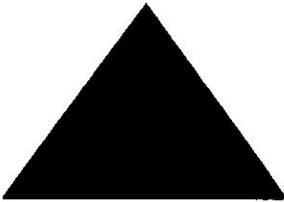
1 - Very seldom or Not true of me
2 - Seldom true of me
**3 - Sometimes true of me**
4 - Often true of me
5 - Very often true of me or True of me

13. It's difficult for me to begin new things.

14. When faced with a difficult situation, I like to collect all the information about it that I can.

15. I like helping people.

16. It's hard for me to smile.

17. I'm unable to understand the way other people feel.

18. When working with others, I tend to rely more on their ideas than my own.

19. I believe that I can stay on top of tough situations.

20. I really don't know what I'm good at.

21. I'm unable to express my ideas to others.

22. It's hard for me to share my deep feelings with others.

23. I lack self-confidence.

24. I'm optimistic about most things I do.

25. When I start talking, it is hard to stop.

26. It's hard for me to make adjustments in general.

27. I like to get an overview of a problem before trying to solve it.

28. It doesn't bother me to take advantage of people, especially if they deserve it.

29. I'm a fairly cheerful person.

30. I prefer others to make decisions for me.

31. I can handle stress, without getting too nervous.

32. I have good thoughts about everyone.

33. It's hard for me to understand the way I feel.

34. In the past few years, I've accomplished little.

35. When I'm angry with others, I can tell them about it.

36. I have had strange experiences that can't be explained.

37. It's easy for me to make friends.

38. I have good self-respect.

39. My impulsiveness creates problems.

40. It's difficult for me to change my opinion about things.

41. I'm good at understanding the way other people feel.

42. When facing a problem, the first thing I do is stop and think.
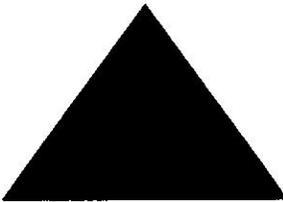
2

MHS

1 - **Very seldom or Not true of me**
2 - **Seldom true of me**
3 - **Sometimes true of me**
4 - **Often true of me**
5 - **Very often true of me or True of me**

43. Others find it hard to depend on me.

44. I am satisfied with my life.

45. It's hard for me to make decisions on my own.

46. I don't hold up well under stress.

47. I don't do anything bad in my life.

48. I don't get enjoyment from what I do.

49. It's hard to express my intimate feelings.

50. People don't understand the way I think.

51. I generally hope for the best.

52. My friends can tell me intimate things about themselves.

53. I don't feel good about myself.

54. People tell me to lower my voice in discussions.

55. It's easy for me to adjust to new conditions.

56. When trying to solve a problem, I look at each possibility and then decide on the best way.

57. I would stop and help a crying child find his or her parents, even if I had to be somewhere else at the same time.
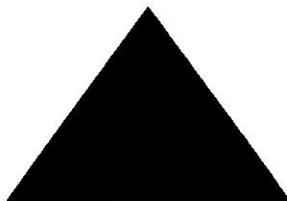
58. I'm fun to be with.

59. I'm aware of the way I feel.

60. I feel that it's hard for me to control my anxiety.

61. Nothing disturbs me.

62. I don't get that excited about my interests.

63. When I disagree with someone, I'm able to say so.

64. I tend to fade out and lose contact with what happens around me.

65. I don't get along well with others.

66. It's hard for me to accept myself just the way I am.

67. I care what happens to other people.

68. I'm impatient.

69. I'm able to change old habits.

70. It's hard for me to decide on the best solution when solving problems.

71. If I could get away with breaking the law in certain situations, I would.

72. I get depressed.

MHS

73. I know how to keep calm in difficult situations.

74. I have not told a lie in my life.

75. I'm generally motivated to continue, even when things get difficult.

76. I try to continue and develop those things that I enjoy.

77. It's hard for me to say "no" when I want to.

78. I get carried away with my imagination and fantasies.

79. My close relationships mean a lot to me and to my friends.

80. I'm happy with the type of person I am.

81. I have strong impulses that are hard to control.

82. It's generally hard for me to make changes in my daily life.

83. Even when upset, I'm aware of what's happening to me.

84. In handling situations that arise, I try to think of as many approaches as I can.

85. I'm able to respect others.

86. I'm not that happy with my life.

87. I'm more of a follower than a leader.

88. It's hard for me to face unpleasant things.

89. I have not broken a law of any kind.

90. I enjoy those things that interest me.

91. It's fairly easy for me to tell people what I think.

92. I tend to exaggerate.

93. I'm sensitive to the feelings of others.

94. I have good relations with others.

95. I feel comfortable with my body.

96. I'm impulsive.

97. It's hard for me to change my ways.

98. I think it's important to be a law-abiding citizen.

99. I enjoy weekends and holidays.

100. I generally expect things will turn out all right, despite setbacks from time to time.

101. I tend to cling to others.

102. I believe in my ability to handle most upsetting problems.
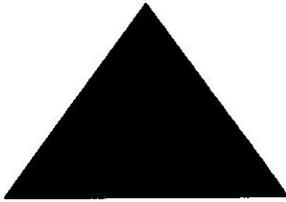
1 - Very seldom or Not true of me
2 - Seldom true of me
3 - Sometimes true of me
4 - Often true of me
5 - Very often true of me or True of me

103. I have not been embarrassed for anything that I've done.

104. I try to get as much as I can out of those things that I enjoy.

105. Others think that I lack assertiveness.

106. I can easily pull out of daydreams and tune into the reality of the immediate situation.

107. People think that I'm sociable.

108. I'm happy with the way I look.

109. It's hard for me to describe my feelings.

110. I've got a bad temper.

111. I generally get stuck when thinking about different ways of solving problems.

112. It's hard for me to see people suffer.

113. I like to have fun.

114. I seem to need other people more than they need me.

115. I get anxious.

116. I don't have bad days.

117. I avoid hurting other people's feelings.

118. I don't have a good idea of what I want to do in life.

119. It's difficult for me to stand up for my rights.

120. It's hard for me to keep things in the right perspective.

121. I don't keep in touch with friends.

122. I tend to explode with anger easily.

123. It would be hard for me to adjust if I were forced to leave my home.

124. Before beginning something new, I usually feel that I'll fail.

125. Looking at both my good points and bad points, I feel good about myself.

Appendix K: Interpretative Guideline for EQ-I Scores

Standard Score	Interpretive Guideline
130+	Markedly High
120-129	Very High
110-119	High
90-109	Average
80-89	Low
70-79	Very Low
Under 70	Markedly Low

Inconsistency Index

The Inconsistency Index (II) score measures response inconsistency. Response inconsistency indicates respondents who contradict themselves or respond randomly. The inconsistency index is calculated by summing the differences in scores between the responses of ten pairs of similar items. **If respondent scores higher than 12 on the inconsistency index, the results are most likely invalid**.

Positive and Negative Impression Scales

The Positive Impression (PI) and The Negative Impression (NI) Scales scores are standard scores generated by the same procedure employed in producing the other EQ-I composite scale and sub scale scores. The scores are designed to detect respondents who may be giving an exaggerated positive or negative impression of themselves. **When PI or NI scores exceed two standard deviations from the mean (30 points), the results are considered invalid.**

Correction Factors

Positive and Negative Impression scale scores exceeding two standard deviation (30 points) from the mean are used to invalidate a protocol. However, PI and NI scores that do not exceed two standard deviations are employed to create a correction factor designed to adjust (deflate or inflate) the EQ-I scale and subscale scores in the computerized report. **The correction factors are computed by applying a statistical procedure called regression analysis**. EQ-i scales are related in different ways to positive and negative impression scores require different types of adjustments. There are five types of corrections as follow

Type I	Intrapersonal EQ, Emotional self awareness, problem solving, Flexibility
Type II	Total EQ, Adaptability EQ, Reality testing, Stress Tolerance
Type III	Social Responsibility, Impulse Control, Happiness
Type IV	Stress Management EQ, General Mood EQ, Self Regard
Type V	Interpersonal EQ, Self Actualisation, Interpersonal Relationship, Optimism
No correction	Assertiveness, Independence, Empathy

This correction factors are used to fine tune scores; **For example**, If a respondent obtains a PI score of 120 and a NI score of 90, the corrections would be Type I = -3.6, Type II = -4.8, Type III = -5.0, Type IV = -6.2, Type V = -4.8. All the scales and subscales to which the Type I correction is applicable would be adjusted downwards by 3.6 standard score points, all the scales and subscales to which Type II correction is applicable would be adjusted downwards by 4.8 points, ect

In General, if the correction is negative, points should be subtracted from the scores, and if the correction is positive, points should be added to the scale and subscale **scores.**

Appendix L: Compounding Variable Questionnaire

Instruction: Please indicate Yes or No

Items 1- 11 : experience	Yes	No	
1. Have you taken any relaxation techniques during the past twelve months? If yes please state			
2. Have you taken any exercise during the past twelve months?			
3. Have you been taken any training regarding meditation teaching during the past twelve months? If yes please state			
4. Have you been taken any training regarding the emotional intelligence within the past twelve months?			
5. Have you been taken any training regarding the leadership development within the past twelve months?			
6. Have you done the questionnaire regarding emotional intelligence during the past twelve months?			
7. Have you done the questionnaire regarding leadership inventory during the past twelve months?			
8. Have you attained the sessions that intend to develop or give knowledge in terms of enhancing human capacities; for instance creativity, intelligence ect. during the past twelve months?			
9. Have you been involved in a similar research study within the past year? If yes please state			
10. Have you taken the medication for anxiety or mood/ depression/ stress/ sleeplessness during the past twelve months? If yes please state how long have you had medication?			
11. Have you taken any training regarding the enhancement of consciousness/ awareness for the past twelve months?			

Items 12 – 15 : Personal details	Yes	No	
12. Have you smoked harder than you usually did during twelve weeks of meditation experiment?			
13. Have you drunk harder than you normally did during twelve weeks of meditation experiment?			
14. Have you got a new job in the last six months?			
15. Have you experienced traumatic situation within the past two years?			
Items 16 -29: During the 3 months of meditation experiment at University of Westminster	Yes	No	
16. Have you been practicing other meditation technique during the meditation experiment?			
17. Have you been tired after work during the meditation experiment?			
18. Have you been rested before meditation experiment began?			
19. Have you felt calm before you begin the meditation session on every Wednesday?			
20. Have you felt irritated before you begun the meditation session on every Wednesday?			
21. Before you begun each session during the meditation experiment, have you felt any other emotional state such as being: inconsistent, unhappy, moody, stressed, tired, uncomfortable, harmed, distressed, miserable, hungry or thirsty. If yes please underline any states that apply to you.			
22. Have you practised meditation on other days, except Wednesday, during the three months period of meditation experiment? Please state how many minutes or hours you have practised meditation?			
23. Have you experienced stress/ anxiety/ depress/trauma/ during the meditation experiment?			

24. Have you felt stress/ anxiety/ depress/ trauma/ or any other negative emotions/ feelings/ thoughts/ actions before each of the session of meditation began?			
25. Have you felt stress/ anxiety/ depress/ trauma/ or any other negative emotions/ feelings/ thoughts/ actions after each of the session of meditation finished?			
26. Have you felt uncomfortable in terms of physical and emotional distress during meditation?			
27. Have you felt either overreaction with regard to positive feelings/ emotions/ thoughts/ actions, such as too much happiness, before each of the session of meditation began?			
28. Have you felt either overreaction with regard to positive feelings/ emotions/ thoughts/ actions, such as too much happiness, after each of the session of meditation began?			
29. How would you describe, narrate or express your feelings/ thoughts/ reactions whilst meditate. You can narrate as much as you desire.			

UNIVERSITY OF WESTMINSTER

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35 Marylebone Road
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6 April 2009

Phra Sarttra Thirapanyo (Panya)

Wat Phra Dhammakaya London
2 Brushfield Way
Knaphill
Working
Surrey GU21 2TG

Dear Phra Sarttra Thirapanyo (Panya)

Re: Official invitation letter for guest meditation sessions

I am an academic supervisor for Miss Tanmika Tamwatin, a research student pursuing a PhD in Business and Management at the University of Westminster, England. She is currently carrying out her research on "An Impact of Meditation on Emotional Intelligence and Leadership: An Empirical Investigation of Practice". Upon the successful completion of the experimental research in Thailand, we have decided to conduct a similar experiment in London. In addition to facilitating Ms Tamwatin's research, we are confident that the meditation sessions will lead to wider benefits for all participants in this experiment.

On behalf of the University of Westminster and Westminster Business School, I am delighted to invite Phra Sarttra Thirapanyo (Panya) to lead meditation sessions in this research experiment. We are expecting approximately 40 business leaders from various companies in England to participate in the research. The experiment will be related to hosting meditation sessions once a week over a period of 12 weeks, starting from 27 May 2009 – 12 August 2009. The sessions will be held at Westminster Business School (Marylebone campus).

Should you have any queries or require further information or assistance, please contact myself or Miss Tanmika Tamwatin. I would like to take this opportunity to thank you for your assistance with this research project.

Yours sincerely

Vlatka Hlupic

Instruction to validate the leadership questionnaire 1ˢᵗ version 30 items

Section A.

1. This document has 6 pages in total. Pages 1-2 provide the instructions on how to validate this questionnaire. Pages 3-6 contain the questionnaire. When validating the content of the questionnaire, please turn to pages **4-5**

2. There are 5 sets of questions (Questions set 1 – Questions set 5). Each set has its own objectives to measure leadership behaviour differently. Within each set of questions, there are different items which measure the same objective for that particular set. Please use the explanation below in section B. as a guideline for validating the content of each item.

    For example : question set 1 : Leaders as role models
                  question set 2 : Inspiring a shared vision
                  question set 3 : Moral Intelligence
                  question set 4 : Enabling others to act
                  question set 5 : Encourage the heart

3. Please give the values to each item by following the values interpretation below

- If you think the content of item 1 is reasonable, sound measurable, or fine give +1
- If you are not sure give 0
- If you think the content is not practical to the objective give -1

4. Repeat the same instructions when giving the value to questions inremaining set (set 2 – set 5).

5. In order to give a value to each item, please point a cursor into the Gray drop down list (page 4-5) in your right hand column next to each item. Click at drop down list at the right hand site of each item and click the value you wanted. After finished all the items, Please save into other file name and please send it back for me via my e-mail address   supernungning@yahoo.com. Thank you for your help.

Section B

   The objective of each item

   Question set 1 (Leaders as role models)

- Items 1, 6, 11, 16, 26 measure how each person can be a role model. Leaders know that if they want to gain commitment and achieve the highest standards, they must be a role models of the behaviour they expect of others. They need to be aware of their own behaviour by
    1. clarifying own personal values
    2. aligning actions with shared values.

Question set 2 (Inspiring a shared vision)
- Items 2, 12, 17, 22, 27 show how leader can inspire a shared vision. Leaders have visions and dreams of what could be achieved. They see the picture in their mind of what the result could look like. They also have clear image of the future by
    1. imagining exciting and ennobling possibilities
    2. they enlist others in a common vision by appealing to shared aspirations.

Question set 3 (Moral Intelligence)
- Items 3, 8, 13, 18, 23 show leaders' moral intelligence. Good leaders need to have a certain level of morale that they can:
    1. act consistently with principles, values and, beliefs,
    2. tell the truth,
    3. stand up for what is right,
    4. take responsibility for personal choices,
    5. actively caring about others,
    6. let go off other's mistakes.

Question set 4 (Enabling others to act)
- Items 4, 9, 14, 19, 29 measure how leaders will enable other to act. They should foster collaboration and build trust. They have a sense of teamwork and how to lead others towards the goals. Leaders should help people feel strong - , capable and committed by ;
    1. fostering collaboration
    2. strengthening others by sharing power and discretion.

Question set 5 (Motivating others)
- Items 5, 10, 15, 20, 30 is how leaders motivate people to carry on. They have sympathy and are aware of their own feelings towards others. They act on the basis of
    1. recognising contributions by showing appreciation for individual excellence,
    2. celebrate the value and victories by creating a spirit of community.

Leadership skills questionnaire

Leadership Behaviour Inventory

How frequently do you typically engage in the following behaviours and actions?

Instructions

1. There are two main parts of this questionnaire. The first One is related to 'Leadership Behaviour Inventory' using the 5-point Likert scale(described below). The second one contains 4 open – ended questions.

2. Write your name in the space provided at the top of next pages. Below your name you will find 30 items of leadership behaviours. Please read each items carefully, and using *Rating Scale* below.

3. Be realistic about the extent to which you actually engage in the behaviour.

4. DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.

5. DO answer in terms of how you typically behave on most days, with most people, and most situations.

The rating scale runs from 1 to 5 as described below.

1	**=**	**ALMOST NEVER**
2	**=**	**RARELY OR SELDOM**
3	**=**	**SOMETIMES**
4	**=**	**VERY OFTEN**
5	**=**	**ALMOST ALWAYS**

In selecting the response, be realistic about the extent to which you actually engage in the particular behaviour. ***Do not*** answer in terms of how you would like yourself to be or how you would like to see yourself or in terms of what you should be doing. Answer in terms of how you typically behave.

Please turn to the next page to rate your behaviour.

YOUR NAME _____

The rating scale runs from 1 to 5. Please write the number, to the right of each statement, using the scale below, that best applies to each statement.

1	2	3	4	5
ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN	ALMOST ALWAYS

PART A	1	2	3	4	5
1. I give the members of the team a lot of appreciation and support for their contributions.	☐	☐	☐	☐	☐
2. I ensure that people grow in their jobs by learning new skills and developing themselves.	☐	☐	☐	☐	☐
3. I speak with genuine conviction about the higher meaning and purpose of our work.	☐	☐	☐	☐	☐
4. I am clear about my leadership pronciples and approaches.	☐	☐	☐	☐	☐
5. I do not blame others or circumstances when things go wrong.	☐	☐	☐	☐	☐
6. I clearly explain what we aspire to accomplish.	☐	☐	☐	☐	☐
7. I always show sympathy to others when they feel unhappy.	☐	☐	☐	☐	☐
8. I support my team members' decisions.	☐	☐	☐	☐	☐
9. I don't hold on my higher position and consider others equally.	☐	☐	☐	☐	☐
10. I show others how their long-term interests can be realised by enlisting in a common vision.	☐	☐	☐	☐	☐
11. I always ask for feedback and improve my actions.	☐	☐	☐	☐	☐
12. I make sure that people are creatively rewarded for their contributions to the success of our projects.	☐	☐	☐	☐	☐
13. I treat others with dignity and respect.	☐	☐	☐	☐	☐
14. I admonish my subordinates if I acknowledge their falseness.	☐	☐	☐	☐	☐

	1	2	3	4	5
	ALMOST NEVER	RARELY OR SELDOM	SOMETIMES	VERY OFTEN	ALMOST ALWAYS

PART A	1	2	3	4	5
15. I appeal to my subordinates that I share a dream of their future.	❏	❏	❏	❏	❏
16. I follow through on the promises and commitments that I make.	❏	❏	❏	❏	❏
17. I always show my beliefs and confidence in my subordinates.	❏	❏	❏	❏	❏
18. I actively listen to vary points of view without an interruption.	❏	❏	❏	❏	❏
19. I dare to accept my false I have made eventhough I loose my respectation.	❏	❏	❏	❏	❏
20. I spend time and energy making certain that people I work with adhere to the principles and standards we have agreed on.	❏	❏	❏	❏	❏
21. I praise people for a job well done.	❏	❏	❏	❏	❏
22. I develop cooperative relationship among the people I work with.	❏	❏	❏	❏	❏
23. When faced with an important decision, I consciously assess whether the decision I wish to make is aligned with my most deeply held principles, values, and beliefs.	❏	❏	❏	❏	❏
24. I talk about goal and future trends that will influence work success.	❏	❏	❏	❏	❏
25. I always set myself as a good personal example for people around me.	❏	❏	❏	❏	❏

PART B

<u>**Open ended Questions**</u>

1. What behaviour do you think best describes yourself?

_____
_____
_____
_____
_____
_____

2. What benefits do you think you have received from the meditation practice in terms of your career position ?

_____
_____
_____
_____
_____
_____

3. In your opinion, what is an effective leadership?

_____
_____
_____
_____
_____
_____

4. In your opinion, in what way do you practice to simplify complex situations for your daily life or in your work life?

_____
_____
_____
_____
_____
_____

END OF QUESTIONNAIRE

THANK YOU VERY MUCH
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FLOW DIAGRAM AS A GUIDE TO CHOOSE THE MOST SUITABLE TEST FOR RESEARCH DESIGN (Coolican, 2004)

How many variables do you have?

Two

More than two

Are you looking for differences between conditions or relationships among variables?

Are you looking for differences between conditions or relationships among variables?

Differences

relationships

relationships

Differences

Do you have a between-participants or a within-participants design?

Do you want a regression equation or simply the strength of a relationship?

Are you interested in a regression equation or exploring clusters of

Do you have more than one DV?

No

Yes

Between

Within

Strength of relationship

Regression equation

Regression equation

Correlation clusters

MANOVA

Independent t-test

Related t-test

Linear regression

Multiple regression

Factor analysis

Do you want to look for differences between conditions while controlling for the effects of another

Pearson's Product Moment Correlation Coefficient

No

Yes

Do you have more than one IV?

ANCOVA

No

Yes

One-way ANOVA

Factorial ANOVA

Glossary of Acronyms

EI	-	Emotional Intelligence
SPLS	-	Self-perception of Leadership Skills
EQ-I	-	Emotional Quotient Inventory
MANOVA	-	Multivariate Analysis of Variance
ANOVA	-	Analysis of Variance

References

Abdi, H., (2007). Bonferroni and Sidak corrections for multiple comparisons. ln: Salkind, J. (ed.), *Encyclopedia of measurement and statistics*. **CA**: Thousand Oaks.

Adair, G., (1984). The Hawthorne effect: a reconsideration of the methodological artefact. *Journal of Applied Psychology.* **69**, 334-345.

Adair, J., (1997). *Leadership Skills*. United Kingdom: Cromwell Press.

Adams, G. and Schvaneveldt, J., (1991), *Understanding research methods.* (2"d ed.) New York: Longman.

Alexander, C. and Langer, E., (1989). Transcendental meditation, mindfulness, and longevity. *Journal of Social Behaviour and Personality.* **6,** 189-247.

Alexander, C. and Langer, E., (1990). *Higher stage of human development*. New York: Oxford University Press.

Anderson, J., Fincham, J., Qin, Y. and Stocco, A., (2008). A central circuit of the mind. *Trends* in *Cognitive Science.* **12**(4), 136-l43.

Anderson, V., (2004). *Research methods in human resource management London*: Chartered Institute of Personnel and Development.

Andreson, J., (2000). Meditation meets behavioural medicine. *Journal of Consciousness Studies*, **7**, 17-74. A

Ashkanasy, N. M., and Daus, C.S., (2005). Rumors of the death of emotional intelligence in organisational behaviour are vastly exaggerated. *Journal of Organisational Behaviour.* **26,** 441-452.

Atwater, L. E., and Yammarino, F. J., (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions? *Personnel Psycholog.* **45***,* 141-164.

Atwater, L. E., and Yammarino, F. J., (1997). Self-other rating agreement: A review of the model. *Research in Personnel and Human Resource Management.* **15,** 121-174.

Atwater, L. E., Ostroff, C., Yammarino, F. J., and Fleenor, J. W., (1998). Self-other agreement: Does it really matter? *Personnel Psychology.* **51**(3), 577-598.

Atwater, L. E., Waldman, D. A., Robie, C., Ostroff, C., and Johnson, J., (2005). Self-other agreement: Comparing its relationship with performance in U.S. and Europe. *International Journal of Selection and Assessment.* **13**(1), 25-40.

Atwood, D. and Maltin, L., (1991). Putting Eastern philosophies into Western psychotherapies. *American Journal of Psychotherapy.* **XLV**, 368-382.

Baars, E., (1988). *A cognitive theory of consciousness.* USA: Cambridge University Press.

Bailey, K.D., (1994). *Methods of Social Research.* (4th ed.) The Free Press, New York, NY.

Ballentine, M., (l986). *Theory and practice of meditation.* Pennsylvania: The Himalayan International Institute of Yoga Science and Philosophy of the USA.

Bandura, A., (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopaedia of human behaviour.* New York: Academic Press.

Bandura, A., (1994). Social cognitive theory of mass communication. In J. Bryant and D. Zillman (Eds.), *Media effects: Advances in theory and research*. Hills Erlbaum. (pp. 61-90).

Bandura, A., (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman.

Bandura, A., (2007). Much ado over a faulty conception of perceived self-efficacy grounded in faulty experimentation. *Journal of Social Clinical Psychology.* **26**(6): 641-658.

Banich, M. T., (2004). *Cognitive neuroscience and neuropsychology* (2nd ed.). Boston, MA: Houghton Mifflin Company.

Baptist, E., (2004). *The supreme science of the Buddha.* Taiwan: Singapore Buddhist Meditation Centre.

Barchard, K.A. and Russell, J.A. (2006). Bias in consensus scoring, with examples from ability emotional intelligence tests. *Psicothema.* **18**, 49-54.

Barling, J., Slater, F. and Kelloway, K., (2000). Transformational leadership and emotional intelligence: an exploratory study. *Journal of Leadership and Organisational Development.* **21**(3), l57-161.

Barling, J., Weber, T. and Kelloway, K., (1996). Effects of transformational leadership training on attitudinal and financial outcomes. *Journal of Applied Psychology.* **81**, 827-832.

Bar-On, D., (1995). "Four Encounters Between Descendants of Survivors and Descendants of Perpetrators of the Holocaust: Building Social Bonds Out of Silence." *Psychiatry.* **58**: 225 - 245.

Bar-On, R., (2000). Emotions and social intelligence: Insight from the emotional quotient inventory. In R. Bar-On and J.D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace.* San Francisco: Jossey-Bass.

Bar-On, R., (2006). The bar-on model of emotional-social intelligence (ESI). *Psicothema.* **18**, 13-25.

Bar-On, R., (2006). The Bar-On model of emotional-social intelligence. *Psicothema*. **18,** 13-25.

Bar-on, R. And Parker, J.D., (2000). *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace*. San Francisco: Jossey-Bass.

Bar-On, R., (1997a). *Bar On emotional quotient inventory*. Canada: Multi Health System.

Bar-On, R., (1997b). *The emotional quotient inventory* (EQ-i): a test of emotional intelligence. Toronto: Multi—Health Systems.

Bar-on, R., Tranel, D., Denburg, N.L., and Bechara, A., (2003). Exploring the neurological subtracts of emotional and social intelligence. *Brain*. **126,** 1790 - 1800.

Bass, M. and Steidlmeier, P., (1999). Ethics, character, and authentic transformation leadership behaviour. *Leadership Quarterly*. **10**(2), 181-217.

Bass, M., (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, M., (1990). *Stogdill and Bass's handbook of leadership: theory, research, and managerial application*. (3rd ed.) New York: Free Press.

Beecroft C, Rees A, Booth A., (2006). Finding the evidence. In: Gerrish K, Lacey A, eds. *The Research Process in Nursing*. 5th edn. Blackwell Publishing, Philadephia: 90–106.

Bennis, W. and Nanus, B., (1988). *Leaders: the strategies for taking charge*. New York: Harper and Row.

Berrocal, P. and Extremera, N., (2006). Emotional intelligence: a theoretical and empirical review of its first 15 years of history. *Psicothema*. **18,** 7-12.

Bhadantacariya, B., (1956). *The Path of Purification*. (translated by Bhikkhu Naamoli) Singapore Buddhist Meditation Centre, Singapore.

Bickman, L. and Rog, D., (2009). *The handbook of applied social research methods*. Los Angeles: Sage Publications.

Bishop, S., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., Segal, Z., Abbey, S., Speca, M., Velting, D. and Devins, G., (2004). Mindfulness: a proposed operational definition. *Clinical Psychology: Science and Practice*. **11**(3), 23 0—242.

Bogart, Leo., (1991). *Preserving the Press. How Daily Newspapers Mobilized to Keep Their Readers*. Columbia University Press, New York.

Bond, K., Ospina, M., Hooton, N., Bialy, L., Dryden, D. and Buscemi, N., (2009). Definition a complex intervention: the development of demarcation criteria for 'meditation'. *Psychology of Religion and Spirituality*. **1**(2), 129-137.

Botha S. and Claassens M., (2010). Leadership competencies: the contribution of the bachelor in management and leadership (BML) to the development of leaders at first national bank. *International Business and Economics Research Journal*. **9**(l0).

Bowen, S., Witkiewitz, K., Dillworth, T. and Marlatt, A., (2007). The role of thought suppression in the relationship between mindfulness meditation and alcohol use. *Psychology of Addictive Behaviour*. **32**(10), 2324-2328.

Boyatzis, R.E., (2006). Using tipping points of emotional intelligence and cognitive competencies to predict financial performance of leaders. *Psicothema*. **18**,124-131.

Boyatzis, R. and McKee, A., (2005). *Resonant leadership: renewing y0urseh' and connecting with others through mindfulness, hope and compassion*. Boston: Harvard Business School Press.

Boyatzis, R., Goleman, D., and Rhee, K., (2000). Clustering competence in emotional intelligence: insights from the emotional competence inventory (ECI). In R. Bar-On and J.D.A. Parker (eds.): *Handbook of Emotional Intelligence* (pp. 343-362). San Francisco: Jossey-Bass.

Boyce, L., Zaccaro, S. and Wisecarver, M., (2010). Propensity for self-development of leadership attributes: Understanding, predicting, and supporting performance of leader self- development. *The Leadership Quarterly*. **21**(l), 159-178.

Brody, N. (2004). What cognitive intelligence is and what emotional intelligence is not. *Psychological Inquiry*. **60**, 234-238.

Broome, M. R., Woolley, J. B., Tabraham, P., Johns, L. C., Bramon, E., Murray, G. K., Pariante, C., McGuire, P. K. and Murray, R. M., (2005). What causes the onset of psychosis ? *Schizophrenia Research*. **79,** 23–34.

Bryman, A. and Bell, E., (2007). *Business Research Method*. NewYork: Oxford University Press.

Bryman, A. and Cramer, D., (2009). *Quantitative and data analysis with SPSS 14, 15 and 16*: *A guide for social scientists*. New York: Routledge.

Bryman, A., (2008). *Social Research Methods*. New York: Oxford university press.

Buddhaghosa, B., (1976). *Visuddhimagga (The Path of Purification)*. Seattle, WA: Shambala.

Burdett, J.O., (1998). Forty things every manager should know about coaching, *Journal of Management Development*. **17**(2), 142-152.

Buzan, T. and Buzan, B., (1995). *The mind map book*. (ed). London: BBC Books.

Cahn, B. R., and Polich, J., (2006). Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychological Bulletin*. **132** (2), 180–211.

Cahn, R. and Polich, J., (2008). Meditation (Vipassana) and the P3a event-related brain potential. *International Psychophysiology.* **72**(1), 51-60.

Cambell, P., Daft, L. and Hulin, L., (1982). *What to study: generating and developing research questions*. London: Sage.

Candasaro, S., (2003). *The path to magga phala: the method of samatha vzpassana meditation*. Bangkok: Wat Paknam.

Canter, P. and Ernst, E., (2003). The cumulative effects of transcendental meditation on cognitive function - a systematic review of randomised controlled trials. The Middle European *Journal of medicine*. **115**(21-22), 758-766.

Cardoso, R., De Souza, E. Carnano, L. and Leite, R., (2004). Meditation in health: an operational definition. *Brain Research Protocols*. **14** (1), 58-60.

Cartwright, S., and Pappas, C., (2008). Emotional intelligence, its measurement and implications for the workplace. *International Journal of Management Reviews.* **10** (2), 149-171.

Carver, R., (1993). The case against statistical significance testing revisited. *Journal of Experimental Education*. **61**(4), 287-292.

Chakraborty, S.K., (1995). *Ethics in Management: Vedic Perspective*, Oxford University Press, Delhi.

Chalmers, F., (2009). Thomas C Chalmers (1917-1995). The James Lind Library (jameslindlibrary.org).

Chalmers, D., (1996). *The Conscious Mind: In Search of a Fundamental Theory*. Oxford University Press.

Chambers, R., Gullone, E. and Allen, N., (2009). Mindful emotion regulation: an integrative review. *Clinical Psychology Review.* **29**(6), 560-572.

Chan, D. and Woollacott, M., (2007). Effects of level of meditation experience on attentional focus: is the efficiency of executive or orientation networks improved?. *The Journal of Alternative and Complementary Medicine.* **13** (6), 651-657.

Chandasaro, S., (2003) *The Path to Magga Phala: The Method of Samatha and Vipassana Meditation Translation Edition by Damkerng J indahra.* Wat Paknam, Bangkok.

Chemers, M., (2002). Efficay and effectiveness: Integrating models of leadership and intelligence pp. 139-160). In R. Riggio, E. Susan, & Associates (Eds.), *Multiple intelligences and leadership. Mahwa.* NJ: Erlbaum

Cherniss, C., (2010), 'Emotional intelligence: toward clarification of a concept', Industrial and Organizational Psychology, Vol. 3 No. 2, pp. 110-26.

Cherniss, C. and Goleman, D., (2001). *The emotional intelligent workplace: how to select for, measure, and improve emotional intelligence in individuals, groups, and organisations.* CA: John Wiley and Son.

Cherulnik, P.D., Donley, K.A., Wiewel, T.S.R. and Miller, S.R., (2001). Charisma is contagious: the effect of leaders' charisma on observers' affect, *Journal of Applied Social Psychology.* **31***, 2149-2159.

Chiesa, A., (2010). Vipassana meditation: systematic review of current evidence. *The Journal of Alternative and Complementary Medicine.* **16** (1), 37-46.

Christoff, K., Gordon, A. M., Smallwood, J., Smith, R., and Schooler, J. W., (2009). Experience sampling during fMRI reveals default network and executive system contributions to mind wandering. *Proceedings of the National Academy of Science.* **106,** 8719-8724.

Church, A. H., (1997). Managerial self-awareness in high performing individuals in organizations. *Journal of Applied Psycholog.* **82***, 281-292.

Ciarrochi, V., Chan, C. and Caputi, P., (2000). Personality and individual differences. *Harvard Business Review on Leadership.* **28,** 539-561.

Cline, B., (2004). *Beyond significance testing: reforming data analysis methods in behavioural research.* Washington DC: American Psychological Association.

Clough, P. and Nutbrown, C., (2007). *A student's guide to methodology.* (2nd ed.), London: Sage.

Cohen, J., (1992). A power primer. *Psychological Bulletin.* **112**(1), 155-159.

Cohen, J., (1994). The earth is round (p<.05). *American Psychologist.* **49**(12), 997-1003.

Cohen, L., Manion, L. and Morrison, K., (2007). *Research methods in education* (6th ed.). USA: Routledge.

Colman, A. M., Norris, C. E., and Preston, C. C., (1997). Comparing rating scales of different lengths: equivalence of scores from 5-point and 7-point scales. *Psychological Reports.* **80**, 355-362.

Conger, J. A., and Kanungo, R., (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review.* **12***, 637-647.

Conte, J.M., (2005). A review and critique of emotional intelligence measures. *Journal of Organisational Behaviour.* **26,** 433-440.

Cook, J., Greengold, L., Ellrodt, A. and Weingarten R., (1997). The relation between systematic reviews and practise guidelines. *Journal of Internal Medicine*. **127** (2), 210-216.

Coolican, H., (2004). *Research methods and statistics in psychology*. (4th ed.). London: Hodder Arnold.

Cooper, R.K. and Sawaf, A., (1997). *Executive EQ: emotional intelligence in leadership and organization*. New York: Grosset Putnam.

Coughlan M, Cronin P, Ryan F., (2007). Step-by-step guide to critiquing research. Part 1: quantitative research. *Br J Nursing*. **16**(11): 658–63

Craven, J.L., (1989). Meditation and psychotherapy. *Canadian Journal of Psychiatry*. **34**, 648-653.

Cresswell, W., (2003). *Research design: qualitative, quantitative, and mixed methods approaches*. London: Sage.

Creswell, J. W., (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: SAGE Publications, Inc. ISBN 978-1-4129-6557-6.

Creswell, W., (2008). *Research design: Qualitative, quantitative, and mixed methods approached* (3rd ed.) Thousand Oaks, CA: Sage.

Cronin, P., Ryan, F. and Coughlan, M., (2008). Undertaking a literature review: a step-by-step approach. *British Journal of Nursing*. **17**(1), 38-43.

Dalai Lama and Ekman, P., (2008). *Emotional awareness*. New York: Henry Holt.

Dalai Lama., (2001). *An open heart*. Boston: Little, Brown.

Dalai Lama., (2003). *The Dalai Lamais - book of transformation*. London: Harper Collins Publishers.

Dalai Lama., (2005). *The universe in a single atom - how science and spirituality can serve our world*. London: Little, Brown.

Davidow, W.H., and Malone, M.S., (1993). *The virtual corporation: Structuring and revitalising the corporation for the 21st Century*. London: Harper Business.

Davidson, J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Daniel M., Santorelli, F., Urbanowski, F., Harrington, A., Bonus, K. and Sheridan, F., (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*. **65**(4), 564-570.

Davidson, R. J., and Harrington, A. (Eds.). (2002). *Visions of compassion*. Oxford: Oxford University Press.

Dearborn, K., (2002). Studies in emotional intelligence redefine our approach to leadership development. *Public Personnel Management, 31*(4), 523-530.

Dennett, D., (1996). *Kinds of minds: towards an understanding of consciousness.* Great Britain: Clay.

Denscombe, M., (2003). *The Good Research Guide*, (2ed.), Buckingham: Open University Press.

Dent, B., Higgins, E. and Wharff, M., (2005). Spirituality and leadership: an empirical review of definitions, distinctions, and embedded assumptions, *The Leadership Quarterly*. **16**, 625-653.

Devine, F. and Health, S., (1999). *Sociological research methods in context.* Basingstoke: Macmillan.

Dhiman, S., (2008). Cultivating mindfulness: the Buddhist art of paying attention to attention. *Interbeing*. **2**(2), 35-52.

Drucker, P.F., (1967), *The Effective Executive*, Harper Colophon edition, New York, NY.

Dulewicz, V. and Higgs, M., (1999), 'Can emotional intelligence be measured and developed', *Leadership and Organization Development Journal*. (**20**) 5, pp. 242-53.

Dulewicz, V. and Higgs, M. (2000), 'Emotional intelligence: a review and evaluation study', *Journal of Managerial Psychology*. (**15**) 4, pp. 341-372.

Dunn, B., Hartigan, J. and Mikulas, W., (1999). Concentration and mindfulness meditations: unique forms of consciousness? *Applied Psychology and Biofeedback*. **24** (3), 147-164.

Easterby-Smith., M; Thorpe, R. and Lowe, A., (1991). *Management Research: An Introduction.* Sage Publications: London.

Easwaran, E., (1991). Meditation: *a simple eight-point programme for translating spiritual ideals into daily life?*. (2nd ed.) [online] Available from: easwaran. http://www.easwaran.org

Ekman, P., (1973). Darwin and cross cultural studies of facial expression. In P. Ekman (Ed.), *Darwin and facial expression: A century of research in review*. New York: Academic Press.

Elias, M.J., Bruene-Butler, L., Blum, L. and Schuyler, T., (1997). How to launch a social and emotional learning program. *Educational Leadership*. **54,** 15-20.

Elias, M.J., Tobas, S.E., and Friedlander, B.S., (1999). *Emotionally intelligent parenting: how to raise a self-disciplined, responsible and socially skilled child*. New York: Harmony/ Random House.

Emavardhana, T. and Tori, C.D., (1997). Changes in self-concept, ego defense mechanisms and religiosity following seven-day Vipassana meditation retreats. *Journal of Science Religion.* **36:**194-206.

Emmerling, R.J. and Goleman, D., (2003). Emotional issues and common misunderstandings. The Consortium for Research on Emotional Intelligence in Organizations. Retrieved from www.eiconsortium.org

Emmons, R. A., (2000). Is spirituality an intelligence ? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of religion.* **10,** 3-26.

Epstein, M.D., (1990). Beyond the oceanic feeling: psychoanalytic study of Buddhist meditation. *International Review of Psycho-analysis.* **17**, 159-166.

Fambrough, M. J., and Hart, R. K., (2008). Emotions in leadership development: A critique of emotional intelligence. *Advances in Developing Human Resources, 10*(5), 740-758.

Farrelly, D. and Austin, E.J., (2007). Ability EI as an intelligence? Associations of the MSCEIT with performance on emotion processing and social tasks and with cognitive ability. *Cognition and Emotion.* **21**(5), 1043-1063.

Fawcett, J. and Downs, F., (1992). *The relationship of theory and research.* (2nd ed.). Philadelphia, PA: F.A. Davis Co.

Feldman-Barrett, L., and Salovey, P. (eds.)., (2002). *The wisdom in feeling: psychological processes in emotional intelligence.* New York: Guilford Press.

Ferrari, M. and Sternberg, R., (1998). *Self-awareness: its nature and development.* New York: The Guilford.

Ferris, G.R., Perrewe, P.L., and Douglas, C., (2002). Social effectiveness in organization: Construct validity and research directions. *Journal of Leadership and Organisational studies.* **9,** 49-63.

Field, A. and Hole, G., (2003). *How to design and report experiments.* London: Sage.

Field, P., (2009). *Discovering statistics using SPSS* (3rd ed.) London: Sage.

Field, T., (2009). Complementary and alternative therapies research. Washington, DC: American Psychological Association.

Fontana, D., (2009). *Learn to Meditate.* London: Duncan Baird Publishers.

Fraenkel, R. and Wallen, E., (2005). *How to design and evaluate research in education.* (6th ed.) New York: McGraw-Hill.

Freud, S., (1912). Recommendations to physicians practicing psychoanalysis. In *Standard Edition.* **12**:111-12. London: Hogarth Press, 1958.

Freud, S., (1914). *Remembering, repeating and working through. The standard edition of complete psychological works of Sigmund Freud, Volume XII.* London: Hogarth Press.

Freud. S., (1930). *Civilisation and its discontents, in Complete Psychological Works*, Standard Edition. Vol. 21. London: Hogarth Press.

Fromm, E., (1975). Self-hypnosis: a new area of research, *Psychotherapy: Theory, Research and Practice.* **12**, pp. 295-301.

Fry, W.L., (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly.* **14**(6), 693-727.

Fu, C., and Wawrytko, S., (1994). *Buddhist behavioural codes and modern world.* Boston: Shambhala Publications.

Gardner, H., (1983/1993). *Multiple intelligences: the theory in practice.* New York: Basic Books Inc.

Gardner, H., (1995). *Leading minds.* New York: Basic Books.

Garman, A.N., Whiston, D.L. and Zlatoper, K.W., (2000). Media perceptions of executive coaching and formal preparation of coaches. *Consulting Psychology Journal Practice and Research.* **52** (3), 201-205.

Geher, G., (2004). *Measuring emotional intelligence: common ground and controversy.* Hauppauge. New York: Nova Science Publishers.

Gentry, W. A., Hannum, K. M., Ekelund, B. Z., and de Jong, A., (2007). A study of the discrepancy between self- and observer-ratings on managerial derailment characteristics of European managers. *European Journal of Work and Organizational Psychology, 16,* 295-325.

Germer, C., Siegel, R. and Fulton, P., (2005). *Mindfulness and psychotherapy.* New York: Guilford Press.

Ghauri, P. and Gronhaug, K., (2005). *Research methods in business studies.* England: Pearson Education Limited.

Giddens, A., (1974), Introduction in A. Giddens (ed), *Positivism and Sociology*, London: Heinemann, pp. 1-22.

Gilbert, D.T., (1998). Ordinary personology. In D.T. Gilbert, S.T. Fiske and G. Lindzey (eds). *The handbook of social psychology.* Volume 2 (4th ed.). New York: Mcgraw-Hill.

Gilbert, P., and Procter, S., (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy.* **13***,* 353-379.

Globus, G., (1980). 'On ''I'': the conceptual foundations of responsibility,' *American Journal of Psychiatry*. **137**, 417–22.

Goddard, R.G., Hoy,W.K., and Woolfolk-Hoy, A., (2004). Collective efficacy: Theoretical development, empirical evidence, and future directions. *Educational Researchers.* **33**, 2-13.

Goldstein, J., (2002). *One dharma: the emerging Western Buddhism.* San Francisco: Harper Collins.

Goldstein, J., and Kornfield, J., (1987). *Seeking the heart of wisdom: The path of insight meditation*. Boston: Shambhala Classics.

Goleman, D., (1995). *Emotional intelligence. Why it can matter more than IQ.* New York: Bantam Books.

Goleman, D., (1988). *The meditative mind: the varieties of meditative experience*. New York: J. P. Tarcher.

Goleman, D., (1995). *Emotional intelligence and working with emotional intelligence.* London: Bloomsbury.

Goleman, D., (1996). *Emotional intelligence*. London: Bloomsbury.

Goleman, D., (1998) *Working with emotional intelligence*. London: Bloomsbury.

Goleman, D., (2000). Leadership that gets results. *Harvard Business Review.* March-April 78-91.

Goleman, D., (2003). *Destructive emotions.* New York: Bantam Books.

Goleman, D., (2004a). *Emotional intelligence.* Great Britain: Clays, St Ives plc.

Goleman, D., (2004b). *Working with emotional intelligence*. Great Britain: Clays, St Ives plc.

Goleman, D., Boyatzis, R. and Mckee, A., (2001). *Primal leadership: the hidden driver of great performance*. Technical Communication.

Goleman, D., Boyatzis, R. and Mckee, A., (2002a). *Primal leadership: realize the power of emotional intelligence.* USA: Harvard Business School Press.

Goleman, D., Boyatzis, R. Mckee, A., (2002b). *'The new leaders': transforming the art of leadership into the science of result.* Great Britain: Clays, St Ives plc.

Gomm, R., (2004) *Social Research Methodology: A Critical Introduction*. London: Palgrave.

Gowing, M. K., (2001). Measurement of individual emotional competence. In C.

Grant, J. A., Courtemanche, J., Duerden, E. G., Duncan, G., and Rainville, P., (2010). Cortical thickness and pain sensitivity in Zen meditators. *Emotion.* **10***, 43–53.

Gross, R., (2010). *Psychology: The science of mind and behaviour.* (6th Ed.). London: Hodder Education.

Grossman, P., Niemann, L., Schmidt, S. and Walach, H., (2004). Mindfulness-based stress reduction and health benefits: a meta-analysis. *Journal of Psychosomatic Research.* **57**(1),35-43.

Guilford, J. P., and Fruchter, B., (1978). *Fundamental statistics in psychology and education.* New York: McGraw-Hill.

Gunaratana, H., (2002). *Mindfulness in plain English.* Somerville, MA: Wisdom Publications.

Gupta, V., Russell, A. and Lo, E., (2007). Meditation: the adoption of Eastern thought to Western social practices. *Journal of Religion and Spirituality in Social Work.* **26**(2), 49-61.

Hair, F., Black, C., Babin, J., and Anderson, E., (2010). *Multivariate data analysis: a global perspective.* New Jersey: Pearson.

Hanley, P. and Spates, L., (1978). Transcendental meditation and social psychological attitudes. *Journal of Psychology.* **99**(2), 121.

Harung, H. and Heaton, D., (1993). Significance of higher stages of adult development for improving the effectiveness of knowledge workers. *Eighth World Productivity Congress.* May, pp. 23-27.

Harung, H., Travis, F., Blank, W. and Heaton, D., (2009). Higher development, brain integration, and excellence in leadership. *Management Decision.* **47**(6), 872 - 894.

Harung, S., Dennis, H., and Charles A., (1995). A unified theory of leadership: experiences of higher states of consciousness in world-class leaders. *Leadership and Organisation Development Journal.* **16**(7), 44 - 59.

Heppner, P., (2006). The benefits and challenges of becoming cross-culturally competent. The *Counselling Psychologist.* **34,** 147-172.

Herzog, A. et al., (1990). Changes pattern of regional glucose metabolism during yoga meditative relaxation, *Neuropsychology.* **23**(4); pp. 182-187.

Hicks, C. and Turner, K., (1999). *Fundamental concepts in the design of experiments.* New York: Oxford University Press.

Hofstede, G., (1981): Culture and organizations. *International Studies of Management and Organization.* **10**(4), p. 15-41.

Hogan, J., Benjamin, A. and Brezinski, L., (2000). Reliability methods: a note on the frequency of use of various types. *Educational and Psychological Measurement.* **60**(4), 523-531.

Holzel, B.K. Ott U, Hempel, H. et al., (2007). Differential engagement of anterior cingulated and adjacent media frontal cortex in adept meditators and non-meditators. *Neurosci Lett.* **421**: 16-21.

Howel, C., (2007). *Statistical methods for psychology.* USA: Vicki knight.

Hwang, K. and Chang, J., (2009). Self-cultivation: culturally sensitive psychotherapies in Confucian societies. *The counselling Psychologist.* **37**(7), 1010-1032.

Jackson, B., and Parry, K., (2008). *A very short, fairly, interesting and reasonably cheap book about leadership.* Thousand Oaks, CA: Sage Publications.

Jaseja, H., (2007). "Meditation and epilepsy: The ongoing debate." Medical Hypotheses **68**(4): 916-917.

Jevning R, Wallace RK, Beidebach M., (1992). The physiology of meditation: A review. A wakeful hypometabolic integrated response. *Neuroscience Biobehavioural Review.***16,**415–424.

Jevning, R., Anand, R., Biedebach M., Fernando G., (1996). Effects on regional cerebral blood flow of Transcendental Meditation. *Journal of Physiological Behaviour.* **59**(3), 399-402.

Jindahra, D., (2006). The *path to magga phala: the method of samatha vipassana meditation by Phramongkolthepmuni (Sodh Cabdasaro).* Bangkok: Wat Paknam.

Jones, G., (1992). Was there a Hawthorne effect? *The American Journal of Sociology.* **98**(3), 451-468.

Kabat-Zinn, J., (1991). *Full catastrophe living.* New York: Delta Trade Books.

Kabat-Zinn, J., (1994). *Wherever you go, there you are: mindfulness meditation in every life.* New York: Hyperion.

Kabat-Zinn, J., (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology: Science and Practice.* **10**(2), 144-156.

Kampa-Kokesch, S., and Anderson,M. Z., (2001).Executive coaching: A comprehensive review of the literature. *Consulting Psychology Journal: Practice & Research.* **53** (4), 205-228.

Kaplan, H., and Sadock, B., (1991). *Comprehensive Glossary of Psychiatry and Psychology.* Baltimore, MD: Williams and Wilkins.

Kaplan, R.E., (1990), "Introduction", *Journal of Applied Behavioural Science.* **26** (4), pp. 417-418.

Keeva, S., (2005). A meditative perspective. *ABA Journal*. 28 March 2005 .

Kickul, J., and Neuman, G., (2000). Emergent leadership behaviours: The function of personality and cognitive ability in determining teamwork performance and KSAs. *Journal of Business and Psychology.* **15**(1), 27-51.

Kilburg, R.R., (2000), *Executive Coaching: Developing Managerial Wisdom in a World of Chaos*. American Psychological Association. Washington, DC.

Killingsworth, M. A., and Gilbert, D. T., (2010). A wander mind is an unhappy mind. *Science.* 330, **932.**

Kitpredaborisood, B., (2006). *Technique in gathering research instrument.* Bangkok: Chamjuree Product.

Koestenbaum, P., (2002). *Leadership: the inner side of greatness - a philosophy for leaders.* New York: John Wiley.

Kokoszka, A., (1994). A rationale for multileveled model of relaxation. *International Journal of Psychosomatics*. **41**, 4-10.

Kostanski, M. and Hassed, C., (2008). Mindfulness as a concept and a process. *Australian Psychologist.* **43** (1), 15-21.

Kotter, J., (1998). *Harvard Business Review on Leadership*. USA: Harvard Business School.

Kouzes, J. and Posner, Z., (2002). *Leadership Challenge.* (3rd ed.) San Francisco, CA: Jossey-Bass.

Kunnanatt, T.J., (2008), 'Emotional intelligence: theory and description', *Career Development International.* **13** (7), pp.614-629.

Kushner, K., Marnocha M. *et al.,* (2008). *Meditation and Relaxation. Evidence-Based Adjunctive Treatments.* San Diego: Academic Press: 177-205.

La Forge, P., (2004). Cultivating moral imagination through meditation. *Journal of Business Ethics.* **51**, 15-29.

Landy, F. J., and Conte, J. M., (2004). *Work in the 21st century: An introduction to industrial and organizational psychology*. Boston, MA: McGraw-Hill.

Lazar, S., (2005). Mindfulness Research. ln Siegel, R. and Folton, P., (eds.), *Mindfulness and psychotherapy.* New York: Guilford.

Lazar, S., Herr, C., Wasserman, R., Gray, J., Greve, D., Treadway, M., McGarvey, M., Quinn, B., Dusek, J., Benson, H., Rauch, S., Moore, C. and Fichl, B., (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport.* **16,** 1893-1897.

Lee, T.W., Locke, E.A. and Latham, G.P., (1989). Goal setting theory and job performance. In L. Pervin (Ed.), Goal Concepts in Personality and Social Psychology. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Lehmann, D., Faber, P., Achermami, P., Jeanmonod, D., Gianotti, L. and Pizzagalli, D., (2001). Brain sources of EEG gamma frequency during volitionally meditation-induced altered states of consciousness, and experience of the self. *Psychiatry Research*. **108**, 111-121.

Lennick, D. and Kiel, F., (2005). *Moral Intelligence*. USA: Wharton School.

Lennick, D., and Kiel, F., (2010). The Morally Intelligence Organisation, FT Press.

Leonard, D., (2006). Meditation : a new role for an old friend. *American Journal of Hospice.* **23**(4), 323-327.

Lindebaum, D. and Cartwright, S., (2010). A critical examination of the relationship between emotional intelligence and transformational leadership. *Journal of Management Studies.* **47**(7), 1317-1342.

Lindebaum, D., and Cartwright, S., (2011). Leadership effectiveness: The costs and benefits of being emotionally intelligent. *Leadership and Organisation Development Journal.* **32**(3), 281-290.

Loftus, G., (1991). On the tyranny of hypothesis testing in the social sciences. *Contemporary Psychology*. **36**(2), 102-104.

London, M., (2002). *Leadership development: paths to self-insight and professional growth.* USA: Lawrence Erlbaym.

Lutz, A., Dunne, J. and Davidson, R., (2007). Meditation and the neuroscience of consciousness. In Zelazo, P., Moscovitch, M. and Thompson, E., (eds.) The *Cambridge handbook of consciousness.* Cambridge: Cambridge University Press.

Lutz, A., Greischar, L., Rawlings, N., Ricard, M. and Davidson, R., (2004). Long-term meditators self-induce high-amplitude gamma synchrony during mental practice. *The National Academy of Science.* **101,** 16369-16373.

Lutz, A., Slagter, H. A., Rawlings, N. B., Francis, A. D., Greischar, L. L., and Davidson, R. J., (2009). Mental training enhances intentional stability: Neural and behavioural evidence. *The* Journal *of Neuroscience.* **29**(42), 13418-13427.

Lvanovski, B. and Malhi, S., (2007). The psychological and neurophysiologic concomitants of mindfulness forms of meditation. *Neuropsychiatric*. **19**(2), 76-91.

Machin, D., Campbell, J., and Tan, S., (2009). *Sample size tables for clinical studies.* USA: Blackwell.

Mahanta, G. and Thooyamani, K., (2010). Perception of top level knowledge workers on productivity improvement through tools and techniques. *Journal of Management Research*. **2**(1), 1-18.

Maharishi-Mahesh, Y., (1969). *On the Bhagavad-Gita: a new translation and commentary.* Baltimore: Penguin.

Maharishi-Mahesh, Y., (1972). *The science of creative intelligence*. Videotaped course, Maharishi International University, Iowa: Fairfield

Manocha, R., (2011). *Meditation, mindfulness and mind-emptiness. Acta Neuropsychiatrica.* **23**(1), 46-47.

Manz, C. and Sims, H., (1993). *Business without bosses. How self-managing teams are building high-performing companies.* New York: John Wiley and Sons.

Margo, C. E., (1999). The placebo effect. *Survey of Ophthalmology.* **44,** 31–44.

Marlatt, G. and Kristeller, J., (1999). Mindfulness and meditation. In W. R. Miller (Ed.), Integrating spirituality into treatment: Resources for practitioners (pp. 67-84). Washington, DC: American Psychological Association.

Marques, J., Dhiman, S. and King, R., (2005). Spirituality in the workplace: developing an integral model and a comprehensive definition. *The Journal of American Academy of Business.* **7**(1), 81-91.

Masciarelli, J., (1999). Less lonely at the top. *Management Review*. April.

Mason, O., Claridge, G., Jackson, M., (1995). New scales for the assessment of schizotypy. *Personal Individual Differences*. **18,** 7 –13.

Matthews, G., Zeidner, M., and Roberts, R.D., (2002). *Emotional intelligence: science and myth.* Cambridge, MA: MIT Press.

Mayer, J., Caruso, D., and Salovey, P., (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*. **27,** 267-279.

Mayer, J. D., (2004). A classification system for the data of personality psychology and adjoining fields. Review of General Psychology. **8**(3), 208-219.

Mayer, J. D., Salovey, P., Caruso, D. R., and Sitarenios, G., (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion.* **3,** 97–105.

Mayer, J., Salovey, P. and Caruso, D., (2004). Emotional intelligence: theory, findings and implications. *Psychological Inquiry*. **15**(3), 197-215.

Mayer, J.D. and Salovey, P., (1997). What is emotional intelligence? In P. Salovey and D. Sluyter (eds.): *Emotional development and emotional intelligence: educational applications* (pp. 3-31). New York: Basic Books.

Mayer, J.D., Salovey, P., and Caruso, D., (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT),* Version 2.0. Toronto, Canada: Multi-Health Systems.

Mayo, E., (1949), *The Social Problems of an Industrial Civilisation,* Routledge and Kegan Paul, London.

McCollum, B., (1999). Leadership development and self-development: an empirical study. *Career Development International.* **4**(3), 149-154.

McCormick, D., (1994). Spirituality and management. *Journal of Managerial Psychology.* **9**(6), 5-8.

McKenna, E., (2000). *Business psychology and organisational behaviour*: a student's handbook. (3rd ed.) New York: Psychology Press.

McLaughlin, D. (2005).Considerations in using the longitudinal school-level state assessment score database. Paper presented at the Symposium on the Use of School-Level Data for Evaluating Federal Education Programs. Retrieved from http://www7.nationalacademies.org/bota/School-Level%20Data_McLaughlin-Final.pdf .

McNeill, P. and Chapman, S., (2005). *Research Methods.* (3rd). UK: Travistock publication.

McVay, J. C., Kane, M. J., and Kwapil, T. R., (2009). Tracking the train of thought from the laboratory into everyday life: An experience-sampling study of mind wandering across controlled and ecological contexts. *Psychonomic Bulletin Review.* **16**(5), 857-863.

Mead, R., (1988). *The design of experiments: statistical principles for practical application.* Cambridge: Cambridge University Press.

Milgram, S., (1974). *Obedience to authority: An experimental view.* New York: Harper & Row

Moore, A. and Malinowski, P., (2009). Meditation, mindfulness and cognitive flexibility. *Consciousness and Cognition.* **18**(1), 176-186.

Moore, N., (2000). *How to do research: the complete guide to designing and managing research projects.* (3rd ed.) London: Library Association Publishing.

Morris, R. and Seeman, M., (1950). The problem of leadership: an interdisciplinary approach. *The American Journal of Sociology.* **56**(2), 149-155.

Murphy, K.R. and Sederman, L., (2006). The two EIs. In Murphy, K.R. (ed.), *A Critique of Emotional Intelligence.* Mahwah, NJ: Lawrence Erlbaum.

Murphy, M. and Donovan, S., (1997). *The physical and psychological effects of meditation.* (2nd ed.) Petaluma, CA: Institute of Notice Sciences.

Nair, K., (1996). A *higher standard of leadership: lessons from the life of Gandhi*. San Francisco, CA: Berrett-Koehkler Publishers.

Napier, E., (2007). *Positive thought*. London: Buy Time Directory.

Needham G., (2000). Research and practise: making a difference. In Gomm, R. and Davies, C., *Using Evidence in Health and Social Care*. London: Sage Publications.

Nielsen, L., and Kaszniak A., (2006). Awareness of subtle emotional feelings: a comparison of long-term meditators and non-meditators. *Emotion*. **6**(3), 392-405.

Nightingale, A., (2009). A guide to systematic literature reviews. *Surgery*. **27**(9), 381-384.

Nyanaponika, T., (2000). *The vision of Dhamma*. Onalaska, WA: BPE Pariyatti.

Oatley, K., (2004). Emotional intelligence and the intelligence of emotions. *Psychological Inquiry*. **15**(3), 216-238.

Ong, J., Shapiro, S. and Manber, R., (2009). Mindfulness meditation and cognitive behavioural therapy for insomnia: a naturalistic 12-month follow-up. *The Journal of Science and Healing*. **5**(1), 30-36.

Onwuegbuzie, A. J., and Teddlie, C., (2003). A Framework for Analyzing Data in Mixed Methods Research. *In Handbook of Mixed Methods in Social and Behavioral Research*. A. Tashakkori and C. Teddlie, eds. Pp. 351-383. Thousand Oaks, CA: Sage.

Oppenheimer, R. J., (1954). Speech delivered at Columbia University, December 27.

Osho, (2004). *Meditation - The first and last freedom*. New York: St. Martin's Press.

Ostafin, B.D., Chawla, N., Bowen, S. et al., (2006). Intensive mindfulness training and the reduction of psychological distress: A preliminary study. *Cognitive Behavioural Practice*. **13:** 191-197.

Owen, H., Hodgson, V. and Gazzard, N., (2004). *The leadership Manual: Your complete practical guide for effective leadership*. Great Britain: Biddles.

Palinscar, A.S., (1998). Social constructivist perspectives on teaching and learning, *Annual Review of Psychology*. **49,** 345-375.

Pavlovich, K., (2010). Education for conscious awareness. *Journal of Management, Spirituality and Religion*. **7**(3), 193-208.

Payne, R., (2005). *Benson's method: relaxation techniques*. (3rd ed.) Edinburgh: Churchill Livingstone: 191-195.

Payutto, P., (1988). *Sammasati: An exposition of right mindfulness* (Dhamma-Vijaya). Bangkok: Wat Pak Nam. .

Pelled, E., (2007). Learning from experience: Bion's concept of reverie and Buddhist meditation: a comparative study. *The International Journal of Psychoanalysis*. **88**(6), 1507-1526.

Perez-De-Albeniz, A. and Holmes, J., (2000). Meditation: concepts, effects and uses in therapy. *International Journal of Psychotherapy*. **5**(1), 49-59.

Petrides, K. and Furnham, A., (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*. **29**, 313 - 320.

Popper, M., and Lipshitz, R., (1992). Coaching on leadership. *Leadership and Organization Development Journal*. **13**(7), 15-19.

Porter, K., Smith, P. and Fagg, R., (2006). *Leadership and management: for HR professional*. Norfolk: Biddles.

Punch, K., (1998). *Introduction to social research: quantitative and qualitative approaches*. London: Sage Publications.

Raffone, A. and Srinivakan, N., (2010). The exploration of meditation in the neuroscience of attention and consciousness. *Cognitive Process*. **11,** 1-7.

Ray, R.H., and Anderson, S.R., (2000). *The cultural creatives: How 50 million people are changing the world.* New York: Harmony Books.

Riggio, R. E., and Reichard, R. J., (2008). The emotional and social intelligences of effective leadership: An emotional and social skill approach. *Journal of Managerial Psychology*. **23***,* 169-185.

Riggio, R.E., (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology*. **51,** 649-660.

Riggio, R.E., Riggio, H.R., Salinas, C. and Cole, E.J., (2003). *The role of social and emotional communication skills in leader emergence and effectiveness.* Group Dynamics-Theory Research and Practice. 7: 83-103.

Rogers, J., (2008), *Coaching skills - a Handbook.* (2nd ed). Open University Press.

Rosch, E., (1999). Is wisdom in the brain'? A review of Zen and the brain. *Psychological Science*. **10**(3), 222-224.

Sala, F., (2003). Executive blind spots: Discrepancies between self- and other-ratings. *Consulting Psychology Journal*. **55,** 222-229.

Salovey, P. and Mayer, J., (1990). Emotional intelligence. *Imagination, Cognition and Personality*. **9**(3), 185-211.

Salovey, P., Brackett, M.A., and Mayer, J.D., (eds.). (2004). *Emotional intelligence: key readings on the Mayer and Salovey model.* Port Chester, NY: Dude Press.

Sarantakos, S., (1998). *Social research*. New York: Palgrave.

Saunders, M., Lewis, P., and Thornhill, A., (2000). *Research methods for business students.* Great Britain: Pearson Education.

Schein, E., (2004). *Organisational culture and leadership* (3rd ed.), USA: Jossey-Bass.

Schneider, R., Alexander, C., Staggers, F., Orme-Johnson, D., Rainforth, M., Salerno, W., Sheppard, W., Castillo-Richmond, A., Barnes, A., and Nidish, S., (2005). A randomised controlled trial of stress reduction in African Americans treated for hypertension for over one year. *American Journal of Hypertension*. **18**(l), 88-98.

Schure, M., Christopher, J. and Christopher, S., (2008). Mind-body medicine and the art of self-care: teaching mindfulness to counselling students through yoga, meditation, and qigong. *Journal of Counselling and Development*. **86**(1), 47-54.

Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J. and Dornheim, L., (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*. **25**, 167–177.

Segal, Z., Williams, J. M. G., and Teasdale, J., (2007) Title of Document: Welcome to www.mbct.com – Your guide to Mindfulness-Based Cognitive Therapy. Retrieved July 4th, 2009 from http://www.mbct.com/Index.htm.

Shapiro, S, L., Carlson, L. E., Arlin, D. A., and Freedman. B., (2006), Mechanisms of mindfulness, *Journal of Clinical Psychology*. **62**, 373-386.

Shapiro, S. and Walsh, R., (1984). *Meditation*. New York: Aldine.

Shapiro, S. and Walsh, R., (2003). An analysis of recent meditation research and suggestions for future directions. *Journal for Meditation and Meditation Research*. **3,** 86-114.

Shapiro, S. L., Brown, K. W., and Biegel, G. M., (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*. **1**, 105-115.

Shapiro, S., Schwartz, G. and Bonner, G., (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behaviour Medicine*. **21**, 581-599.

Sharp, J. and Howard, K., (1996). *The Management of a Student Research Project.* (2nd ed.) Aldershot; Gower.

Simpson, T.L., Kaysen, D., Bowen, S. et al., (2007). PTSD symptoms, substance abuse and Vipassana meditation among incarcerated individuals. *Journal of Traumatic Stress.* **3:** 239-249.

Sivanathan, N., and Fekken, C., (2002). 'Emotional intelligence, moral reasoning and transformational leadership' , *Leadership and Organisational Development Journal*. **23** (4), pp. 198-204.

Slagter, H., Lutz, A., Greischar, L., Francis, A., Nieuwenhuis, S., Davis, J. and Davidson, R., (2007). Mental training affects distribution of limited brain resources. *PLOS Biology*. **5,** 1228-1235.

Smallwood, J., and Schooler, J. W., (2006). The restless mind. *Psychological Bulletin*. **132**(6), 946-958.

Smith, L. and Sandstrom, J., (1999). Executive leader coaching as strategic activity. *Strategy and Leadership*. **27**(6), 33-36.

Snaith, P., (1998). Meditation and psychotherapy. *British Journal of Psychiatry*. **173**, 193-195.

Sosik, J. and Megerian, J., (1999). Understanding leader emotional intelligence and performance. *Group and Organisation Management*. **24**, 367–391.

Sosik, J. J., (2001). 'Self-Other agreement on charismatic leadership: Relationships with work attitudes and managerial performance'. *Group and Organisational Management*. **26**, 484-511.

Sternberg, R.J. and Salter, W., (1982). Conceptions of inteeligence. In Sternberg, R. J. (Ed.), *Handbook of human intelligence*. Cambridge, UK: Cambridge University Press.

Stogdill, R., (1974). *Handbook of leadership*. New York: The Free Press.

Swinehart, R., (2008). Two cases support the benefits of transcendental meditation in epilepsy. *Medical Hypotheses*. **70**(5), 1070-1070.

Tabachnick, B. and Fidell, L., (2007). *Using multivariate statistics*. (5th ed.) Boston: Allyn and Bacon.

Tekleab, A. G., Sims, H. P., Yun, S., Tesluk, P. E., and Cox, J., (2008). Are we on the same page? Effects of self-awareness of empowering and transformational leadership. *Journal of Leadership and Organizational Studies*. **14**, 185-201.

Thach, E. and Heinselman, T., (1999), "Executive coaching defined", *Training and Development Journal*. **53**(3), pp. 34-9.

Thach, E.C., (2002). The impact of executive coaching and 360 feedback on leadership effectiveness. *Leadership and Organizational Development Journal*. **23**(3/4), 205-214.

Thera, N., (2005). *The power of mindfulness: An inquiry into the scope of bare attention* (7th ed.). Kandy, Sri Lanka: Buddhist Publication Society. .

Thompson, B., (1996). AERA editorial policies regarding statistical significance testing: Three suggested reforms. *Educational Researcher*. **25**, 26-30.

Thorndike, E.L.,(1920). Intelligence and its users. *Harper's Magazine*. **140**, 227–235.

Thorndike, R. L., (1936). Factor analysis of social and abstract intelligence. *Journal of Educational Psychology*. **27**, 231–233.

Thorndike, R. L., and Stein, S., (1937). An evaluation of the attempts to measure social intelligence. *Psychological Bulletin*. **34,** 275–285.

Tischler, L., Biberman, J. and McKeage, R., (2002). Linking emotional intelligent, spirituality and workplace performance. *Journal of Managerial Psychology*. **17**(3), 203-218.

Tjosvold, D., (1991). *Team organisation: an enduring competitive advantage*. Great Britain: John Wiley and Sons.

Travis, F., Arenander, A. and Dubois, D., (2004). Psychological and physiological characteristics of a proposed object-referral/self-referral continuum of self-awareness. *Consciousness and Cognition*. **13**(2), 401-420.

Vygotskii, S., (1978). *Mind in society: the development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wachholtz, A. and Pargament, K., (2005). Is spirituality a critical ingredient of meditation'? comparing the effects of spiritual meditation, secular meditation, and relaxation on spiritual psychological, cardiac, and pain outcomes. *Journal of Behavioural Medicine*. **28**(4), 369-384.

Wallace, A. B. (Ed.)., (2003). *Buddhism and Science*: Columbia University Press.

Wallace, B. A., (1999). The Buddhist Tradition of Samatha: Methods for Refining and Examining Consciousness." *Journal of Consciousness Studies*. **6**(2-3), 175-187.

Wallace, B. and Shapiro, S., (2006). Mental balance and well-being: building bridge between Buddhism and Western psychology. *American Psychologist*. **61**(7), 690-701.

Wallace, B., (2001). *Buddhism with an attitude: The Tibetan seven-point mind-training*. Ithaca, NY: Snow Lion.

Wallace, B., (2003). *Buddhism and science*. New York: Columbia University Press.

Wallace, K. and Benson, H., (1972). The physiology of meditation. *Science American*. **Feb**, 84-90.

Wallace, R. K., (1970). Physiological effects of transcendental meditation. *Science*. **167**(926), 1751-1754.
Wallace, R., (1993). *The physiology of consciousness*. New York: MIU Press.

Walsh, R. and Shapiro, S., (2006). The meeting of meditative disciplines and Western psychology: a mutually enriching dialogue. *The American Psychologist*. **61**(3), 227-239.

Walsh, R. N., (1983). Meditation practice and research. *Journal of Humanistic Psychology.* **23**, 18–50.

Washbush, J. and Clements, C., (1999). Two faces of leadership. *Career Development International.* **4**(3), 146-148.

Watson, J. B., (1913). Psychology as a behaviorist views it. In R. John Huber, Cynthia Edwards and David Henning Bownton (Eds.), *Cornerstones of psychology-readings in the history of psychology* (pp.180-191). Asia: Thomson Learning Incorporated.

Wechsler, D., (1943). Nonintellective factors in general intelligence. *Journal of Abnormal Social Psychology.* **38,** 100-104.

Wechsler, D., (1958). *The measurement and appraisal of adult intelligence* (4th ed.). Baltimore, MD: The Williams and Wilkins Company.

Wegner, D., and Vallacher, R., (1980). *The self in social psychology.* New York: Oxford University Press.

Weiner, B., (1980). *Human motivation*. New York, NY: Holt, Rinehart & Winston.

Weiner, B., (1992). *Human motivation: Metaphors, theories, and research.* Newbury Park, CA: SAGE Publications.

Western, S., (2008). *Leadership: a critical text*. Los Angeles: Sage Publications.

Wheelahan, L. and Carter, R., (2001). 'National training packages: a new curriculum framework for vocational education and training in Australia', *Education and Training.* **43** (6), 303-16.

Whitehouse, W. G., E. C. Orne, et al., (2007). *Relaxation Techniques. Encyclopaedia of Stress*. New York, Academic Press**:** 345-350.

Wicklund, R., (1975). Objective self-awareness. In L. Berkowitz (Ed.), *Advances in experimental social psychology.* **8,** pp. 233-275. New York: Academic Press.

Wilber, K., (1998). *The Marriage of Sense and Soul: Integrating Science and Religion.* Dublin, Ireland: Newleaf.

Wilkinson, L., (1999). APA task force on statistical inference. Statistical methods in psychology journals: guidelines and explanations. *American Psychologist.* **54**, 594-604.

Witherspoon, R., and White, R. P., (1997). *Four Essential Ways that Coaching Can Help Executives.* Greensboro, N.C.: Center for Creative Leadership.

Wong, E. (1996). *Feng-shui: The ancient wisdom of harmonious living for modern times.*

Yammarino, F. J., and Atwater, L. E., (1997). Do managers see themselves as others see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics.* **(Spring),** 35-44.

Yukl, G. A., (2006). *Leadership in organizations* (6th ed.). Englewood Cliffs, NJ: Prentice

Zaleznik, A., (1998). *Managers and Leaders - Are they different?* Boston: Harvard Business School Press.

Zelazo, D., Moscovitch, M. and Thompson, E., (2007). *The Cambridge handbook of consciousness.* New York: Cambridge University Press.

Zeldow, P.B., (1995). Psychodynamic formulations of human behaviour. In D. Wedding (ed.) *Behaviour and medicine* (2nd ed). St Louis, MO: Mosby-Year Book.

Zikmund, W. G., (2003), *Business Research Methods.* 7th ed.,Ohio-USA, Thomson, South-Western.

Zohar, D., and Marshall, I., (2001). *Spiritual Intelligence (The Ultimate Intelligence),* Bloomsbury: Paperbacks.