Abstract

The objective of this dissertation is to evidence the correlation between cultural experience and Emotional Intelligence (EI) which can influence the outcome of Emotional Intelligence Questionnaires (EIQ). To do so, three defined variables, such as age, language abilities and foreign experience have been taken into consideration to present Cultural Intelligence [CI] and students from different nationalities have taken one elected EIQ in two different languages. The correlation between the two test results, based on the participants age, language abilities and foreign experience have been observed, and discussed. The results of the study indicate that all three variables have an impact on EI, whereas age and foreign experience seemed to be more important than language abilities. As it is proposed that EI contributes to effective leadership, it is required to study if this theory is culturally influenced. This discussion is needed as the construct of EI became widely used in Psychology and Human Resource Management (HRM) to evaluate individual and team performance, while most accessible questionnaires have been constructed by North American researchers and are usually available in English. Therefore the use of well established EI questionnaires, evaluating trait or ability EI needs to be investigated to avoid conclusions neglecting possible cross-cultural differences and influencing evaluation standards. It is necessary to mention, that because of the limitation of the work, the cultural dependency of EI questionnaires will be studied while focusing on verbal understanding and by using one specific Questionnaire as example, namely the Wang and Law Emotional Intelligence Scale [WLEIS].

Resumo

O objectivo desta dissertação é comprovar a existência de uma correlação entre a experiência cultural e a Inteligência Emocional (IE), e a forma como esta pode influenciar o resultado de um Questionário de Inteligência Emocional (QIE). Para alcançar este objectivo, três variáveis foram consideradas como indicadores de Inteligência Cultural (IC), nomeadamente, idade, conhecimentos linguísticos e experiência no estrangeiro. Para tal, estudantes de diferentes nacionalidades responderam a um QIE específico em duas línguas distintas. A correlação entre os resultados dos dois testes, baseados na idade, na capacidade linguística e na experiência no estrangeiro foi examinada e discutida. A conclusão é que as três variáveis têm impacto sobre a IE, embora pareça que a idade e a experiência no estrangeiro são mais importantes do que os conhecimentos linguísticos. Sendo sugerido que a IE contribui para a capacidade de liderança, é necessário estudar se esta teoria é influenciada pelas diferenças culturais. Esta discussão torna-se inevitável uma vez que a IE se tornou numa ferramenta amplamente utilizada na área de Psicologia e de Recursos Humanos para avaliar a eficiência individual e de grupos. No entanto a maioria dos questionários disponíveis foram criados por cientistas norte-americanos e normalmente estão unicamente disponíveis em inglês. Desta forma é essencial investigar a utilização dos QIE que avaliam qualidades e aptidões da IE, para evitar conclusões que negligenciam possíveis diferenças culturais influenciando os critérios de avaliação. É necessário mencionar, que devido às limitações associadas à dissertação, a dependência entre os Questionários de Inteligência Emocional e a experiência cultural vai ser investigada, focando-se na compreensão verbal e apenas utilizando o questionário de Wang e Law, a Escala de IE [WLEIS].

Palavras de chave:
Inteligencia Emocional ♦ questionario ♦ differencias culturais cruzadas ♦ WLEIS
J24 ♦ D83

Resumo executivo

O objectivo desta dissertação é comprovar a existência de uma correlação entre a experiência cultural e a Inteligência Emocional (IE), e a forma como esta pode influenciar o resultado de um Questionário de Inteligência Emocional (QIE). Para alcançar este objectivo, três variáveis foram consideradas como indicadores de Inteligência Cultural (IC), nomeadamente, idade, conhecimentos linguísticos e experiência no estrangeiro. Para tal, estudantes de diferentes nacionalidades responderam a um QIE específico em duas línguas distintas. A correlação entre os resultados dos dois testes, baseados na idade, na capacidade linguística e na experiência no estrangeiro foi examinada e discutida.

A dissertação está dividida em sete partes distintas, das quais as primeiras quatro são explicativas do conceito de IE e de IC. A introdução inclui uma curta explicação dos nomes e modelos existentes de Inteligência Emocional e Cultural, explica as divergências de impressão e expressão de emoções e os trabalhos científicos feitos para tratar estes assuntos e outros temas adicionais já estudados nestas áreas. Para além disso, a introdução oferece um "overview" da dissertação e a explicação da ordem das passagens incluídas. A segunda parte da dissertação conta a história da IE. Inicialmente explica o conceito de Inteligência Social, fundado pelo cientista E. L. Thorndike, que consistia em emoções e sentimentos introduzindo pela primeira vez no mundo científico o conceito de Inteligência Emocional. De seguida são dadas algumas definições de IE e uma breve introdução aos três modelos de IE mais famosos, nomeadamente o Mayer, Salovey e Caruso Emotional Intelligence Scale [MSCEIT], o modelo de Goleman e finalmente o modelo de Bar-On que introduziu o termo de "Emotional Quotient" e o Inventario de Quociente Emocional [EQ-i]. A terceira parte da dissertação, confronta o tema de pesquisas entre emoções e a cultura cruzada. Para chegar a um consenso, dois estudos foram aproveitados. Primeiro um de Elfenbein e Ambady sobre a teoria da vantagem de pertencer a um grupo cultural, "in-group advantage", e um segundo de Geert Hofstede sobre as diferenças entre culturas individualistas e colectivistas. A quarta e última parte teórica compara vários modelos e formas de medir IE e explica as três medidas usadas para criar os modelos actuais (o modelo misturado, o modelo de habilidade e o modelo de investimento), com o objectivo de definir o mais adequado

para o estudo final. Os modelos incluídos na pesquisa são o MSCEIT, o TMMS, o SSRI, o SSEIT, o WPOei o EQ-i e o modelo final escolhido, o WLEIS. A quinta parte explica a razão da selecção das três variáveis deste estudo, nomeadamente idade, capacidade linguística e experiência no estrangeiro e como são usadas durante da pesquisa primária. Depois, o estudo é apresentado, incluindo os questionários, o método, as medidas, os participantes, o procedimento e os resultados. Para escolher uma norma estatística, três possíveis foram identificadas ("ANOVA", "multivariance analysis" e "univariate analysis of variance") sendo a *univariate analysis of variance* a norma seleccionada. A conclusão mostra que as três variáveis têm impacto sobre a IE, embora pareça que a idade e a experiência no estrangeiro são mais importantes do que os conhecimentos linguísticos. A parte final é a discussão dos resultados, mostrando que os resultados são importantes para a questão de um impacto cultural para IE e na sequência destes, uma pesquisa mais profunda será necessária para chegar a uma solução globalmente aceitável.

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DISCUSSION AND ARGUMENTATION ABOUT THE IMPACT
OF CULTURAL EXPERIENCE ON EMOTIONAL
INTELLIGENCE MEASUREMENT QUESTIONNAIRES

Thomas Werner Lippels

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- Spine -

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Finally, my beautiful wife, who at all times gave me the warmth and love I needed to go on and finish my dissertation… I love you.

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Introduction

From increasing competition in the labor-market, through the growing need for technical expertise, the computerization of processes and the globalization of markets, intellectual ability has been seen as one of the most influential facts of achievement among psychologists and the general public during ages. Although mostly focusing on cognitive aspects such as problem-solving and memory, the contribution of emotional abilities within the intellectual construct and the impact of perceiving, expressing and understanding ones own and the emotions of others turned out to be a related subject of universal interest, coined as "Emotional Intelligence" [EI].

Even after more than a decade has passed by since Daniel Goleman published his bestselling book, *Emotional Intelligence: Why it can matter more than IQ* (1995), the discussion about the impact and validity of EI on ones professional success and overall satisfaction has not calmed down. Specialists suggest that "success" and "satisfaction" in life can be associated with emotional intelligence (Dulewicz, Higgs, 2000) and they widely studied the importance of emotions in Leadership theories (e.g., George, 2000). Yukl for example mentions the situational relevance of skills and that for "Top level Managers", interpersonal competencies, such as Emotional- and Social Intelligence, are more required for success than technical skills (Yukl, 1998).

However, there is one aspect that caused special divergences among psychologists: The cultural universality of emotions (e.g., Elfenbein, & Ambady, 2002; Matsumoto, 1989; Mesquita & Frija, 1992). Researchers have been trying to prove existing similarities of emotions between cultures, distinguishing between emotion expression and emotion recognition, but they have not been able so far to agree on an universal agreement on the subject.

But why is this important within the construct of emotional intelligence? EI questionnaires, used in Human Resource Management and being part of the decision if "the right person" gets hired or not, are mostly innovated and constructed by North American and European specialists, inducting their cultural mind set and the English language into the tests. So the question has to be, are these questionnaires culturally influenced, and/or do they offer an "in-group advantage" (Elfenbein & Ambady, 2003) which can lead to a possible misinterpretation of the result and therefore having a direct

impact on the hiring process and on the financial outcome for an organization (Cherniss & Goleman, 1998)?

Since the introduction of EI in Psychology and Social Science, there have been plenty of studies on the actual definition of EI and discussions about the question, if the construct can be called intelligence or just an ability or skill (Salovey & Mayer, 1990; Goleman, 1995; Brackett & Salovey, 2006; Roberts et.al., 2001; Locke, 2005)[1]. Therefore many different approaches of how to analyze it and how to measure it have been suggested (e.g.: MSCEIT, Bar-On, Trait Meta Mood Scale [TMMS], TMMS 24, Trait Emotional Intelligence Questionnaire [TEIQue], Six Seconds Emotional Intelligence Assessment [SEI], Schutte Self Report Emotional Intelligence Test [SSEIT], ect.).

In the first part of this dissertation, the definition and history, but also different approaches of EI Questionnaires are going to be shortly explained.

Another question related to EI, which Psychologists throughout the world have been discussing, consists in the cultural universality of emotions and the processes of perceiving and expressing them. Matsumoto (1989) for example suggested that the level of controlling emotional expression and perceiving them, is highly dependent on cultural factors, even if emotions itself are biologically coined. Other researchers (e.g.: Russell, 1994) argue that certain types of the emotional spectrum are universal, but that special emotional categories are culturally reliant. Elfenbein and Ambady published a Meta-Analysis: "On the Universality and Cultural Specificity of Emotion Recognition" (2002), which showed that emotions were universally recognized above better-than-chance levels and that there is, a so called "in-group advantage" existent, which shows that "culture can have an important role in shaping our emotional communication" (page 228). Looking at these approaches it becomes vivid that till now there has not been a clear and universal decision about the question if emotions are cross-cultural aligned. Hence, the second part of this work will focus on different studies, examining the cross-cultural perspective of emotions and on cultural differences and similarities to build the base for discussion.

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[1] [Author's note: As this profound question has been discussed in former papers and as the Author's experience is not sufficient enough to enter this discussion, EI is postulated as an intelligence in this dissertation]

The third section will vastly present all different, widely used EIQ's while focusing on the area of excellence in which the Questionnaires are best to use and the differentiation between trait- and ability EI[2] (Petrides & Furnham, 2000). This is necessary to clarify why the Mayer-Salovey-Caruso Emotional Intelligence Test [MSCEIT], even if it is the most popular EI-Test, does not seem to be the right tool for this dissertation and on the other hand to explain why the WLEIS was chosen to discuss and argument the correlation between CI and EI.

The last part of this dissertation will be the study of the impact of age, language ability and foreign experience on the outcome of EI questionnaires, using the WLEIS (Law, Song, & Wong, 2004). Thus it will include the Methods of the study, the data analysis, the results and the final discussion and conclusion on the outcome. Because of the fact that the field study presented only includes a minor number of participants, it is necessary to mention, that this should be seen as an exploratory research and that further investigation is intended to follow in the future.

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[2] [Author's note: Because of the restricted volume of the paper, details about medical research on the prefrontal cortex and its interconnections between the RAS and the limbic system will not be further explained]

I. The History of Emotional Intelligence

If someone nowadays (25th of September, 2009) introduces the term "Emotional Intelligence" on www.Google.com, more than 2.83 million hits will be made available, correlated to the construct. This obviously includes much more than just psychology and HR related scientific research, but even solely scientific papers show a strong focus on this still recent expression. A search strategy developed in PsycInfo using the term and from journals in which studies of emotions tend to be published (such as Cognition and Emotion) showed the impressive number of 1371 published papers available (11th of February, 2008).

The term *"Emotional Intelligence"*, also measured as Emotional Intelligence Quotient (EQ), had been mentioned by different researchers in their studies (Leuner, 1966; Payne, 1985; Greenspan, 1989; Salovey & Mayer, 1990), until it was Daniel Goleman who made the term globally known through the publication of "the most widely read social science book in the world" (Palmer, et. al., 2004: p. 286) called *Emotional Intelligence: Why it can matter more than IQ* (1995). It seemed that he was finally able to translate the scientific research on emotions into a day-to-day language, which led his book to become an international bestseller that sold over 5 million paper copies and has been published in more than 30 different languages[3].

Because of this, more and more people started to show interest in Emotional intelligence as it turned out to be one of the latest research areas, not only in psychology, but also in Management and Leadership theories.

1. The Concept of Social Intelligence

The idea of the existence of different kinds of intelligence has always been a subject of discussion between philosophers and psychologists and intelligence has been defined differently, depending on the era (Salovey & Mayer, 1990). The first "Intelligence" that occurred, including feelings and emotions, was the construct of "Social Intelligence". It was actually E. L. Thorndike, who proposed the differentiation between social intelligence and other forms of intelligence and defined it as "the ability to understand

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[3] Webliography: Biography of Daniel Goleman

men and women, boys and girls-to act wisely in human relations" (E. L. Thorndike, 1920; p. 228).

Another researcher who later followed Thorndike's idea was Gardner. In 1983 in *Frames of Mind: The Theory of Multiple Intelligences*, he stated social intelligence as one of the seven intelligence domains, being responsible for an individual's inter- and intrapersonal intelligences, defining the interpersonal branch as the ability to notice and distinct between the motivations, moods and intentions of others and intrapersonal intelligence as the relation to one's capacity to deal with the complex construct of feelings within oneself (Law, Song, & Wong, 2004).

2. The First Definition of EI

Another milestone that needs to be mentioned was the first time the term "Emotional Intelligence" was used in the title of a scientific paper. It happened in 1985, named *"A study of emotion: Developing emotional intelligence"* which was written by a doctoral student called Wayne Payne. Even so, it was Salovey and Mayer, who published the first attempt toward a definition, who saw EI as "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 actions" (1990). Due to their continuing research, Salovey and Mayer reconsidered their earlier definition to: "The ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer & Salovey, 1997: 5).

Nevertheless there is still some misunderstanding concerning the core of EI within our society. In common language spoken, being emotional intelligent does not mean that someone needs to be nice, anytime at any cost, but rather being able to talk things through, confronting uncomfortable subjects and discussions which would normally be avoided for the "better good" but are essential to secure integrity and understanding within a group. Being able to control emotions so that they can be expressed appropriately and effectively, at the right time, over the right subject, with the right person, to the right degree is the true essence of the construct (Goleman, 1995).

Some people are actually unwilling or undecided about articulating their emotions. Focusing on this ambivalence, George summarizes that there are two types of persons

that can be identified (2000). The first category can be classified as two minded people who want to express their emotions, while struggle doing so and actually fail to. Others do express their emotions, but are not in control of doing it. "Both types of ambivalence have been linked to anxiety, depression, some psychiatric disorders, lower well-being, and less social support" (George, 2000; p. 9). Besides ambivalent people, there are others, referred to as alexithymics, who are unable to appraise their own emotions and are incapable of verbally communicating their feelings (Apfel& Sifneos, 1979; Krystal et al., 1986; Sifneos, 1972, 1973; Taylor, 1984; Thayer-Singer, 1977).

Therefore, EI as an intelligence has been examined and discussed over the last decade and it is necessary to view different points of research done on the subject, to create the basis of understanding for this dissertation.

3. Models to define Emotional Intelligence

"The *Encyclopedia of Applied Psychology* (Spielberger, 2004) states that there are three major models of emotional intelligence:

(i) the Mayer-Salovey model which defines this construct as the ability to perceive, understand, manage and use emotions to facilitate thinking;

(ii) the Goleman model which views it as an array of emotional and social competencies that contribute to managerial performance; and

(iii) the Bar-On model which describes EI as a cross-section of interrelated emotional and social competencies, skills and facilitators that impact intelligent behavior"[4].

3.1 The Mayer-Salovey Model

The construct of Emotional intelligence consists of different parts, depending on the scientific proposal used, which as a whole define EI. Mayer and Salovey intend in their first published paper the existence of three major aspects. They distinguish between the appraisal and expression of emotion in oneself and others through verbal and non-verbal communication, the regulation of emotions and the actual use of emotions in an adaptive way to enhance cognitive processes and decision making (Figure 1; *EI_MayerSalovey-1990 1st Definition; p.6*). People differ in their ability to be aware of the emotions they experience and the degree to which they can verbally and nonverbally express emotions to others. The fact of understanding and expressing emotions is

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[4] Webliography: Reuven Bar-On

crucial to avoid misunderstandings in communication and to be socially adequate and accepted.
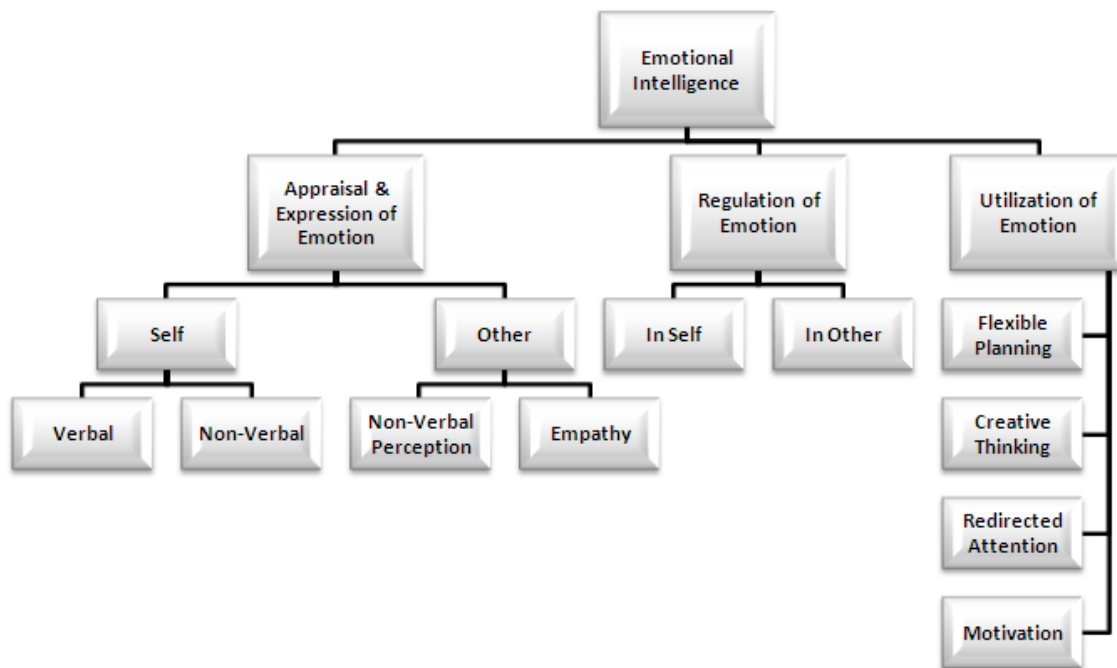
Figure 1: Conceptualization of Emotional Intelligence (Salovey & Mayer, Emotional Intelligence, 1990)

Already mentioned in their definitions in 1990 and 1997, from their point of view, the EI level of an individual or group depends on the ability to process information of emotional nature. This aspect led to their four type ability based model which suggests that emotions should be seen as useful sources of information that help to

1. Perceive,
2. Use,
3. Understand and
4. Manage

Emotions properly in oneself and others. This approach escorted other researchers "to the belief that EI is somewhat different from traditional views of intelligence, suggesting a different kind of aptitude that is founded entirely on non-cognitive aspects of behavior rather than the cognitive factors that have traditionally directed our thinking" (Wakeman, 2006; p. 71). Therefore the challenge can be seen in the actual

recognition of emotions in oneself and others and the attempt to transform non-cognitive aspects of behavior in tacit communicative actions that can be manageable und generally understandable.

3.2 The Goleman Model

Goleman's et. al. development of defining EI competencies not as native talents, but as learned abilities support this concept. They see the brain mastering emotional competencies through implicit learning and tacit knowledge and propose that what actually can be seen as emotional intelligent is the ability to differentiate between effective and non-effective competencies and to be sufficient self- and social aware to adapt them (Goleman, Boyatzis & McKee, 2002). In other words, their definition is based on the approach of EI being directly related to the ability of translating emotional experience into tacit knowledge, adaptable to general situations.[5]

Nevertheless, Goleman details his definition to put more focus on the impact of EI within one implicit field of research, leadership theories. His first construction of an EI competence model offered five distinct domains with 25 competencies to show his idea of what is necessary for being influentially emotional competent. However, through his ongoing research Goleman et. al. started to review the model constantly and by now the approach for EI distinguishes between two main areas of emotional awareness in self and others, including four different "Emotional Intelligence Domains" and 18 associated competencies[6].

The core idea is that, based on personal and social competencies, the domains offered in his definition create a model that links certain competence clusters to the brain dynamics that lead them. That means for example that if "an EI domain would be social awareness; a competency in that domain would be empathy or service" (Primal Leadership, 2002; p.39). In his later book, called *The Emotionally Intelligent Workplace* (2001)[7], he reviewed his model to include two additional competencies and to distinguish in a more subtle way between emotion recognition and regulation. Table 1 will give an overview over his model and its structure (Table 1; *Primal Leadership, 2002; p.39*).

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[5] [Author's note: This definition urges the need to explain the difference of two distinct approaches mentioned throughout topic related literature, trait- and ability EI, which will be done later in this paper
[6] [Author's note: Changes and evolution of his model down to the final structure can be looked up in his book Primal Leadership (HBS Press, 2002; co-written by Boyatzis and McKee) on page 263.
[7] [Author's note: Co-written by Cary Cherniss

Table 1: Emotional Intelligence Domains and Associated Competencies (Goleman, Boyatzis, & McKee, 2002)

As already mentioned, the crucial point of view that differentiated Goleman in the beginning of the EI era from other psychologists and their EI research was his focus on the impact of high emotional intelligence on leadership and professional performance. His objective was not solely to find the key for an overall well-being, but to create an understanding of what can be the formula for becoming a good leader and what is necessary to build a constructive organizational structure (Goleman, Boyatzis & McKee, 2002). There are some other researchers who profoundly cope with the impact of moods on leadership effectiveness and therefore this area will not be further examined in this work (for example, George, 2000).

3.3 The Bar-On Model
Another researcher who needs to be mentioned within the context of EI is the psychologist Reuben Bar-On. Besides having been involved working, defining and

constructing models of EI since 1980, he invented the term "Emotional Quotient" [EQ][8] in 1985 to describe his idea of combining emotional and social performance. [9] According to Bar-On there are also two interrelated levels responsible for being emotional intelligent, the intra- and the interpersonal one, comparable with the personal- and social competence Levels shown by Goleman.

As a result, incorporating high EI means for him to effectively understand and express oneself, to understand and relate well with others, and to successfully cope with daily demands, challenges and pressures. He defines "the intrapersonal ability to be aware of ourselves, to understand our strengths and weaknesses, and to express our feelings and thoughts non-destructively" as the basis of EI.[10] Regarding the interpersonal level, being emotionally and socially intelligent includes the ability to be conscious of others emotions, feelings and needs, and to set up and maintain cooperative, beneficial and mutually satisfying relationships. Further, "being emotionally and socially intelligent means to effectively manage personal, social and environmental change by realistically and flexibly coping with the immediate situation, solving problems and making decisions as the need arises".[11]

His approach led him to invent the *Bar-On Emotional Quotient Inventory* [EQ-i], the first EI-Test that had ever been published and accepted by a psychological test publisher, already in 1997, which will be further explained later during this dissertation. However, the test turned out to be the most popularly-used EI measure in the world, being taken by more than one million people after only five years of publication.[12]

Examining these different approaches and models, it can be suggested that the base of EI consists of the factors mentioned within the definitions so far, namely the appraisal, expression, understanding and management of emotions in oneself and others. This concept leads to the actual construction and definition of EI Questionnaires, which try to capture these factors in a subtle and predictable way. Nevertheless, to prepare the

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[8] [Author's note: Referring to EQ, there are different studies available coping with the subject. Wakeman for example notes in his study on Emotional Intelligence that "though researchers tend to agree that the two concepts are inextricably related, they are fundamentally different in character" (Emotional intelligence, 2006, p. 72) and also argues that Salovey and Caruso suggested that EI differs from EQ. They imply that the competencies of EI are necessary to provide the foundation for building an emotional quotient (Wakeman, 2006).

[9] Webliography: Reuven Bar-On

[10] Webliography: Reuven Bar-On

[11] Webliography: Reuven Bar-On

[12] Webliography: Reuven Bar-On

discussion if age, language ability and foreign experience have an impact on EI and to observe if EIQ's are culturally dependent, it is necessary to be aware of the cultural aspect of emotional expression and recognition and the research available so far. Therefore before getting into details on existing Questionnaires, the next chapter will focus on the definition of culture and the cohesion between emotion and cultures.

II. Cross-Cultural Research on Emotions

Thinking about cultures and their norms and beliefs which lead to the behavior of its individuals, firstly make remember the work of Hofstede and his effort of defining cultural differences. Through his research construct on IBM employees all around the world, he was able to offer us the first, detailed "shopping list" of how cultures differ one from the other around the globe.

The study included 116.000 survey questionnaires collected throughout the years between 1967 and 1973, in twenty different languages and from up to 72 different national subsidiaries. Using 53 of the accessible 72 country and regional reports, because of their size and statistical data, he was able to distinguish "four largely independent dimensions of differences among national value systems", coined as "power distance", "uncertainty avoidance", "individualism vs. collectivism" and "masculinity vs. femininity" (Hofstede et al., 1990; p. 288). After further research on cultural studies, especially in Asian cultures, he augmented his model by a fifth dimension called "Confucian dynamism". This element copes with long-term and short-term orientation of cultural members and was also introduced to explain the economic success of East-Asian cultures during the last three decades (Hofstede et al., 1990). Although his cross-cultural study did not cope with the direct impact of cultural conditions on emotional constructs, it must be seen as a milestone in the history of research on cultural diversity and above all its impact on business related, cultural decisions.

Studies about the cross-cultural impact on emotions have already a long tradition. More than a decade ago, anthropologists and psychologists based their classic reflections on reports received from people representing different cultures and already Charles Darwin took advantage of such information in his book *The Expression of the Emotions in Man and Animals* (Eid & Diener, 2001).

As earlier mentioned in the explanation and history of EI, what is subject to emotions is not only their expression, but also the perception of them. Nevertheless, opinions on the question if emotions are culturally dependent or not, differ between researchers and there have been strong efforts by defenders and attackers of the theory to prove their findings. Just to mention some of them, for example Matsumoto stated that the power to

control and understand the perception and expression of emotions is learned and highly dependent on cultural factors, even if emotions are biologically embedded (Matsumoto, 1989). A diverse possibility has been offered by Russell. He implies that certain emotional areas depend on the cultural background, but that basic facets are universal (Russell, 1994). Further in this context, Frijda and Mesquita even specialize by differentiating between three characteristics of culturally influenced emotions, such as social consequences of emotions which lead to acceptance or denial, the importance of actually experiencing diverse emotions and third the social-cohesive roles of emotions (Eid & Diener, 2001).

1. The Definition of Culture in Emotional Research

So let us start at the beginning by asking, how can culture be defined? Triandis and Suh (2002) offer a consortium of definitions taken from anthropological and psychological papers, namely published by Kluckhohn, Sperber or Barkow. From their point of view, culture can be seen as an idea or experience in a society which, because of its value for the social group, has been adopted by more and more people throughout the time. "Elements of culture are shared standard operating procedures, unstated assumptions, tools, norms, values, habits about sampling the environment, and the like" (Triandis & Suh, 2002; p. 136).

Within this context, Triandis et. al. emphasize that perception and cognition of information is a psychological process which depends on the culturally inducted sampling and importance level given to incidents of the environment. Mesquita supports the point of view in relation to emotions and states that emotions grow "when an event is appraised as being relevant to one's concerns, goals, motives, values, and expectations about oneself or others and about the world in which one lives" (Mesquita, 2001; Page, 69).

There has been great interest of debating the question of emotions being universal or if they differ from culture to culture. Moreover, this question of emotional universality led to exhausting research in the field of expressing and recognizing emotions depending on the cultural heritage. For example, Ekman, Friesen et. al. showed in their investigations that a high agreement across cultures in their interpretation of facial expressions of emotion can be observed. They studied to which degree subjects from 10 different

cultures agree on the indication of emotion and the intensity of each emotion (anger, disgust, fear, happiness, sadness and surprise) by using three different sources of expression: "posed emotions, spontaneous expressions and photographs in which models followed instructions about which muscles to contract" (Ekman, et. al., 1987; p. 712). The result matched an earlier study from 1971 in which participants, who have not had the chance of being exposed to the emotional expressing culture, could above chance identify which emotions wanted to be transmitted. Nevertheless, the authors also mention in their research that there are certain limitations to their findings of universality, especially the facts that it has been the only study of such range so far, that not all 6 emotions could have been identified properly during the test and further that all facial expressions have been posed (Ekman & Friesen et. al., 1987).

There are more studies that have been coping with the same subject. In 2007 three Dutch Psychologists, Hemert, Poortinga and van de Vijver, published a Meta analysis on cross-cultural emotion studies. They examined 190 articles on the subject, published between 1967 and 2000, to find out "to what extent reported cross-cultural differences in emotion variables could be regarded as valid (substantive factors) or as method-related (statistical artifacts, cultural bias), and which country characteristics could explain valid cross-cultural differences in emotion" (van Hemert, Poortinga & van de Vijver, 2007; p. 913). One important factor mentioned by them is the categorization of emotions to observe dependent, cultural patterns. In their research they separated not only research on emotional recognition from studies about emotional expression, but they also established a filter to differ between literature coping with negative or positive emotions. Even if they conclude that the actual size of cross-cultural differences published may be overestimated, they clearly state the findings of different broad patterns of emotions between cultures but also that more studies are needed to establish a sample large enough to allow valid studying (van Hemert, Poortinga & van de Vijver, 2007).

1.1 The Concept of an "in-group" advantage

Another team of researchers who concentrated their efforts to observe the cultural specificity of emotions are the two Harvard psychologists, Hillary Elfenbein and Nalini Ambady. Besides many articles on cross-cultural patterns in emotion recognition and universals and cultural differences in the same field of interests, they published a Meta-

Analysis in 2002 on the topic. Hence their focus was solely on the field of emotion recognition their findings have been of importance for subsequent research. They suggest the existence of an "in-group" advantage in within and between members of different cultures, which means that they "found evidence that emotions may be more accurately understood when they are judged by members of the same national, ethnic, or regional group that had expressed the emotion" (Elfenbein & Ambady, 2002, Vol. 128, No. 2; p.228). This indicates that culture can have a decisive responsibility in constructing emotional communication. Further in that context, Elfenbein and Ambady mention that "Cultural variability in the accuracy of emotion recognition has also been attributed to differences in language" (Elfenbein & Ambady, 2002, Vol. 128, No. 2; P. 204) and they state, that words can transmit different meanings from one language to another. They also use the work done by Matsumoto and Assar (Matsumoto & Assar, 1992) to suggest that some languages are more versatile and adequate in the use of its vocabulary to express emotions than others and also, that the in-group advantage of emotion recognition in verbal context is as evident as in the field of facial recognition (Elfenbein & Ambady, 2002).

Additional research on this theory has been replicated along various studies related to positive and negative emotions and different non-verbal channels of emotional communication, without stretching tests to the field of verbal, linguistic studies (Elfenbein & Ambady, 2003). Besides their theory of a possible "in-group" advantage, they further inducted the speculative metaphor of emotional "dialects" proposing that the actual emotional expression can be seen as a general language, but distinctive between cultures though communicating with different dialects (Elfenbein, Mandal, Ambady & Harizuka, 2002; Elfenbein & Ambady, 2003; Tomkins & Mc Carter, 1964). Nevertheless, they join other scientists in their opinion that further research on the subject is needed to determine if cross-cultural universality, or diversity is existent.

1.2 Collectivistic and Individualistic Cultures

One comparison within cross-cultural research on emotions, which leads certain discussions among psychologists and therefore needs to be mentioned in this work, are the differences between individualistic and collectivistic emotions. Already pointed out as one of Hofstede's dimensions on cultural differences, cultures showing patterns of

individualism differ from collectivistic ones. The following table shows how emotions are perceived and thought between cultures of the two dimensions.

Components of Emotion	Collectivist Emotions	Individualist Emotions
Concerns	One's own social worth and the worth of the in-group	Focus on personal concerns only
Appraisal	Attention to the impact of other people's behavior on relative social positions (intentionality)	Less focus on the impact on relative social positions
Source of Appraisal	The meaning of situations appears as given (obivous)	Awareness of the subjectivity of emotional appraisal
Action readiness	Focus on relationships and therefore more action readiness	Focus on bounded self and therefore less action readiness
Nature of Shared Emotions	Social sharing involves insuring that others share in the concern and behave accordingly	Social sharing involves the sharing of information
Emotions as meanings	Emotions signal changes of reality: changes of beliefs about self, others and the relationship between self and others	Emotions signal internal, subjective feelings: few implications for beliefs

Table 2: Key differences between Individualist and Collectivist Emotions (Mesquita, 2001)

Elfenbein and Shirako use a tangible example to explain those differences. They induct the possible emotional appraisal of Chinese (collectivistic culture) or American (individualistic culture) members of a team, being publicly mentioned for their great work. An action that could cause the feeling of pride for the American for standing out, on the other hand could cause the feeling of embarrassment for the Chinese as not fitting in within the team (Hillary Anger Elfenbein, 2006). This creation of differing emotions originated by the same event helps to better understand how culture can induct an appraisal and response of emotions and how these differences can influence the result of EI testing throughout the world.

To better explain the idea regarding this context, different variables, concerning the language, cultural roots and experience of a person taking an EI Questionnaire and also constructing one, should actually influence the outcome of a test.

Questions such as:

- Does the test person properly understand the questions asked?

This is the quintessence of the test, because if someone does not even have the basic language abilities to understand the question, he will not be able to respond to it.

- Is her perception of the emotions inducted by the founder of the questionnaire the same?

- Is it culturally acceptable for her responding to the question, honestly or at all?

For example, is it culturally/socially acceptable for a woman in a Muslim environment publicly responding questions about her emotions?

- What are the expectations for the test-taker and what where the expectations of the test-owner, when she was constructing it?

As mentioned in the text, people from collectivistic and individualistic cultures have a different understanding of emotions and their meanings, which can lead to a distinct expectation when constructing or answering EIQ's.

All these questions directly depend on the cultural background and experience of the test-taker and the test-maker and can therefore influence the result of the test. In this context, age, language abilities and foreign experience, the three chosen norms for this study will be taken into consideration as variables that can impact test-scores.

The following section of this work is going to explain the existing concepts of EI and will further give an overview of the most widely used questionnaires available so far. The focus will be on the methical construct of EI used for the EIQ's, their scientific validity, their cultural background and the area in which they are used.

III. Emotional Intelligence Questionnaires

After having presented the basics of EI theories, some ideas and thoughts behind their construction and a spectrum of the range of research done on the possible cultural differences in EI, it is now necessary to explain existing EI-Questionnaires and to demonstrate why the WLEIS seems to be the appropriate choice for this dissertation. As already mentioned in earlier chapters, the most well known and widely used EI-Questionnaires are the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey & Caruso, 2000) and the Bar-On EQ-i:S (Bar-On, 2002), which turned out to be the most popularly EI-Test in the world [13].

Nevertheless, there are obviously hundreds of different tests available nowadays and not all of them are scientifically valid, but just public distractions available over the internet[14]. Therefore this part of the dissertation will clarify distinctions between the existing forms for evaluating Emotional Intelligence, differences between the questionnaires, their areas of appliance and finally the function and principles of the WLEIS.

1. Models and Evaluation of Emotional Intelligence

Over the last few years and with the discussion about EI getting more and more professional researchers involved, three types of models and two types of evaluating EI crystallized themselves throughout topic-related literature. This part of the work attends to the definition of these constructs, the explanation of differences, strength and weaknesses of each of them and finally to the identification of the most adequate EI questionnaire to be used for the research within the dissertation.

As for the types of models, the following descriptions have been established and accepted by topic related scientists and literature (e.g. Hertel, 2007)

1. the Ability Model (ability EI)
2. the Mixed Model (trait EI) and

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[13] Webliography: Reuven Bar-On
[14] [Author's note: Internet research for the term "ei test" on the 12th of March 2008 on Google showed 353.000 hits

3. the Investment Model

and they are directly connected with the two different types of diagnosing EI, namely self-report tests and performance tests.

1.1 The Dilemma of EI Measurement

Even after almost two decades passed by since Salovey and Mayer (1990) published their first ideas about Emotional Intelligence, researchers are still undecided about the question of, which model or scientific approach is the most adequate one to study EI-existence and strength within individuals and organizations observed. John D. Mayer offers in his paper from 2004 a classification of when and how someone should use certain models and research criteria for evaluating EI, depending on the scientific objective. From his point of view, if someone wants to assess EI as a mental ability, then it should be measured with a criterion-report data, but if someone has the conviction that EI is a personality style than self-report could be an adequate research base and so on (Mayer, 2004).

Further proposals on EI measurement and validity come from Petrides and Furnham (2000). Those two scientists propose that the type of measurement rather than the theory itself is what determines the nature of an EI model and that in the field of EI capacity, there should be a differentiation not only between trait- and ability EI, but between trait EI and information-processing EI. Taken given approaches on definitions about mixed and ability models into account, from their point of view, trait EI is concerned with cross-situational consistencies in behavior, contrary to information-processing EI, which solely concerns abilities. In their opinion, trait EI has its roots within the personality framework and should be assessed via validated self-report inventories that measure typical behavior. They foster, that those constructs could include other points of interest, such as motivation or happiness, which should be seen more as probable correlates, rather than fundamental elements of EI.

By contrast, they appraise, that the information-processing approach of EI should be more focused and precise than trait EI questionnaires, as to the elemental parts of EI and its relationship to traditional intelligence and that it could be best assessed through measures of maximal performance, such as the MEIS and its successor the MSCEIT (Petrides and Furnham, 2000).

Also necessary to facilitate the understanding of the complexity between the different models and types of measurement of EI, Perez, Petrides and Furnham argue in 2005, that self-report measures of EI tend to interrelate strongly with personality traits, independent of whether or not they are adapted from mixed or ability models. From their point of view, research should not differ between ability- or mixed models of EI, but rather between two constructs, trait EI and ability EI (Perez, Petrides & Furnham, 2005).

Taken from an article published in "The Psychologist" in October 2004 (Volume 17, Number 10, 2004) and written by Petrides, Furnham and Frederickson, the following table will clarify the differences between trait- and ability EI.

	Trait EI	Ability EI
Measurement	Self-report	Performance-based
Conceptualisation	Personality trait	Cognitive ability
Expected relationship to g	Orthogonal (i.e. uncorrelated)	Moderate to strong correlations
Construct validity evidence[a]	Good discriminant and incremental validity vis-à-vis personality	Limited concurrent and predictive validity
	Good concurrent and predictive validity with many criteria	Lower than expected correlations with IQ measures
Example measures	EQ-i	MSCEIT
	SEIS	
	TEIQue	
Properties of measures[a]	Easy to administer	Difficult to administer
	Susceptible to faking	Resistant to faking
	Standard scoring procedures	Atypical scoring procedures
	Good psychometric properties	Weak psychometric properties

Note: g = general cognitive ability; EQ-i = Emotional Quotient Inventory (Bar-On, 1997); SEIS = Schutte Emotional Intelligence Scale (Schutte et al., 1998); TEIQue = Trait Emotional Intelligence Questionnaire (e.g. Petrides & Furnham, 2003); MSCEIT = Mayer–Salovey–Caruso Emotional Intelligence Test (Mayer et al., 2002).

[a] Entries in these rows are generalisations and do not apply equally to all measures.

Table 3: Common facets in salient models of EI (Petrides et al., 2004)

1.2 The Ability Model

As already shortly mentioned in the introduction of this work on EI, the ability model is the "grandfather" of EI-Questionnaires. Most supporters of ability models of EI strengthen the idea that EI measurements should be performance tests and solely focus on emotional skills and ability (Byrne, Smither, Reilly & Dominick, 2007). For example Tett, Fox and Wang argue in the beginning of their work on the "Development and Validation of a Self-Report Measure of Emotional Intelligence as a Multidimensional Trait Domain", that when EI is elicitated as an ability or skill inducting the capacity of possible development through experience and training, a form of "measurement in the context of correctness" (p. 2) is needed (Tett, Fox & Wang, 2005). Nevertheless it is necessary to mention, that the two different types of evaluating EI, namely performance measurements and self-report questionnaires, are evident in all different models of EI, such as the ability model.

Demonstrated in the work of Petrides and Furnham (2000) and critized by the fact that it appeared through the detail that early EI models paid little attention to cognitive characteristics, which usually are typical for the traditional definition of intelligence, the Multifactor Emotional Intelligence Scale [MEIS] by Salovey and Mayer (1990) was the first EI Questionnaire under the umbrella of ability models.

As the name already induces, the idea of the ability model of EI contains the view that Emotional Intelligence is composed of cognitive abilities which interact one with each other. As already mentioned in an earlier part of this work, Salovey and Mayer define four abilities of EI: First, the perception and appraisal of emotions in oneself and others, second the utilization of ones own emotions and therefore the cognitive comprehension of them, third the understanding of how emotions evolve and develop and fourth the ability to manage emotions in oneself and others.

Important in this context is to add, that those abilities are also hierarchically graded, which means, how Salovey and Mayer propose, that a person who has facility in the perception and understanding of emotions, should also have less difficulties in managing and using those emotions, than someone who cannot even understand them in the first place. Therefore someone who wants to be able using or regulating his or others emotions necessarily has to be able understanding them to enable successing behavior (Hertel, 2007).

As for this view of Emotional Intelligence, it is assumed that the mentioned abilities can better throughout the time, because of increasing experience and age. Arguments for this assumption could already be delivered through empirical studies in the fields of utilization, regulation and understanding of emotions (Hertel, 2007).

Within the scientific field of research, the ability model is the most widely used one, also thanks to the MSCEIT (performance model) which paved the way for many studies and discussions (Mayer, Salovey, Caruso, Sitarenios, 2003; Gignac, 2005; Farrelly and Austin, 2007; etc.).

1.2.1 The Mayer, Salovey & Caruso Emotional Intelligence Test

The MSCEIT, which is the further developed successor of the MEIS, was constructed to substitute the former model as it was not only exhausting long, but it also comprehended "evident areas of scale improvement" (MHS Inc., 2002). Bearing especially the first objective in mind, the MSCEIT still consists of a 141-item performance scale that provides a total of 15 main scores including the total EI score, two Area scores, four Branch scores, and eight Task scores. In addition to these 15 scores, there are three supplemental scores. As quoted in the MHS-flyer for the model, "responses to MSCEIT represent actual abilities at solving emotional problems; this means that scores are relatively unaffected by self-concept, response set, emotional state, and other confounds" (MHS Inc., 2002).

The 141 items include questions on facial expression as the view of series of faces and to what extent each of six emotions is present, but also questions about emotional scenarios and responses (e.g., the test person has to judge how much joy one might experience while planning a party), and emotional problem solving (e.g., deciding how to respond most appropriately as talking to a friend who just lost her job).

Constructed for performance assessment, the MSCEIT is an ability-based scale that measures how well people perform tasks and solve emotional problems as opposed to relying on an individual's subjective assessment of their perceived emotional skills (MHS Inc., 2002).

1.2.2 Performance- vs. Self-Report Measurement Questionnaires

This explanation leads to what makes the performance model different from self-report EI Questionnaires, the way of evaluating a person's score. As in a self-report, the final result is built on a score where there does not exist any right or wrong, but just an actual

value as an outcome, based on a x-point Likert scale which indicates how high or low someone's EI actually can be. On the contrary performance models utilize right or wrong answers based on an expert judgment. Unlike other measures of EI, performance models and in this case the MSCEIT, are based on the premise that there are correct answers to each question and that an actual performance score of EI can be assessed.

Although this performance-based scoring method (where the correct answer is based on a consensus or expert scoring protocol) has been questioned by some critics and it has also been argued that in terms of measurement most success has been achieved in relation to trait EI rather than ability EI (Pérez, Petrides & Furnham, 2005), some other propose that performance-based measures of EI are more likely than self-report measures to assess EI as a construct distinct from personality traits (Byrne, Smither, Reilly & Dominick, 2007).

However, there are certain negative observations about performance-based models that support the decision of not using the MSCEIT for this work.

The first point which supports the idea of not using forced choice design questionnaires has already been described within the cultural acceptance of EI models. Just to remember, the argumentation is that those studies could prime participants to interpret stimuli as expressions of emotion and inflate agreement across cultures by constraining choices. Therefore,

- forced choice can show consensus on clearly incorrect categories
- participants may choose a particular label when prompted by a multiple-choice list, which they would not have chosen under free-response conditions (Rosenberg & Ekman, 1995; Wagner 2000)
- response choices are often generated by North American researchers, whose lists may or may not correspond to emotion constructs in other cultures (Haidt & Keltner, 1999; Russell & Yik, 1996)[15]

Hertel supports the second argument and points out in her study, that "the objectivity of performance measures is limited by the fact that there is usually no single right answer to emotional problems" (Hertel, 2007; p. 48) and that those procedures cannot assess

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[15] [Author's note: Taken from (Elfenbein, Ambady, Mandal, Harizuka, & Kumar, 2002)

everything there is about emotional intelligence. More, people do gain an ability to find the "right" answer, so individuals might know what response would be appropriate but it still does not indicate that they would be able to enact it effectively in real life (Hertel, 2007).

Further has to be mentioned, that ability models based on performance scoring and in especial the MSCEIT, are still subject to discussions about the validity of their results. Gignac expresses in his commentary on the version 2.0 of the MSCEIT doubts about the confirmatory analysis of the test (Gignac, 2005). Mayer et. al. argued in their report published in 2003 on "Measuring Emotional Intelligence with the MSCEIT V2.0" that correct test answers often can be identified according to the analog response of a group of unselected test persons and that if respondents identify a face as predominantly angry, that it than can be scored as a correct answer. They further hypothesized for their research, that emotions experts would identify correct answers with greater reliability than average, especially when research provides established methods for identifying correct alternatives (Mayer et al., 2001) and "that the MSCEIT achieved reasonable reliability and that confirmatory factor analysis supported their theoretical model of EI" (Mayer, Salovey, Caruso & Sitarenios, 2003; p. 97).

After all, Mayer et. al. agreed in their response to Gignac's comment, that "the authors anticipate that further investigations of the MSCEIT factor structure may yield additional information" (Mayer et al., 2005). Therefore, the author thinks that it does not seem reliable using the model for this research.

Further, the decision not to use the MSCEIT in this work is also based on the fact that the questionnaire was constructed by a team, solely consisting of North-American researcher and therefore inducts a very limited cultural mindset. Even as there are already translations available (MHS Inc., Tech Brochure MSCEIT, 2002; Schütz, Hertel & Schröder, 2002) and that the mentioned limitation of cultural diversity in the MSCEIT research team could be used to prove that the most well known EI questionnaires actually lack a cultural adaptability, the detail that the test still is exhaustingly lengthy (e.g., 141 measures) and therefore not suitable within the given context, also contributes to the authors decision.

1.3 The Mixed Model

Unlike the presented ability models, where the whole construct is based on the cognitive ability of the test person, supporter and advocates of the mixed models of EI view Emotional Intelligence as a combination of skills, personality-like traits, motivation and abilities (Byrne, Smither, Reilly & Dominick, 2007).

Although they typically study some relevant emotion-specific abilities, they also add in motives, social styles, self-related qualities, and other traits that do not concern a primary focus on emotion or emotional reasoning. These mixtures of traits and emotions led adversaries of these constructs argue that those questionnaires actually are no proper models to evaluate someone's emotional ability, but rather result in a sole perception of self- or others EI (Daus & Ashkanasy, 2003). This criticism is based on the assumption, that for being able to measure EI, scales should not correlate with the personality traits, leading to the definition of trait EI (Byrne, Smither, Reilly, & Dominick, 2007)

However, even as stated in the beginning of this section, the idea of Tett, Fox and Wang who argue that assessing ability EI calls for a form of "measurement in the context of correctness" (Tett, Fox & Wang, 2005: p. 2), there are some scientists who used the ability model of EI (Salovey & Mayer) as basis to construct self-report questionnaires, measures for trait-EI[16].

Just to mention some of those tests and to give a short overview, there are the Trait Meta Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey & Palfai, 1995), the Schutte Self-Report Inventory (SSRI; Hertel, 2007, based on Schutte, Malouff, Hall, Haggerty et al., 1998; or SREI; Tett, Fox & Wang, 2005, based on Schutte et al., 1998), the Workgroup Emotional Intelligence Profile (WEIP) (Tett, Fox & Wang, 2005, based on Jordan et al., 2002) and of course the Wong and Law Emotional Intelligence Scale (WLEIS) which will be separately explained at the end of this section (Wong & Law, 2002) (Tett, Fox & Wang, 2005; Hertel, 2007).

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[16] [Author's note: Even if the opinions about the classification of these measures differ between researchers (Hertel, Lopes & Schütz, 2007; Tett, Fox & Wang, 2005; Petrides & Furnham, 2000), the proposition of Perez, Petrides and Furnham to distinguish between ability and trait EI, leads to the authors decision to include ability-based self-report questionnaires (thus measurements of trait-EI) in the section of Mixed Models.

1.3.1 The Trait Meta Mood Scale

The TMMS contains 30 questions, embedded in three Subscales: Attention to feelings, clarity in discrimination of feelings and mood repair which is concerned with the ability of changing unpleasant moods and keeping pleasant ones. First presented in 1995, the TMMS consisted of 48 items (21 Attention, 15 Clarity and 12 Repair) which were cut down to the current more efficient 30-item scale (Salovey, Mayer et. al., 1995). There is no overall score of the test and participants can choose on a 5 point scale up to which point they agree, or disagree with the proposed mood. The scale has been used in scientific papers to prove its relationship with empathy, attributional complexity, self control and responses to interpersonal conflict (Fitness & Curtis, 2005) and has been translated into different languages (Hertel, 2007).

1.3.2 The Schuette Self-Report Inventory

The second questionnaire pointed out in the context of ability-based self-report questionnaires is the so called Schutte Self-Report Inventory, or SSRI[17]. Based on Mayer and Salovey's early ability EI model (1990), the model consists of 33 questions and is, thanks to its good internal consistency, its test-retest reliability (α = .93 and .73 respectively) and its availability in foreign languages, one of the most widely used self-report EI questionnaires in the field (Hertel, 2007; Schutte et al., 1998).

Even so, the SSRI has been, such as other trait EI tests, the subject of doubt referring to the necessity of non-correlating with the Big Five or other personality variables for being a valid intelligence test. Covering research on this subject done by Tett, Fox and Wang on the "Development and Validation of a Self-Report Measure of Emotional Intelligence as a Multidimensional Trait Domain" (2005) which offers investigation, besides the already mentioned factors of internal consistency and test-retest reliability, about content-, construct- and incremental validity, social desirability, subscale discriminability and more, showed that the SSRI can be linked to personality variables and that the test, even developed as a general measure, obtains three, or four dimensions[18]. Another negative factor of the test, stated by Pérez et al. (2005), is the

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[17] [Author's note: SSRI has been chosen as it seems more likely, than the term SREI as stated in Tett, Fox & Wang, 2005

[18] [Author's note: These findings are based on the scientific work done by Chan, 2003; Ciarrocchi, Chan, & Bajgar, 2001 (Petrides & Furnham, 2000)

detail that it does not present full coverage of the EI domain, as it is solely based on three dimensions presented by Salovey and Mayer in their work from 1990.

1.3.3 The Work Profile Questionnaire-Emotional Intelligence

The WEIP which is one of the six questionnaires covered by the former mentioned work of Tett et al., is another trait EI test, based on the work of Mayer and Salovey. As its name already directs, the Workgroup Emotional Intelligence Profile is constructed to assess the EI capacity of individuals within workgroups. It consists of 27 questions, embedded into two general subscales to evaluate EI competences (Jordan, et al., 2002). The goal of the first scale is to investigate the test person's ability to deal with her own emotions (DOWE) and the second to see how well the person can deal with the emotions of others (DOTE). Those two general subscales are further leveled, offering three subscales of DOWE[19] and four subscales of DOTE[20]. Interesting in this context is the fact, that the WEIP was the only questionnaire within in their findings that could not been linked to personality variables and besides that it was further one of two tests that could not be connected "to one or more abilities, most often cognitive ability (*g*) and its facets (Tett, Fox & Wang, page 12, 2005). They also cite that there is no information available on test related studies consisting of peer-reviewed incremental validity and relations with chronic emotions. Therefore, even as the WEIP seems to be a trustworthy profile, the lack of correlations to abilities and emotions supports the decision of working with another questionnaire in this dissertation.

Nevertheless, self-report EI questionnaires are the most widely used models, applied to appraise emotional intelligence. Moreover, between the most well known researchers in the field of EI, there are many who invented mixed models of EI and back their trait EI-questionnaires with acknowledged research and validity to the construct of EI, such as for example Goleman, Bar-On, Boyatzis and Petrides & Furnham.

The questionnaires which probably have been mostly mentioned within the context of mixed models of EI are the Bar-On Emotional Quotient Inventory (EQi; Bar-On, 1997) and the Emotional Competence Inventory (ECI; Boyatzis, Goleman, & Rhee, 2000; Sala, 2002). As already stated during the introduction of this work, Bar-On's EQ-i is the most

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[19] DOWE: aware of own emotion (AOE), discuss own emotion (DOE), emotions facilitate thinking (EFT);
[20] DOTE: recognize others' emotion (ROE), detect false emotions (DFE), empathy (EMP), manage others' emotion (MOE)

popularly-used EI measure in the world and Goleman's publications have their place in the Olympus of most read scientific literature. Most likely because of their popularity, both tests have been subject to scientific research.

1.3.4 The Emotional Competency Inventory

First to mention, Goleman (1998, Appendix 1) affirmed that EI "refers to the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships...abilities distinct from, but complementary to academic intelligence". There are many different trait EI questionnaires that are based on the proposals published in Goleman's bestselling books of 1995 and 1998 (see table 4).

Emotional Competency Inventory (ECI)	Goleman	Self-Report And Other-Report	A multi-rater instrument that provides ratings on a series of behavioural indicators of emotional intelligence
Emotional Intelligence Appraisal (EIA)	Goleman	Self-Report And Other-Report	A 7-minute assessment meant to measure the existence of Goleman's four components of emotional intelligence
Work Profile Questionnaire-Emotional Intelligence Version (WPQei)	Goleman	Self-Report	Measures 7 of Goleman's competencies thought of as most essential for effective work performance

Table 4: A Review of the Emotional Intelligence Literature and Implications for Corrections (Brown, 2004)

Boyatzis constructed together with Goleman and others the Emotional Competence Inventory, called ECI (Boyatzis et al., 1999) and Dulewicz and Higgs published their DHEIQ, named after their inventors (Dulewicz & Higgs, 2001; Higgs & Dulewicz, 1999), but nevertheless also using Golemans definition of EI.

Byrne et al. published an "Examination of the Discriminant, Convergent, and Criterion-related Validity of the Emotional Competence Inventory" (2007) and found out, that the ECI self-ratings had no relation to academic performance and general mental ability, using a sample size for emotional competence of 298 participants. A further important result was that the factor structure differed from the factor structure of the Big Five personality dimensions, which could offer some confirmation about the EI validity of ECI self-report ratings. Nevertheless, there are more studies done on the ECI and

findings expect that further research is necessary to predict its EI validity (Byrne, Smither, Reilly, Dominick, 2007).

To further explain its construct, the ECI is a mixed model built to determine someone's EI by measuring 20 competencies[21] as self-report measures, structured into Goleman's four main emotional intelligence competencies namely self awareness, social awareness, self management, and social skills. Constructed by Goleman, the Emotional Competency Inventory (ECI) utilizes, besides the already mentioned self-report competencies, also prior published management and leadership related peer ratings invented by Richard Boyatzis (1994) to assess EI through third party contribution. Participants are asked to rate the proposed behavioral competencies on a scale from 1 to 7 (where 1 means that the behavior described does not correspond to the individual's character and 7 that it is very characteristic for her) to get a final overall rating. By using self-report and peer ratings, the participant gets two ratings for each competency: a self rating and a total other rating (Brown, 2004).

The sample size used to norm the ECI is indicated in the order of 6000 participants, mainly white male from North America and the UK, and its internal consistency (Cronbach's α) mentioned in the technical manual shows high ratings, varying between .73 and .92 for total others ratings and between .60 to .85 for self rating results (Brown, 2004). Although the ECI can be classified as a complete EI questionnaire, as it not only measures the participant's self-report validation, but also the perception of EI through related third party contributors as of the 360 assessment, its culturally rigid based sample norm and its timely application caused by the necessary 360 appraisal does not qualify it as an adequate questionnaire within the given context.

1.3.5 The Bar-On Emotion Quotient Inventory

Compared to the described ECI model by Goleman, Bar-On's EQ-i does not differ by the fact that it also perceives mixed intelligence, such as cognitive ability and personality aspects, but by its field of utility and its orientation. As Goleman's questionnaire is mostly used as a measure to assess workplace success, Bar-On's model focuses on the potential of EI and its impact on general well-being. Also based on the

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[21] [Author's note: This information is taken from a research paper written by Stys and Brown in 2004 about Emotional Intelligence Literature, whereas Byrne, Smither, Reilly, Dominick indicate in their research from 2007 that the ECI solely measures 18 emotional competencies and not the 20 described earlier

assumption, that emotional competencies are not native aptitudes, but learned abilities which can be trained and developed through experience and therapy, his process-oriented model deals with the earlier mentioned different emotional and social abilities such as "the ability to be aware of, understand, and express oneself, the ability to be aware of, understand, and relate to others, the ability to deal with strong emotions, and the ability to adapt to change and solve problems of a social or personal nature" (Brown, 2004; p. 19). The Bar-On Emotion Quotient Inventory (EQ-i), is a mixed model of emotional intelligence constructed for persons, 17 years or older. Distinct from other questionnaires in the field, it is indicated, that the objective of the EQ-i is not to determine personality traits or cognitive capability, but how someone reacts to environmental demands and pressures (Brown, 2004; Bar-On, 2002).

The EQ-I consists of 133 items, which goal is to render a final Total EQ. To achieve this outcome, participants choose their answers on a 5-point scale constructed as a textual response design ranging from "very seldom or not true of me" (1) to "very often true of me or true of me" (5). Based on 5 composite scales and 15 subscales (see table 5) correspondents receive their raw scores tabulated and transformed into standard scores based on a mean of 100 and standard deviations of 15, indicated as similar to common IQ scores[22].

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[22] Webliography: Reuven Bar-On

Components	Sub-Components
Intrapersonal	Self Regard
	Emotional Self-Awareness
	Assertiveness
	Independence
	Self-Actualization
Interpersonal	Empathy
	Social Responsibility
	Interpersonal Relationship
Adaptability	Reality Testing
	Flexibility
	Problem Solving
Stress Management	Stress Tolerance
	Impulse Control
General Mood Components	Optimism
	Happiness

Table 5: Bar-On's EQ-I composite scales and subscales (Brown, 2004)

Further is it necessary to mention, that the EQ-i includes so called validity indicators that define the psychometric instrument as scientifically applicable:

- Omission Rate (*number of omitted responses*)
- Inconsistency Index (*degree of response inconsistency*)
- Positive Impression (*tendency toward exaggerated positive responding*)
- Negative Impression (*tendency toward exaggerated negative responding*)

Besides the above explained general Bar-On Emotion Quotient Inventory, there are further, different expansions of the model available. First there are the 125-item and 51-item versions of the *EQ-I*, whereas the 125-item version (*BarOn EQ-i:125*) creates all of the above-mentioned scale and subscale scores as used in the full version except for Negative Impression scale scores and the 51-item version (*BarOn EQ-i:S*) only disposes the total EQ score, the 5 composite scale scores, the Positive Impression scale score and Inconsistency index. Further extensions are the EQ-i Youth Version (for children and adolescents 7- 15 years of age), and the EQ-360 which possesses a factor structure identical to the EQ-i[23].

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[23] Webliography: Reuven Bar-On

Even indicated as the most widely used EI questionnaire in the world and even as the first version of the test was normed on an internationally basis, there are certain facts that count against the use of the test within the given context of this thesis. First, and besides the fact that the test is already available in many different languages, the actual model is supported by approximately 4000 respondents from the United States and Canada, which lacks the needed cultural diversity (Brown, 2004). Second and most important is the actual indication of use of the EQ-i. As stated in the description of the questionnaire and throughout scientific literature, the Bar-On model is built to examine the overall "pursue of happiness" without the needed focus on workplace success[24]. Another and final point against the use of the EQ-i is also the length and therefore timely application of the test.

1.4 The Investment Model

Pointed out in the work of Hertel (2007), the investment model does not attempt to explain the actual theory of EI, but rather tries to combine given constructs and to analyze EI from the perspective of development psychology. Zeidner et. al state in their work, that the level of someone's emotional intelligence is impacted by social and biological factors and that the living environment can positively or negatively impact the development of EI (Zeidner, 2003).

The model is based on different components, genetically coined but also constructed and enhanced through experience, which interact one with each other to build up a learning process for emotional intelligence. The base of this process is the ability of self-perception as it paves the way to actually understand own emotions and to finally reach the "highest level" of emotional intelligence, the conscious regulation of emotions (Hertel, 2007).

2. Decision of what model to use for the study

Comparing the pros and contras of the different EI approaches and the models which represent them, choosing the right questionnaire, for the right occasion, with the presumingly right facet for the research in question seems to be the most difficult task of it all. Therefore, there are some factors which led to the author's decision of using the

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[24] [Author's note: The published Marketing Brochure also suggest a good application of the EQ-i for recruitment and workplace assessment, but based on the related scientific publications, the author values this suggestion as a sales teaser

WLEIS for this particular research of measuring the correlation between age, language skills, foreign experience and EI and they can be summarized as the following ones:

1. The cultural background of the inventors of the questionnaire,
2. the field of utilization and the association of EI. not only with life satisfaction, but most important with work place performance,
3. the scientific validity of the test,
4. being a self-report-EI questionnaire and already scientifically used in different languages,
5. the limited time and resources within the context of this work
6. and the recommendations by researchers in the field of EI.

2.1 The Wong and Law Emotional Intelligence Scale

The WLEIS was invented by Wong and Law, from the Chinese University of Hong Kong and the Hong Kong University of Science and Technology and consists of a 16 question scale, based on the four-dimensional definition of EI as proposed by Davies et al. (1998).

To reach its final, published structure, selective group research was done. Described in their research paper from 2002, Wong and Law ran the following manuscript to secure the models validity. First, three groups of MBA and undergraduate students generated questions aligned with the EI construct presented by Davies. After that, inappropriate items had been rejected and the objects left were subject to studies on their factor loadings and their correlations with several selected conditions, using the results of a 189 university students sample research. The final and actual 16 item WLEIS construct was further cross-validated through three additional student samples, one non-teaching university study and a supervisor-subordinate test, with a total sample size of 653 participants (Wong, Law, & Song, 2004).

THE WONG & LAW EMOTIONAL INTELLIGENCE SCALE

Self-Emotions Appraisal (SEA)
1. I have a good sense of why I have certain feelings most of the time.
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

Others-Emotions Appraisal (OEA)
5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.

Use of Emotion (UOE)
9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivating person.
12. I would always encourage myself to try my best.

Regulation of Emotion (ROE)
13. I am able to control my temper so that I can handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

Table 6: The WLEIS (Wong, Law, & Song, 2004)

The WLEIS is a relatively new test, but even so it has already been subject of examination and summarization by many different researchers (Hertel, 2007; Byrne, Smither, Reilly, & Dominick, 2007; Tett, Fox, & Wang, 2005; Juan Carlos Pérez, 2005; Wong, Law, & Song, 2004). Invented in 2002, the conceptual foundation of the scale is based on Mayer and Salovey's view of ability EI (1997) and shows distinct facets to the Big Five. Law and Wong studied the validity of the questionnaire, concerning its test, re-test liability, its correlation, but distinguism, with the already mentioned Big Five personality dimensions, its internal consistency and its possible use as predictor for job performance (Wong, Law, & Song, 2004, 2004). Even as Wong and Law state in their discussion the need to "advocate continued research on EI" and call for "the development of scales that do not rely on self-reports" (Wong, Law, & Song, 2004; Page 12), their results and the acceptance of the scale by the EI consortium, turn the WLEIS into an adequate research model. Further contribution to use the WLEIS and

what their innovators saw as an actual limitation of their research results, is the detail that although all data for their project was collected in Hong Kong and the People's Republic of China, distinct from studies done by North American scientists, the WLEIS has been accepted and used as a valid construct to predict EI by scientists all over the world (Hertel, 2007; Byrne, Smither, Reilly, & Dominick, 2007; Tett, Fox, & Wang, 2005; Juan Carlos Pérez, 2005; Wong, Law, & Song, 2004).

IV. The Current Study

Based on the presented history of EI and the overview of existing EI-tests, it becomes clear, that most of currently existing EI questionnaires have not been tested or constructed under the vision of cultural diversity. Even after two decades of EI history, the most widely used questionnaires have been built by North American scientists and even if not, questionnaires invented by researchers from other cultures, are usually available and held in English. Therefore, the influence of cultural, linguistic patterns inducted in these questionnaires needs to be examined to show that different variables correlate to the understanding and thus the outcome of EI tests.

To do so, the author specified two areas of correlation between culture and emotion, which are going to be analyzed within this work: The ability approach of emotional intelligence and the in-group advantage of members of different cultures. The three variables chosen to evaluate this correlation are the age, language ability and foreign experience of the participating students.

As already stated throughout this work, there are many supporter of the theory that emotional intelligence is not inducted by native talent, but rather an ability based intelligence that can increase over time, through learning and experience (Goleman, Boyatzis, Bar-On, etc.). In this context it can be postulated, that certain variables such as age, language abilities, working or studying experience and active people management should lead to a higher EI and a better understanding of emotions. Consequently, the same point should be applicable for the construct of cultural intelligence. That means that, language abilities, studying and working abroad and the act of living and experiencing another culture should increase the understanding of the norms socially evident in it and finally lead to the point of being able to benefit from the so called "in-group advantage" when it comes to recognizing and acting in certain

situations. Because, only someone who understands the language and the actual meaning of given words, in this precise case, words presented in a questionnaire, will be able answering them adequately.

Thus the following assumptions have been made to create the base of research for this dissertation:

1. The longer a person has been involved in a certain cultural environment, the better is her understanding of the emotional construct inducted and how it is expressed, in this study, verbally. That means, the longer someone is exposed to an environment, different from her mother-culture, the higher should be the correlation of EI scores between the two, even if the procedure happens in different languages[25].

2. The more languages a person is capable of speaking and understanding and the longer someone is actively speaking a language, the easier it should be for him to comprehend emotions in different languages and to define and express them verbally. This assumption is based on the idea that certain languages are based on the same linguistic basis and also that the more languages someone has incorporated, the higher should be his eloquent understanding. Therefore vocabulary practiced to express states of emotion are better integrated and as a result become a wider habit of daily usage. As a consequence the correlation between emotional response in different languages should be higher, the more languages are actually in someone's repertoire.

3. The older someone is, the higher is the grade of emotional and cultural experience she should have been exposed to and hence it is easier for someone to perceive, understand and manage emotions, thus, the higher should be someone's EI. This assumption is based on the already explained theory of

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[25] [Author's note: In this context it is obviously necessary that the test person has significant knowledge of the different languages used for the questionnaire, otherwise he would not been able to understand the questions

ability EI and the idea that EI can be trained and increased throughout time and experience[26].

The following graphic gives a figurative explanation of the assumptions indicated for this research.
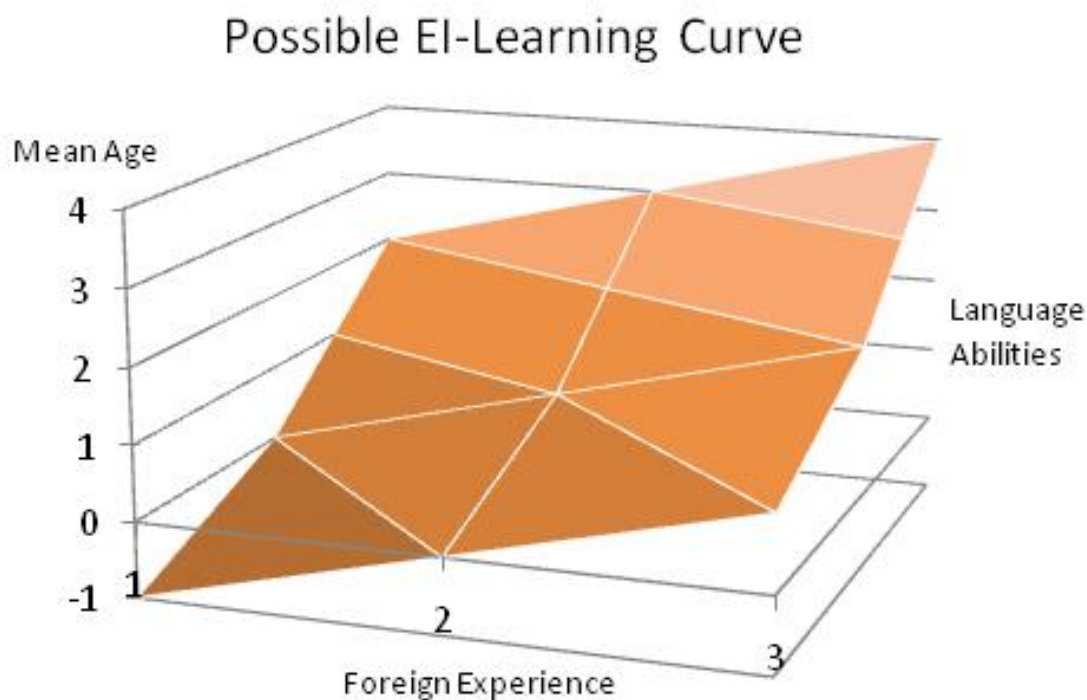
Figure 2: Possible EI-Learning Curve

General Assumption:
The three mentioned variables, namely age, foreign experience and language abilities, should contribute to a better cultural understanding, therefore a higher correlation of EI-test scores, constructed for, and by people with a different cultural background, even if the test is taken in different languages

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[26] [Author's note: In the authors opinion and backed up by certain scientists in the field, there are many other variables which surely impact the grade of EI, such as social environment, political environment and psychological stability, but because of the limitation of time and volume of the work, those variables will not be considered

V. Study

1. Method

1.1 Overview and Measures

Undergraduate students in the field of Business Administration, ranging from the 1st till the 5th Semester, from the University of Applied Sciences in Munich, Germany, were asked to participate in this research, by taking the WLEIS, two times, separated by a predefined time gap, in two different, but familiar, languages. There were no credits, or any other kind of compensation, financially or professionally, promised or submitted and all students participated on their free will.

The versions of the WLEIS, used within this work, where the following:

- *English version*: The original WLEIS version, taken from Wong, Law, & Song, 2004, has been used.

- *German version*: Based on the existing German version used by Hertel in her dissertation from 2007 (Hertel, 2007), also the author changed some frases derived from his own lingustic experience[27] and after a review session with a german aerospace-engineer, graduated at UT/Austin, who has been living and studying in the USA for more than 14 years[28]. Additionally and with keeping the idea of avoiding possible copying or recognition of questions by the test subjects in mind, the sequence of the questions, within the WLEIS, have also been changed. On the other hand, to facilitate the necessary correlations and calculations, the same sequence of questions has been adopted for all questionnares which differ from the original version in English.

- *Portuguese version:* Based on the original english version of the questionnaire, the WLEIS was first translated into portuguese by the author himself and after that handed over to two different persons for review and discussion. The first person is portuguese, certified in the english language by the cambridge institute in Lisbon/Portugal, who speaks four different languages fluently and works for

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[27] [Author's note: German born, has been studying and living in the USA, Sweden, Portugal and Spain and because of that experience speaks four languages fluently and a fifth on a basis level

[28] [Author's note: The name of the reviewer is Jens Ramrath and he currently lives in Philadelphia, USA

an international company where english is the daily used peer language. The second assessor is the current financial director at the CMVM[29], who is fluent in three different languages and has to negotiate in english on a daily bases.

- *Spanish version:* To create the Spanish version of the WLEIS, also the English, original version (Wong, Law, & Song, 2004) was used as basis to construct the adapted survey. First, the questionnaire was translated into Spanish by the author himself. Second, two colleagues of him, working at the Coca-Cola Company in Madrid, have been asked to review the proposed version. The primer assessor is born Spanish and the current responsible manager for commercial finance at the Iberian Business Division in Madrid. The author chose specifically that person, as his mother is Irish and besides that specific fact, his vast international studying and working experience further indicated sufficient linguistic and cultural qualification for the task. The other professional asked for support, is leading engineer for the European water business within the Coca-Cola Company, also working in Madrid. In addition to his international occupation, he needs to discuss, negotiate and give consultation in English and Spanish on a daily basis, which makes him the perfect, linguistic evaluator for the test. Moreover is he capable of speaking five languages in total as he also studied in German and French which reinforces the author's opinion of his perfect qualities to review and approve the used Spanish version of the WLEIS.

To achieve a valid observation of the three variables necessary for this research, the header of each test, independent of the language used, included questions about the age, language abilities and foreign experience of the participant[30]. Moreover, each person taking part in the test, was also asked to include his/her gender, nationality, and initials or any other kind of irretraceable identification, for example an image or number, which would only be used as match for having the possibility of comparing the two scores of the WLEIS, while maintaining the anonymity of the students. To avoid too many possible answers for the observing variables, the following restrictions had been included in the test:

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[29] [Author's note: CMVM is the Portuguese Regulatory Office for the Stock Exchange Market
[30] [Author's note: Please see the test examples attached at the end of the study [Appendix B]

Age: No restriction in the test, Arabic number, indicating the current age

Language abilities: List of four possible answers to choose from, namely

- 2 languages
- 3 languages
- 4 languages
- > 4

Foreign experience: List of three possible answers to choose from, namely

- No
- Yes
- Yes > 1 Year

Nevertheless, after reviewing the data collected and to avoid complications for the analysis, the variables had been organized and classified into only two possible groups (charter), used for the correlation. Therefore, age was coded in distinguishing between older (= 1) or younger (= 0) than 22 years, language abilities in being able of fluently speaking up to two (= 0) or more languages (= 1) and foreign experience as the duration of having staid abroad for more (= 1) or less (= 0) than one year.

Between-Subjects Factors

		N
Age	0	41
	1	38
Language	0	24
	1	55
ForeignExp	0	44
	1	35

Table 7: Between Subjects Factors

1.2 Participants

The age of participants ranged from Minimum = 18 to Maximum = 30 years, whereas the Mean shows m = 23,24 and the Median M = 23. The total number of questioned persons reached N = 80, even if one sample was rejected as the second questionnaire was not completed properly and it therefore was not possible to evaluate any correlation. Even if the statistic will not be taken into consideration within this study, the percentage of female participants counted up to 66,3% of the total sample N, or 53 out of the 80 questioned students. A great variety of nationalities was observable throughout the students who took part in the test. Besides the expected students from Germany and Turkey[31] the nationalities of the students who contributed to the research came from Asia, North America, Australia and former member states of the Russian Federation. The number of languages spoken per partaker varied from two to five, but all participants indicated English as one of the languages in their repertoire. Nevertheless, wide-ranging knowledge of the following languages, apart from English and German, was present among the students: French, Mandarin, Russian, Spanish, Portuguese, Polish, Ukrainian, Kirgizstan, Greek, Turkish, Slovenian, Hungarian, Vietnamese and Finnish.

The participants' foreign experience also showed a vast variety of periods, ranging from zero time till up to 10 years, whereas especially the students from the last of the three mentioned samples, the Erasmus class, showed the highest foreign experience average. Within that group, only one person indicated foreign experience below one year, but more than 35% percent of the sample students specified that they had lived more than one year outside their birth country.

	Total N	Mean	Median	Max	Min	Percentile 25	Percentile 75	Standard Error of Mean	Standard Deviation
Study I	80	23,24	23,00	31,00	18,00	21,00	25,00	,07	2,77

Table 8: Parameters of the study

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[31] [Author's note: From Turkey, as a high percentage of Students at German Universities are Turkish in the third and fourth Generation. Turkish people are number one ranking within the group of foreign students studying in Germany, approximately 27.000

1.3 Procedure

The students were asked at the beginning of their lectures if they would like to participate in a research which outcome would be used for this dissertation. All students asked, finally took part in the research presented. The procedure for taking the questionnaires was the same for all three classes that contributed with their participation except for the languages and the sequence in which they were used. After a short, 15 minute long presentation and explanation about Cultural Intelligence, EI, EI-questionnaires and the actual objective of this dissertation, in the official language of the lecture itself, Students were asked to state any question or lack of understanding, before starting the test.

The first round of questioning was held with the WLEIS in a foreign language[32], to better avoid the possibility of memorizing questions during the first run. Talking, writing down the questions on an extra sheet, or the exchange of ideas during the test was not tolerated and any question was directly addressed to the author and explained by him[33]. There was no timely pressure to fulfill the task, but after 10 minutes it was communicated that they should try to come to an end.

After everyone had finished the test, all questionnaires were collected and taken from the students to avoid that someone could change answers or copy them directly to the second test during later use. Before taking the second test, the timely gap and occupation during the break had been different for every group and will be further explained through the following paragraphs. Nevertheless, the break was necessary to avoid that students with more advanced language skills could remember the questions presented, so that the outcome of the second test was not impacted by the answers given in the first one.

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[32] [Author's note: In case of the first two groups, it was English, but as the third group consisted of foreign students joined in from the Erasmus program, the first language used was German

[33] [Author's note: In the first group two questions were asked concerning the questionnaire:
1. One student could not figure out the meaning of question 12 of the WLEIS "I would always encourage myself to try my best." and the author explained its significance in the following way "what they want to know is, can you motivate yourself to try your best in certain, different situations?"
2. The second question emerged also through the lack of linguistic understanding, in that case with question 4, "I always know whether or not I am happy." The student was confused by the construction of the sentence and wanted to ascertain that his idea of what the question is asking was right.

The beginning group had two full time lectures about "Principles of Management", including theoretical lectures and the task of handling questions about a case study discussed during the lecture, before running the WLEIS in German[34]. The second group actually had their semester end exam of the Management module during the exact lecture they were asked to participate in this research. Therefore, the time between taking the WLEIS in English and in German was occupied by focusing on their final exam, which was restricted to 90 minutes. The third group of students had prepared group presentations on discussed case studies and had to present them, in English, during two full time lectures, which counts up to three hours. After the second lecture had finished, they took the second WLEIS, in their case in English and also in Spanish, as two Spanish students asked if it would be possible, taking the questionnaire in their mother tongue instead of English.

1.4 Results

Out of the 80 participants, one sample was rejected due to the lack of proper data and therefore did not contribute to the results of the study (N = 79).

Various models of analyses have been tested to find out which one would be the proper method for this study. To examine the sought-after correlations between the three selected variables[35] and the grade of difference of the total WLEIS-EI score achieved in mother tongue and foreign language, ANOVA, multivariance analysis and univariate analysis of variance had been chosen as potential techniques. After the first data introduction in SPSS®, univariate analysis of variance was selected as the most appropriate type of analysis, using the difference between the two test scores as the "subject of matter".

As already shown on page 42 the Between-subjects factors for this study show the distribution of the sample for the three variables. There is a slight overweight in the field of language, which occurs, as only 24 out of the 79 test persons spoke just two languages and it was therefore not possible to further limit the two charters chosen.

Using descriptive statistics, the score difference between the two tests was taken into consideration. Two effects, such as the principle effect of the variables and the

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[34] [Author's note: The time span between the two tests aggregated to three hours
[35] [Author's note: Foreign experience, language ability and age

interactional effect were mediated and the subsequent formulas had been used to calculate, the

Principle Effect: $y_i = \varsigma_0 + \varsigma_1 * x_1 + \varsigma_2 * x_2 + \varsigma_3 * x_3$, and the

Interactional Effect: $y_i = \varsigma_0 + \varsigma_1 * x_1 + \varsigma_2 * x_2 + \varsigma_3 * x_3 + \varsigma_4 * x_1 * x_2 + \varsigma_5 * x_1 * x_3 + \varsigma_6 * x_2 * x_3 + \varsigma_7 * x_1 * x_2 * x_3$,

whereas x_1 = age, x_2 = language and x_3 = foreign experience.

Observing the Mean and the standard deviation for the test-score difference, in dependency on each of the three variables as a principle effect, variations between the two groups are vivid. In all three cases, the Mean of the score difference for the test persons in the second charter (x_n=1), such as higher age (M = 0,18 for x_1 = 1, compared with M = 0,68 for x_1 = 0), more languages spoken (M = 0,18 for x_2 = 1, compared with M = 1,04 for x_2 = 0) and greater foreign experience (M = -0,63 for x_3 = 1, compared with M = 1,30 for x_3 = 0), was lower than for subjects from the first charter (x_n=0). The standard deviation showed the same deportment for age and language abilities, but within the variable "foreign experience", the standard variation for the score difference, was higher for people who indicated greater experience than for subjects with less experience outside their home country (see table 9).

ScoreDiff * Age				ScoreDiff * Language				ScoreDiff * ForeignExp			
ScoreDiff				ScoreDiff				ScoreDiff			
Age	Mean	N	Std. Deviation	Language	Mean	N	Std. Deviation	ForeignExp	Mean	N	Std. Deviation
0	,68	41	5,935	0	1,04	24	6,504	0	1,30	44	5,268
1	,18	38	5,642	1	,18	55	5,454	1	-,63	35	6,245
Total	,44	79	5,764	Total	,44	79	5,764	Total	,44	79	5,764

Table 9: Parameter of the study

Using these specifications to examine the interactional effect on the test-score, the results of the descriptive analysis for all variations is shown in the following table:

Descriptive Statistics

Dependent Variable:ScoreDiff

Age	Language	ForeignExp	Mean	Std. Deviation	N
0	0	0	2,56	8,110	9
		1	,67	4,761	6
		Total	1,80	6,826	15
	1	0	1,07	5,811	14
		1	-1,17	4,821	12
		Total	,04	5,392	26
	Total	0	1,65	6,665	23
		1	-,56	4,743	18
		Total	,68	5,935	41
1	0	0	1,13	4,883	8
		1	-11,00	.	1
		Total	-,22	6,099	9
	1	0	,77	1,878	13
		1	-,06	7,113	16
		Total	,31	5,600	29
	Total	0	,90	3,239	21
		1	-,71	7,679	17
		Total	,18	5,642	38
Total	0	0	1,88	6,623	17
		1	-1,00	6,191	7
		Total	1,04	6,504	24
	1	0	,93	4,305	27
		1	-,54	6,368	28
		Total	,18	5,454	55
	Total	0	1,30	5,268	44
		1	-,63	6,245	35
		Total	,44	5,764	79

Table 10: Results of the descriptive analysis

In this context, the results show more facets than the ones extracted from the principle analysis. The variable x_1, age, was used as the base variable for this statistic analysis.

Within this framework, zero value subjects for the variable x_1 (x_1=0), age, show lower standard variation scores, ranging from 4,783 to 4,821 for people with more foreign experience than a year (x_3=1) independent of their language skills (x_2=0 ∧ x_2=1), compared with an interval from 5,811 to 8,110 for participants without foreign experience (x_3 = 0). The mean scores range between -1,17 and 2,56, whereas the highest mean [2,56], and by the way also the highest standard deviation score, is reported by "triple zero" subjects (x_1∧x_2∧x_3=0). The closest score to a zero mean in this chapter [0,04] is indicated by people being fluent in more than two languages independent of their foreign experience (x_1∧x_3=0; ∧ x_2∧x_3=1). Therefore, looking at the correlations, using the score of all participants independent of their foreign experience (x_3=0 ∧ x_3=1), the mean for students, younger than 22 years, with higher language skills (x_2=1) is the closest to zero, while for ones just being capable of speaking two languages is [1,80], hence the second highest. The same behavior is present for the sample, which is independent of the participants language skills (x_2=0 ∧ x_2=1), but with longer foreign experience than their counterparts (-0,65 versus 1,65).

Further, observing the statistical data of participants older than 22 years (x_1=1), results indicate a better overall correlation of cultural intelligence and emotional intelligence, as mean scores are lower in 6 out of 9 comparisons. The mean scores vary from -11 to 1,13, but it should be mentioned, that the -11 score is just for one sample and consequently not significant. The other two values, which indicate a higher mean score compared with the samples in the first chapter (x_1=0), also show a higher standard variation (5,600 ∧ 7,679, vs. 5,392 ∧ 4,743). All other combinations show a higher correlation than the ones detected for chapter one subjects (x_1=0), and data points toward the consequence that with higher age (x_1=1), foreign experience has a lower impact on cultural intelligence than it does in a younger age (M = 0,77 versus M = 1,07 for x_2=1 ∧ x_3=0, and M = 1,13 versus M = 2,56 for x_2=0 ∧ x_3=0).

Examining the last chapter, which shows the results, independent of the age of the participants (x_1=0 ∧ x=1), lowest mean scores are given for students with advanced language skills and foreign experience of more than a year (M = -0,54 for x_2∧x_3=1) and the widest gap between the two test scores are referenced for those who lack advanced experience for both variables (M = 1,88 for x2∧x3=0). Approximately two times better correlations are indicated for subjects dominating more than two languages,

independent of their foreign experience (x3=0 V x3=1), even if the mean scores, for both cases, are closer to zero if the observed students went through longer stays abroad (M = -1,00 for x_2=0 $\wedge$ x_3=1 versus M = 1,88 for x_2=0 $\wedge$ x_3=0, and M = -0,54 for x_2=1 $\wedge$ x_3=1 versus M = 0,93 for x_2=1 $\wedge$ x_3=0).

Tests of Between-Subjects Effects

Dependent Variable:ScoreDiff

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	137,346[a]	6	22.891	,672	,673
Intercept	,045	1	.045	,001	,971
Age	29,339	1	29,339	,861	,357
Language	2,505	1	2,505	,074	,787
ForeignExp	99,066	1	99,066	2,906	,093
Age * ForeignExp	1,540	1	1.540	,045	,832
Age * Language	47,697	1	47.697	1,399	,241
Language * ForeignExp	21,272	1	21,272	,624	,432
Error	2454,147	72	34.085		
Total	2607,000	79			
Corrected Total	2591,494	78			

a. R Squared = .053 (Adjusted R Squared = -.026)

Table 11: Results of the descriptive analysis

To facilitate this explanation of the results of the statistical analysis, the following graphics are used. Each of them graphically supports one of the three combinations of the variables to explain their correlation ($x_1 \wedge x_2$, $x_2 \wedge x_3$, $x_1 \wedge x_3$).

Graph number one specifies how the mean scores correlate in relation to the combination of the variables used, in this case, age [x_1] and language abilities [x_2].

Estimated Marginal Means of ScoreDiff
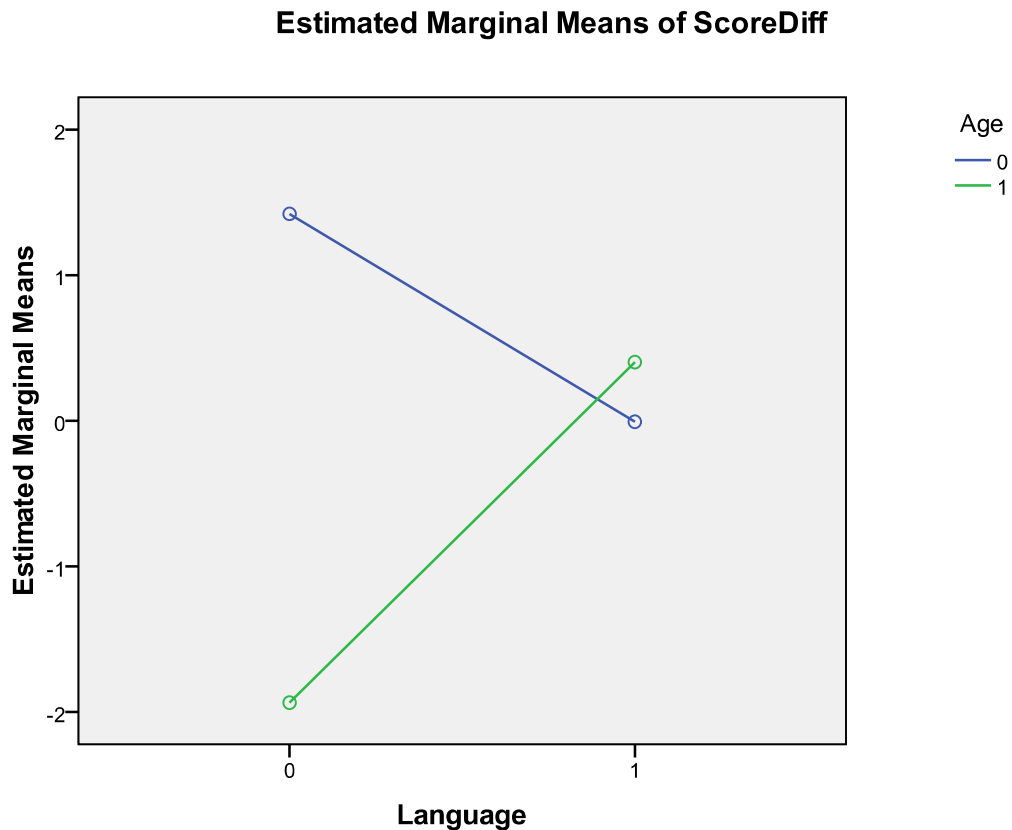
Graph 1: Correlation of estimated marginal means between Age and Language

It turns evident, that the mean scores for age and language abilities behave proportional to the test result. Variables indicate that with higher age and experience, mean values tend closer to zero and therefore close the gap between each other.

Graph number two indicates how mean scores correlate in relation to the combination of the two following variables, language abilities [x_2] and foreign experience [x_3]. The result shows the same trend as the combination of age [x_1] and language abilities [x_2], which means, that with more languages spoken and extensive experience outside the home country, the estimated marginal means of the score difference heads closer to zero.

Estimated Marginal Means of ScoreDiff
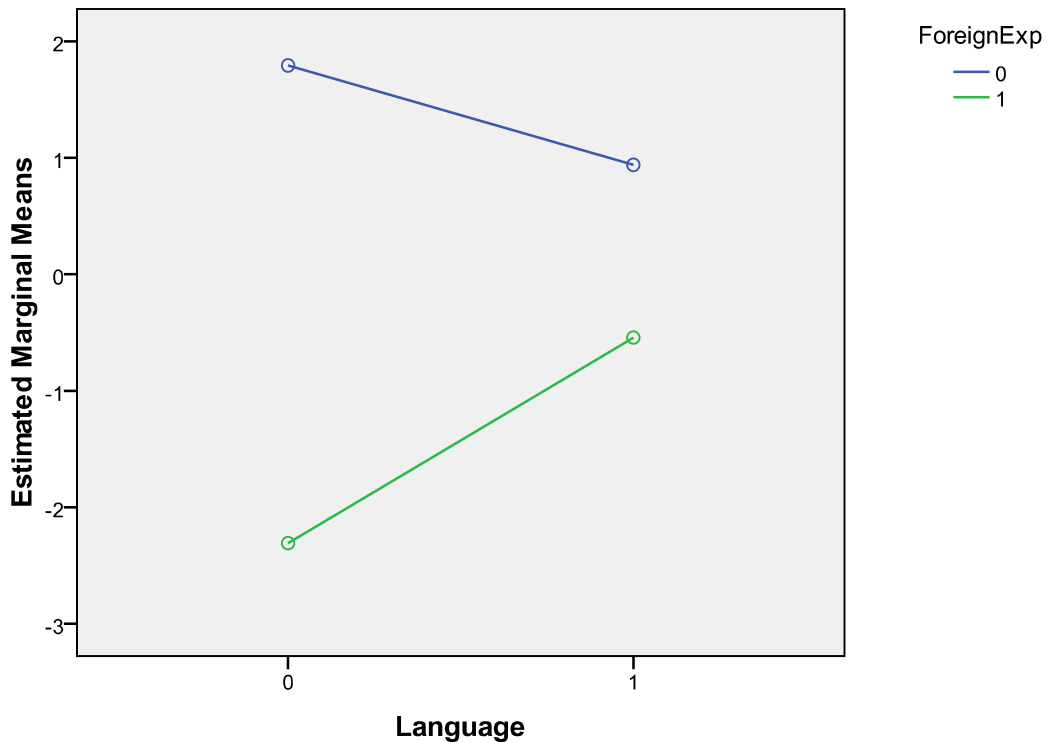
Graph 2: Correlation of estimated marginal means between Foreign Experience and Language

Third and last graph within this context is graph three, which copes with the combination of age [x_1] and foreign experience [x_3]. Compared with the first two charts, the correlation is controversial to the other two groupings. In this case, the mean score for subjects with advanced foreign experience and higher age, increases, hence acts obverse to the result for participants without foreign experience. Nevertheless, this impact is probably caused by the sole contributor of a mean score of -11, whose sample had subsequently been rejected.

Estimated Marginal Means of ScoreDiff
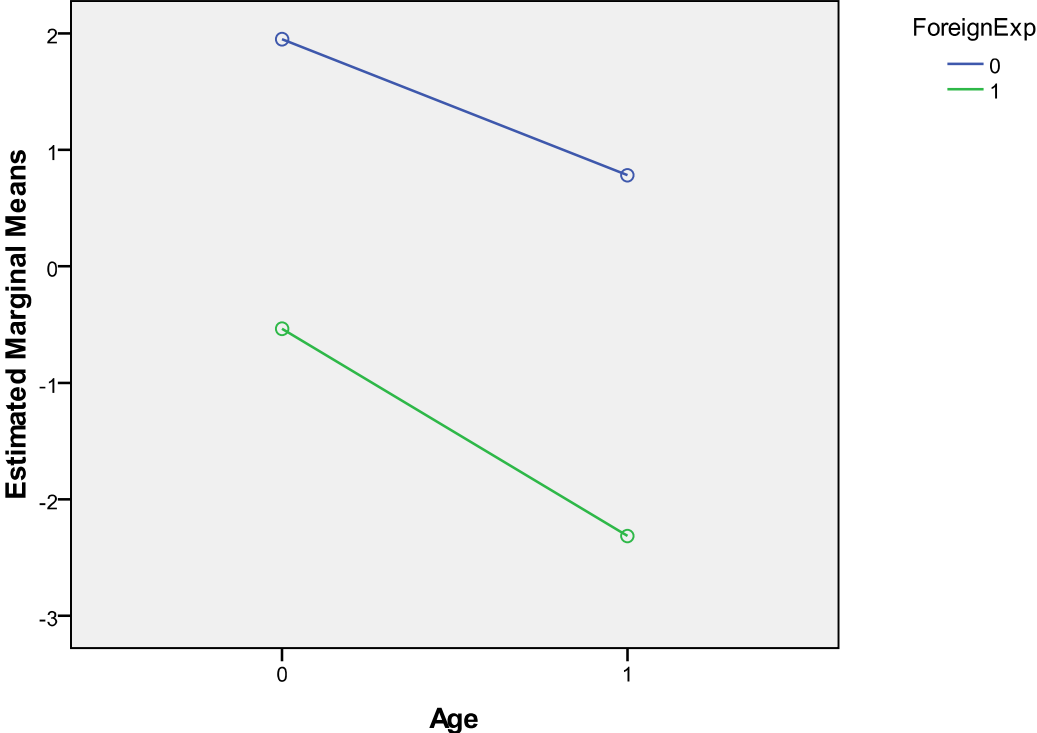
Graph 3: Correlation of estimated marginal means between Foreign Experience and Age

VI. Discussion

The objective of this dissertation was to investigate if there is an observable correlation between Cultural- and Emotional Intelligence, using age, language ability and foreign experience as the observed variables throughout the study. To reach a final conclusion, different steps have been included in the work. First the history and definition of Emotional Intelligence, its different theories and roots, have been presented. Hence the construct of social intelligence has been explained (E. L. Thorndike, 1920), the first time the term Emotional Intelligence was published in the title of a scientific study (Payne, 1985) has been pointed out and the first definition of EI has been presented (Mayer & Salovey, 1990).

Second, models of EI have been explained, different fields of application presented and some of the founders of these constructs, such as Mayer and Salovey, Bar-On and Goleman, have been clarified and compared (Mayer & Salovey, 1990, 1997, 2000; Bar-On 1985, 1997, 2002; Goleman 2002).

After that, the concept of cross-cultural research on emotions was used to establish the foundation for this discussion and existing work done by Elfenbein and Ambady, Ekman and Friesen, Mesquita and many other specialists was taken into consideration. Subsequently, models of EI, such as the ability model, the trait model and the investment model have been meticulously explained and the model to use in this work (WLEIS) and the author's decision, why to use exactly this questionnaire was pointed out.

The study presented, compared the impact of three defined CI variables, namely age, language abilities and foreign experience on Emotional Intelligence, to observe if the results of EI-Questionnaires are culturally impacted. The questionnaire used for this study was the WLEIS and it took place in Munich, Germany, with German and foreign students.

There are three conclusions arising from the results presented. First, the study provided evidence, that age, language ability and foreign experience have a direct impact on the responses given in the WLEIS. This leads to the argumentation that cultural intelligence affects EI-scores. As already mentioned earlier, people with higher CI are regarded as better able to successfully blend in to any environment and to better understand

emotions and behavior connected to different cultures. Therefore, the results of the study showed that the responses of EI-questionnaires, taken in two different languages to be able comparing different cultural norms incorporated in the questionnaires through the language, indicated fewer differences, the older, the more languages or the more foreign experience the participants had integrated and experienced. The outcome of the research further showed, that all three abilities appear to have a different intensity of impact. In this context, age and foreign experience seemed to be more important than language abilities, as long as the influence of the variables were examined independently one from each other.

The second conclusion, which is drawn from the study, specifies that incorporating more than one of those three abilities, increases the correlation of the EI-questionnaire results, when the test is taken in different languages. Within this context, the strongest link existed between age and language abilities, but also language and foreign experience showed mean results close to zero. The results therefore provided evidence to support that cultural abilities contribute to a better understanding of EI and its patterns, particularly when the questionnaire is provided in a different language or invented by people from a different culture. This result also supports the theory of an "in-group advantage", by Elfenbein and Ambady (Elfenbein & Ambady, 2002), which already has been explained throughout the dissertation. One point that has to be mentioned is that the one relationship of abilities which did not appear to show better correspondence between the two test scores was the combination of age and foreign experience.

The third ratiocination consists in the reasoning that the timely gap between the two tests and also the occupational activity within this time, does not have a differing impact on the outcome, as long as it is secured that the answers given during the first run cannot be copied directly onto the second. As the results already mentioned are coherent within a sample size as small as used for this thesis, it can be seen as evident, that the different time spans used, and the different activities presented by the students during the break between the two test sessions, have not had impact on their responses. Therefore, their ability of handing in correlated or uncorrelated EI-scores of the first test taken in a foreign language and the second one responded in mother tongue could be solely depended on their Emotional Intelligence and their EI-Quotient.

Nevertheless, there are some limitations of the study, which need to be mentioned. To start with, the sample size which has been used for the study can be seen as not sufficiently explicative. Even if the conclusions taken from the study support the idea of a correlation and inter-dependency between cultural- and emotional intelligence, the author suggests that more studies, including more countries, cultures and participants should be done before a final, scientifically valid conclusion can be drawn. As already alluded during the explanation on cross-cultural research on emotions, there are some scientists who focus their studies on exactly that field of excellence; hence there could be more consolidated findings in the future and more investigation focusing also on the possible different outcomes of inhabitants from collectivistic and individualistic cultures.

Another limitation which goes hand in hand with the small sample size is the fact that just students have been taken into consideration for this study. Consequently, the possible, maximum age of the participants can be considerate as limited and the author therefore suggests that additional studies, using participants form different fields of professionalism should be involved in the research. Also, as the main concern of this dissertation consisted in the observation of EI-scores and if they are influenced by cultural factors, it is highly recommended that subsequent studies are not only done for different fields of professionalism, but also within different companies, throughout different countries, as that would help to examine possible intercompany cultures and their influential strength. However, the procedure of taking the same test more times in different languages complicates the participation and observation and it turned out that the timely involvement was not accepted by companies, asked to participate in the study. Still, the attention of including partaker from many different countries and cultures, to get a diversified picture of their test results, has been fulfilled in the study.

One more restriction which occurs within this thesis is the actuality that only one EI-questionnaire, namely the WLEIS, has been used for all observations. The author's decision has been mentioned and explained and the limited length of the dissertation does not permit further examinations, but for possible successors it would be a recommended point of investigation. In this context, the author suggests that not only trait-EI tests, but also ability-EI tests should be taken into consideration (for example the MSCEIT, TEIQue, SEIS or the EQ-i).

Though the results of this study indicate that the level of EI-scores and the recognition and regulation of emotions in different languages depend on the cultural experiences of each individual, the final conclusion must be that more research is needed to reach an overall accepted implication. Facing the current economic crisis and its consequences on global business, it is essential that EI-questionnaires, used in professional recruitment, take all factors into consideration. Hopefully we will see much more investigation and exploration of this subject in the future.

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Appendix A

Acronym Index

Acronym	Name
CI	Cultural Intelligence
DHEIQ	Dulewicz & Higgs Emotional Intelligence Questionnaire
ECI	Emotional Competence Inventory
EIA	Emotional Intelligence Appraisal
EI	Emotional Intelligence
EIQ	Emotional Intelligence Quotient
EQ-i:S	Bar-On Emotion Quotient Inventory Scale
HRM	Human Resource Management
IQ	Intelligence Quotient
MEIS	Multifactor Emotional Intelligence Scale
MSCEIT	Mayer, Salovey & Caruso Emotional Intelligence Test
SEI	Six Seconds Emotional Intelligence Assessment
SSRI	Schutte Self-Report Inventory
SSEIT	Schutte Self Report Emotional Intelligence Test
TEIQue	Trait Emotional Intelligence Questionnaire
TMMS	Trait Meta Mood Scale
TMMS 24	Trait Meta Mood Scale 24
WEIP	Workgroup Emotional Intelligence Profile
WLEIS	Wang and Law Emotional Intelligence Scale
WPOei	Work Profile Questionnaire-Emotional Intelligence Version

Appendix B

WLEIS in the English Version

WLEIS - WONG AND LAW EI-SCALE

BACK

INITIALS TL	**GENDER** MALE	**NATIONALITY** D	
AGE 32	**LANGUAGE ABILITY** 4 LANGUAGES	**MOTHER TONGUE** GERMAN	**FOREIGN COUNTRY EXPERIENCE** YES > 1 YEAR

	1	2	3	4	5	6	7

1. I have a good sense of why I have certain feelings most of the time.
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.

9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivating person.
12. I would always encourage myself to try my best.

13. I am able to control my temper so that I can handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

Note. The 16 items in WLEIS are reprinted for The Leadership Quarterly, 13, C. S. Wong and K. S. Law , The effects of leader and follow er emotional intelligence on performance and attitude: An exploratory study, 243–274, Copyright (2002), w ith permission from Elsevier.

WLEIS in the German Version

WLEIS - WONG UND LAW EI-SCALE

ZURUECK

INITIALEN TL	**GESCHLECHT** MAENNLICH	**NATIONALITAET** D	
ALTER 33	**SPRACHEN** 4 SPRACHEN	**MUTTERSPRACHE** DEUTSCH	**AUSLANDS-ERFAHRUNG** JA > 1 JAHR

	1	2	3	4	5	6	7

Ich habe die meiste Zeit ein gutes Gespuer dafuer, warum ich bestimmte Gefuehle habe
Ich sage mir immer dass ich eine kompetente Person bin
Ich bin ein guter Beobachter der Gefuehle anderer
Ich verstehe meine eigenen Gefuehle gut
Ich kann meine eigenen Gefuehle gut kontrollieren
Ich kenne stets die Gefuehle meiner Freunde aufgrund ihres Verhaltens
Ich weis immer, ob ich gluecklich bin oder nicht
Ich verstehe die Emotionen der Menschen um mich herum gut
Ich setze mir immer Ziele und gebe mein Bestes um diese zu erreichen
Ich bin im Grossen und Ganzen im Stande meine Gefuehle im Griff zu haben
Ich bin fuer die Gefuehle und Emotionen anderer sensibel
Ich wuerde mich ermutigen mein Bestes zu versuchen
Ich bin in der Lage, mein Temperament zu zügeln, so dass ich mit Schwierigkeiten rational umgehen kann.
Ich motiviere mich selbst
Ich kann mich immer schnell beruhigen wenn ich sehr veraergert bin
Ich verstehe wirklich was ich fuehle

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WLEIS in the Portuguese Version

WLEIS - WONG E LAW EI-ESCALA

INICIAIS	JL
SEXO	MASCULINO
NACIONALIDADE	P
IDADE	29
LINGUAS	4 LINGUAS
LINGUA MATERNA	PORTUGUES
EXPERIÊNCIA NO ESTRANGEIRO	NÃO

	1	2	3	4	5	6	7
Na maioria dos casos estou consciente porque tenho certas emoções							
Sempre me digo que sou uma pessoa competente							
Sou um/a boa/m observador/a de emoções de outros							
Eu entendo bem as minhas emoções							
Tenho capazidade de controlar bem as minhas proprias emoções							
Eu percebo sempre os sentimentos do/as meus/minhas amigo/as observando as suas acções							
Sei sempre se estou contente, ou não							
Entendo as emoções das pessoas a minha volta							
Eu defino sempre objectivos e dou o meu melhor para os atingir							
Em geral sou capaz de controlar as minhas emoções							
Tenho sensibilidade para as emoções e sentimentos de outra/os							
Esforçaria-me sempre para tentar o meu melhor							
Sou capaz de acalmar o meu temperamento para conseguir tratar as dificuldades de uma forma racional							
Eu consigo motivar-me							
Quando estou muito irritado consigo acalmar rapidamente							
Percebo perfeitamente o que sinto							

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WLEIS in the Spanish Version

WLEIS - WONG E LAW EI-ESCALA

INICIALES	
SEXO	FEMININA
NACIONALIDAD	P
EDAD	27
LENGUAS	4 LINGUAS
LENGUA MATERNA	PORTUGUES
EXPERIENCIA EN EL EXTRANJERO	SIM < 1 ANO

	1	2	3	4	5	6	7
En la mayoria de los casos soy consciente del porqué de ciertas emociones							
Pienso que soy una persona competente							
Soy un/a bueno/a observador/a de las emociones de los demás							
Entiendo bien mis emociónes							
Tengo capacidad de control sobre mis propias emociones							
Percibo siempre los sentimientos de mis amigos/as observando sus acciones							
Siempre sé si estoy contento/a, o no							
Entiendo las emociones de las personas de mi entorno							
Siempre defino objetivos y hago lo mejor para cumplirlos							
Generalmente soy capaz de controlar mis emociones							
Soy sensible a los sentimientos y emociones de los demás							
Me esfuerzo para ser mejor							
Tengo control sobre mi comportamiento y capacidad para analizar situaciones complejas de manera racional							
Consigo motivarme							
Si me pongo nervioso consigo calmarme de forma rápida							
Entiendo perfectamente lo que siento							

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