Universidad Ramon Llull

DOCTORAL THESIS

Title	**Emotional and Social Competencies:** **Developing and Measuring Emotional and Social** **Competencies in Higher Education**
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To

my PARENTS

my FAMILY (which includes the GLEAD)

and my FRIENDS:

Thank you for your unconditional support and for being with me through my tears of fatigue and tears of joy.

ABSTRACT

During the last three decades, research on emotional intelligence (EI) has continuously increased in order to understand its nature and its effects on diverse life variables including outstanding performance, leadership or life satisfaction. In parallel and independently from the different competing models of EI and the subsequently applied measurement tools, research has shown that in each of these approaches EI can be developed. However, evidence on how and how effectively this is done in higher education is still scarce. After covering the areas of the theoretical models, the three paper sections of this doctoral thesis focus on establishing construct validity among different measures of emotional and social competencies (ESC) and on the possibilities of developing them in higher education:

The first study taps into some of the major criticisms on the concept of EI, mainly referring to the quality of previous empirical studies due to the lack of construct or incremental validity of some of the measurement instruments. Here, a closer look is taken at two different instruments used to measure ESC: the Emotional and Social Competencies Inventory - University Edition (ESCI-U) as a multi-rater questionnaire and the Critical Incident Interview (CII) Informant results of the 360 degree questionnaires are compared to the results from the CIIs for 87 students. Results show significant correlations among colleagues' assessments of teamwork and spouses' assessment of developing others with the results from the CIIs. Findings suggest the presence of social desirability in some indicators for achievement orientation. Some competencies seem more difficult to assess through external observers. Significant correlations were also found between some competencies as measured through the self-assessments and the CIIs, which indicates that self-assessments might be more "realistic" than expected.

The second study shares how interdisciplinary project at a masters' program at a Spanish law school is introduced. This pedagogical innovation rose from the need to better prepare students for the expectations of their future employers which required the

development of competencies. The curriculum of a new course called "Module 9" was framed according to Experiential Learning Theory (ELT). While student teams worked on self-selected projects, their learning processes were accompanied by workshops and tutorials. Coding of learning memoranda showed that each team applied each learning mode during the different stages of the projects. While evaluations about the experience were generally positive, awareness of the learning process itself could be increased throughout the course. Reflections from professors included the need to improve the support system for students to manage the emotions during the learning process. This led to changing the curriculum design for the following cohort by including the assessment and development of emotional and social competencies.

The third study describes how Boyatzis' Intentional Change Theory (ICT) is combined with the interdisciplinary project work in teams with the objective of creating a framework for self-directed change based on the assessment and development of ESC. Workshops, tutorials and individual coaching sessions were offered to ensure the best possible alignment of personal and team goals. ESC were measured with the multi-rater ESCI-U after 3 months into the program and then again at the end of the academic year. The results of exploratory evaluations for 18 participants showed positive change on the development of ESC in general.

The quality of the present research is discussed critically and future research lines recommended as well as the implications of the present studies reviewed.

KEYWORDS

Emotional and Social Competencies, Emotional and Social Competencies Inventory, Critical Incident Interview, Behavioural Event Interview, Emotional Intelligence, Curriculum Design, Experiential Learning Theory, Intentional Change Theory, Competency Development, Higher Education

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Chapter 1: Introduction

In the quest for understanding what it is that makes some persons perform better than others, traditional measures of intelligence (IQ) quickly resulted insufficient. Although providing some degree of predictive validity, these measures of intelligence, have not been able to account for a large portion of the variance in work performance and career success (McClelland, 1973). Regarding the link between traditional intelligence and leadership effectiveness, for example, a comprehensive meta-analysis based on 151 independent samples obtained correlations of .27. The authors were forced to conclude that "Overall, results suggest that the relationship between intelligence and leadership is considerably lower than previously thought" (Judge, Colbert, & Ilies, 2004; pg 542). In contrast,

emotional intelligence (EI) and emotional and social competencies (ESC) have been able to predict outstanding performance of leaders, managers, and professionals (Boyatzis, 1982; Goleman, 1998; Guillén Ramo, Saris, & Boyatzis, 2009; Spencer & Spencer, 1993). Thus, one of the primary reasons for the growing interest in the assessment and development of EI is their association with success in a person's professional and personal life in general (e.g. Goleman, 1995; Goleman, 1998).

Unfortunately, what makes research on EI challenging is the ongoing debate on the validity of the concept and used measures. For some scholars, the psychometric properties of many measures of emotional intelligence – especially self-report measures - are insufficient to allow for valid conclusions on any of the conducted studies (e.g. Antonakis, 2003, 2004; Landy, 2005; Locke, 2005; Zeidner, Roberts, & Matthews, 2002). These criticisms call for further methodological analyses, improvements or alternatives in measuring and thus confirming EI as a valid construct.

The debate on the different models of EI has led to the need to clearly specify which model of EI is used for research (Cherniss, 2010). The model used in the present research falls into the realm of ESC as a behavioural approach to EI, not only because the theory has evolved from applied research in organisational settings as opposed to research in psychology, but also because the use of a 360º measure was designed to overcome some of the often criticised shortcomings of self-report and thus, as seen in practice, offers a measure with a higher face validity as compared to tests evaluated by experts.

The practical applicability of ESC can be seen in an increasing number of outcome studies which confirm that competencies can be developed. These outcome studies are mainly based on short-term trainings or set in organisational environments (Cherniss, Grimm, & Liautaud, 2010). Outcome studies in higher education that evaluate the efficiency of specific courses designed to develop emotional and social

competencies have only been published from the Weatherhead School of Management at Case Western Reserve University (Boyatzis, Passarelli, & Wei, 2013; Boyatzis & Saatcioglu, 2008); and thus are still rare (Boyatzis, 2008; Emmerling et al., 2008). However, they seem necessary in order to guarantee the quality of programmes and universities as these are continuously pushed to include the development of emotional competencies into their programmes by external entities, such as by organisations who hire the graduating students or even ministries of education as is the case in Europe as a component of the Bologna agreements.

At ESADE Business School, these issues are incorporated into a project funded by the Spanish Ministry of Science and Innovation (MICINN) which aims to establish an educational framework for the development and assessment of the ESC in higher education. In this project developmental efforts are framed under two related theories: Experiential Learning Theory (ELT) (Kolb, 1984) as one of the most prominent learning philosophies applied in higher education and the Intentional Change Theory (ICT) (Boyatzis & McKee, 2006) as an approach suggested to specifically develop ESC which can be considered an extension of ELT. Given the above mentioned importance of EI and ESC, i.e. the criticism on the measures, the need to analyse the effectiveness of developmental programmes and the pressure set on higher education institutions through the ministries of education, the main objectives of this doctoral thesis as part of the overall MICINN project are twofold: First, this research seeks to better understand and refine the measurement of ESC with the objective of adding insights about the quality of the ESC measures and thus contributing to the EI literature. Second, it inquires about possibilities to improve the educational outcomes by validating the process by which ESC can be developed in adults in the context of higher education. This would add to the scarce literature on competency development and would also advance the educational literature through outcome studies on ICT. The general research questions are therefore:

1. Are ESC properly operationalised and measured?

2. How can developmental theories such as Experiential Learning Theory (ELT) and Intentional Change Theory (ICT) be systematically incorporated into higher education?

3. Is higher education the appropriate setting to develop competencies, and specifically ESC?

To answer these questions, the thesis reports empirical studies conducted at ESADE, Ramon Llull University in form of three papers. In line with the objectives of the thesis which are related to emotional intelligence on the one hand and the implementation of effective curricula in higher education to develop these, the theoretical framework offers a brief overview of emotional intelligence and its different approaches and criticisms (chapter 2) as well as an overview of the most common learning and developmental philosophies and their application in higher education (chapter 3). Then, the three studies are presented: As a necessary first step and with the objective of taping into one of the main problems in social science related to the methodological criticisms on concept agreement and the operationalisation of ESC, results of an empirical study of triangulating different measures of ESC are presented to cover the question of construct validity as posed in the first research question (chapter 4). The second paper is dedicated to the other two questions: it suggests an educational framework to develop competencies by reviewing a curriculum change to include interdisciplinary project work framed around ELT which was introduced at a masters' programme at ESADE to overcome the lack of students' preparation for the expectations of the "real world" (chapter 5). Even though the interdisciplinary project was successful *per se* in stakeholders' perceptions for acquiring applied knowledge and general competencies - such as "creativity and innovation" or "communication and presentation skills" - a result of this experience was the detection of the need to offer students a better support system in managing their emotions throughout the learning process. This led to

changing the curriculum of the next programme by introducing ESC and combining it with the interdisciplinary project. This new curriculum is presented in the last study (chapter 6) in form of a small pilot study for an initial outcome research. The leading research questions are the same two questions, however now with a focus on ICT and ESC rather than ELT and general competencies. Finally, after a general discussion, the overall limitations are revisited, implications of the findings related to the above mentioned research objectives discussed, and future ways of research suggested (chapter 7).

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Chapter 2: Emotional Intelligence and Emotional and Social Competencies

2.1 Emotional Intelligence

Emotional intelligence (EI) evolved from studies on social intelligence primarily attributed to Thorndike. Later, Gardner (1983) published his theories on multiple intelligences in which he includes – among others – intrapersonal and interpersonal intelligences. However, it was not until 1990 that Salovey and Mayer (1990) first used the expression "emotional intelligence". Since Goleman (1995) popularised the concept with his book *Emotional Intelligence*, research has continuously increased among the fields of psychology, education and management to understand its nature and its effects on diverse life variables such as outstanding performance, leadership effectiveness, life satisfaction and even health issues like stress resistance. Today, the academic literature differentiates among different approaches to EI. These approaches do not necessarily contradict each other: scholars attribute emotional intelligence differently to the realm of intelligence and thus offer alternative ways to operationalise and measure EI in individuals. Some of these different approaches are also due to the settings of the original research which generated the concepts and measurement tools. These different approaches are often categorised based on similarities of the practical use of the measurement tools or their psychometric properties: As the number of research lines, conceptualisations and operationalisations started to diversify, Petrides and Furnham (2001) suggested differentiating the approaches and labelling them information processing – or ability EI - and trait EI. Later, Boyatzis (2009) gave an

overview of common approaches to EI by categorising them into ability, behavioural or internal (self-) perceived models based on how the concept is operationalised and thus measured. Recently, Cherniss' (2010) suggestion to separate between emotional intelligence and emotional and social competencies has often been cited, however mostly omitting his claim that "having made this distinction it should be noted that this does not make the Mayer-Salovey-Caruso model inherently 'superior' to the others"(Cherniss, 2010; pg 116). Possibly, as a consequence, Brackett, Rivers and Salovey (2011) discuss ability models related to cognitive intelligence as opposed to mixed models which also include personality traits and competencies measured through self-report instrument without contemplating the many approaches that often include multi-rater assessments. Due to the lack of coherence in the offered categorisations, some of the most relevant current approaches in EI and the used measurement instruments are described in the following based on the authors who are associated to each model. A special focus will be given to the competencies model as it originated from research trying to understand differences in performance in organisational settings.

2.1.1 Salovey & Mayer: Ability Model

Salovey & Mayer (1990) coined the term "emotional intelligence" and consider it to be a mental ability, thus relating it to cognitive intelligence. They initially defined "emotional intelligence as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions (Salovey & Mayer, 1990; pg 189). As a result of their research, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was developed (Mayer & Salovey, 1997) which measures EI in four dimensions: 1) perception, appraisal and expression of emotion,

2) emotional facilitation of thinking, 3) understanding and analysing emotional information, and 4) regulation and management of emotion. The MSCEIT measures the levels of EI mainly through a self-report questionnaire with 141 questions which are evaluated based on consensus or by experts. This means that the ability model considers that there are "right" and "wrong" answers to the results and thus the authors consider emotional intelligence to have similar characteristics to cognitive intelligence: some persons have higher levels of emotional intelligence than others and emotional intelligence can improve with age and experience (Mayer, Caruso & Salovey, 1999). Due to the similarities to traditional IQ –test, some authors have suggested to categorise this approach as an information processing approach (Petrides & Furnham, 2000).

Independent studies using the MSCEIT have shown its discriminant and convergent validity (e.g. Ashkanasy & Daus, 2005; Daus & Ashkanasy, 2005). Nonetheless, some of the major criticism is related to the lack of measuring personal emotional expression, the management of emotions, and the difficulty of representing organisational phenomena while using the MSCEIT (McEnrue & Groves, 2006). As a consequence of the last point – the lack of representing organisational phenomena – the level of acceptance of the MSCEIT among managers and professionals is relatively low (McEnrue & Groves, 2006).

2.1.2 Bar-On: Emotional and Social Intelligence

Bar-On's conceptualisation of EI derived from his experience and research in clinical psychology (Cherniss, 2010). Bar-On uses the definition given in *The Encyclopedia of Applied Psychology* which describes the model as "a cross-section of interrelated emotional and social competencies, skills and facilitators that impact intelligent behavior, measured by self-report within a potentially expandable multimodal

approach including interview and multi-rater assessment" (Spiegelberger, 2004 c.f. Bar-On, 2006, pg 14). In this model, EI is measured by the Emotional Quotient Inventory (EQ-I). Bar-On (2006) conceptualises EI into five scales: intrapersonal, interpersonal, adaptation, stress management and general mood. The EQ-I initially included only a self-assessment and was later extended into a multi-rater approach (Boyatzis, 2009) Bar-On's approach on EI has been criticised to measure products of EI rather than components (e.g. establishing satisfying relationships or working cooperatively), the lack of measures on emotional expression, and the high overlap with personality measures. McEnrue and Groves (2006) recommend the use of EQ-i for career development, job placement, and person-job fit applications due to its link to traits and personality dimensions.

2.1.3 Petrides & Furnham: Trait Model

Petrides and Furnham (2000) posit that trait EI is concerned with the manifestation of specific traits or behaviours, such as empathy, assertiveness or optimism, and is thus embedded within the personality framework. Their definition of emotional intelligence suggests that "Trait EI is a constellation of emotion-related self-perceived abilities and dispositions located at the lower levels of personality hierarchies." (Petrides & Furnham, 2003, pg 816) In fact, these suggested differentiating between trait EI and ability EI, specifically based on the measurement approaches rather than the conceptual differences:

"The former encompasses behavioral dispositions and self-perceived abilities and is measured through self report, whereas the latter concerns actual abilities and ought to be measured with maximum performance rather than self-report tests. Because trait EI relates to behavioral tendencies and self-perceived abilities, its investigation

should be conducted primarily within a personality framework. In contrast, ability EI should be studied primarily with respect to psychometric intelligence." (pg 426)

As a result of a comprehensive study of the EI construct and to overcome some of the shortcomings of existing measures, Petrides et al (2007) offer a competing measure with the TEIQue, a 144-item self-report questionnaire which covers 15 domains of trait EI: adaptability, assertiveness, emotion expression, emotion management (others), emotion perception, emotion regulation, empathy, happiness, impulsiveness (low), optimism, relationship skills, self-esteem, self-motivation, social competence, and stress management.

2.1.4 Goleman and Boyatzis: Emotional and Social Competencies

The competency model of EI based on Goleman (Goleman, 1995; Goleman, 1998) and Boyatzis (Boyatzis, Goleman, & Rhee, 2000) emerged from studies in organizational settings and build on previous research by McClelland and Flanagan. McClelland (1973) studied and compared the behaviour of a sample of exceptional workers with those of regular workers at their workplace at the US State Department's Information Service with the objective of finding indicators for outstanding performance and characteristics which differentiates it from average performance. For these studies, he adapted a method of analysis of behavioural and critical incidents from Flanagan (1954) which later became the basis of the design of any model of competencies. As an outcome of this observation, McClelland was able to group the examples of behaviour under common labels converting these into a compendium of observable behaviours. These groups are considered to be the origin of the first competencies. Boyatzis (1982) extended the work of McClelland by analysing competencies in managerial jobs. Spencer and Spencer (1993) then specialised on the assessment and measurement of competencies.

Boyatzis (1982) first defined competencies as, "the underlying characteristics of a person that lead to or cause effective and outstanding performance" and recently modified it to "a set of related but different sets of behaviours organized around an underlying construct called intent" (Boyatzis, 2009). Competencies can only be considered so if they are the outcome of the combination of intent and behaviour. With this last extension, Boyatzis positions the ESC model within the behavioural approach of the earlier mentioned approaches to emotional intelligence.

The different elements within these definitions indicate that emotional and social competencies are closely related to, sometimes overlap, or dependent on many constructs such as motives, personality traits, values or knowledge. Given the academic scope and importance of each of the fields, they can only be described briefly for reasons of parsimony.

First, according to McClelland's theory, "motivation has to do with the *why* of behavior" (McClelland, 1987, pg 4, italics in original text). Classifications of motives or drivers of behaviour are numerous depending on the focus of each scientist (e.g. Freud, McDougall) and can vary from culture to culture (McClelland, 1987) but will always include thoughts related to a particular goal state of theme (Boyatzis, 1982). McClelland proposes three main motives: achievement, power, and affiliation. According to the underlying motivations of a person, his or her behaviour will be different (McClelland, 1987).

Second, personality traits are defined as habitual patterns of behaviour, thought, and emotion (Kassin, 2003) which hardly change over time, differ among individuals and influence behaviour. Even though there is a connection to competencies as both influence behaviour, Eysenck and Eysenck (1985) suggest that personality traits are caused by the properties of the brain. And again, these properties of the brain are a result of genetic factors which so far had been considered as being difficult to modify. Nonetheless, recent research provides evidence that personality

traits continue to change in adulthood and that these changes may be quite substantial and consequential (Roberts & Mroczek, 2008).

Nelis et al (Nelis et al., 2011) show that even an 18 hours EI-training programme can lead to long-term significant increases in extraversion and agreeableness as well as a decrease in neuroticism. These recent studies add to the complexity of competencies by blurring some of the previously established lines.

Third, values can also influence behaviour given their role as guiding principles in people's lives (Hitlin & Piliavin, 2004; Schwartz, 1992) and their effect on personal experiences (Dolan & Garcia, 2002). However, values are defined to be enduring beliefs which leads to the logical conclusion that they are difficult to modify. These beliefs influence behaviour as the individual prefers to act in a specific way based on the personal moral code (Rokeach, 1973). Additionally, the set of personal values can alter the way an individual perceives and interprets his or her environment (Hitlin & Piliavin, 2004; Meglino & Ravlin, 1998).

Finally, knowledge is a broad concept, which can include the idea of competencies according to different perspectives. Since "knowledge is a multifaceted concept with multilayered meanings" (Nonaka, 1994), scholars are currently abstaining themselves from limiting the concept into a static definition. One possible perspective is to look at knowledge from the point of view of content, i.e. related to facts and information. In this case, Dretske explains that "information is that commodity capable of yielding knowledge, and what information a signal carries is what we can learn from it" (Dretske 1981, pg 44). Knowledge is identified with information-produced (or sustained) belief, but the information a person receives is relative to what he or she already knows about the possibilities at the source" (Dretske 1981, p.86). While this perspective can be compared to explicit knowledge, i.e. knowledge which is captured in records of the past such as libraries, databases or archives, (Nonaka, 1994) an alternative knowledge is to look at the concept in

terms of "how to do things". This tacit knowledge is hard to formalise or communicate and is deeply rooted in the human mind and body (Nonaka, 1994). Boyatzis and Saatcioglu (2008) associate the idea of "knowing how to do things" with competencies, thus creating an overlap in different strands of literature.

The interrelatedness of the various constructs around competencies such as values or personality traits is represented in figure 2.1.
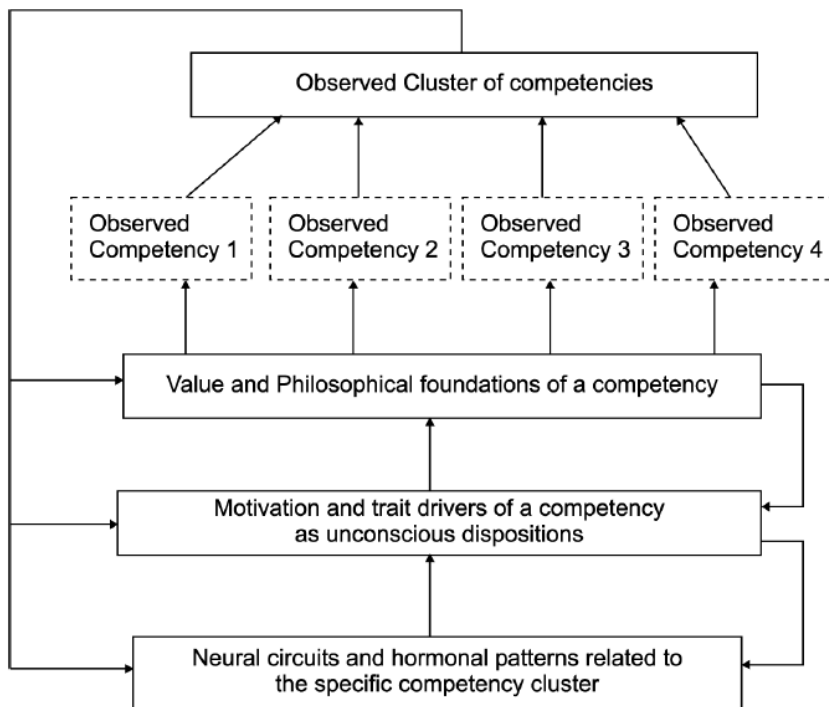
Figure 2.1: Levels within the personality structure (Boyatzis et al, 2000)

Competencies are typically grouped into three major categories: 1) cognitive competencies such as systems thinking and pattern recognition 2) emotional competencies which include emotional self-awareness, emotional self-control, adaptability, positive outlook, and achievement orientation, and 3) social competencies including empathy, organizational awareness, influence, conflict management, teamwork, developing others and inspirational leadership. The last

two sets of competencies are the so-called Emotional and Social Competencies (ESC) (Boyatzis, 2009; Goleman, Boyatzis, & McKee, 2002; Goleman & Boyatzis, 2008; Goleman, 1998)

ESC are measured through a combination of self-report and a multi-rater assessment via the Emotional and Social Competency Inventory (ESCI or previously ECI-2) or its university edition (ESCI-U) (Boyatzis & Sala, 2004). While the ESCI measures some additional competencies, such as relationship building or self-confidence, all competencies fall into one of the four clusters which are the same in both types of the measures: self-awareness, self-management, social awareness, and relationship management. The ESCI-U additionally measures two cognitive competencies. The format of the measure as a 360º assessment with results from multiple raters makes the measure more complex thus requiring qualified assistance when interpreting the results. It is recommended to only be used with individualised feedback for the participant in developmental processes.

Criticism on the competencies model has been voiced based on studies which show high intercorrelations to measures of personality (Diamantoupopoulu, 2001; Burckle, 2000; Murensky, 2000; c.f. McEnrue & Groves, 2006). Further research on relationships with other EI measures, the generalisability of results across cultures, age, gender and education levels, content related to the expression of emotions, as well as independent studies on the perception of the questions by the different raters (face validity) would increase the validity of the measures used in the competencies model. McEnrue & Groves (2006) questioned some of the competencies such as initiative, achievement or customer service orientation as they "appear to be the product of EI rather than dimensions of it" (pg 20). The discussion on the construct validity of the competency model has raised the question, whether it should be considered as part of EI at all (Ashkanasy & Daus,

2005) which eventually led to suggestions to clearly differentiate between the models and concepts used in related research (Cherniss, 2010).

As mentioned by Cherniss (2010), the low correlations among EI instruments make it difficult to establish a model that might be "better" than the others. What speaks in favour of the competencies model to be used in higher education which has the objective of preparing students for their future work in organizations is the fact that it actually derived from research in organizational settings by exploring effective behaviour. Also, the measurement through 360º assessments based on observations of frequencies of specific behaviour implies that only what is visible to others is measured. Since behaviour impacts the quality of interactions with others, it seems more important that the measure of competencies covers this aspect rather than the question whether a person is able to express emotions or not. At the same time, the combination of self-assessments with assessments from other raters helps detect gaps and discrepancies in perceptions which make this model especially interesting for developmental purposes.

Table 4.1 expands the previous overviews prepared by McEnrue and Groves (2006) and Boyatzis (2009) and summarises the above mentioned main models and measurement instruments of EI:

Table 2.1: Overview of main EI models (adapted from McEnrue and Groves, 2009 and Boyatzis, 2009)

Authors	Model	Definition	Instr.	Dimensions of EI	Major Critique
Salovey & Mayer	Ability EI	Emotional intelligence as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions	MSCEIT	• Perception, appraisal and expression of emotion • Emotional facilitation of thinking • Understanding and analysing emotional information • Regulation and management of emotion.	• Does not measure personal emotional expression, the management of emotions, and the difficulty of representing organisational phenomena. • Low face validity
Bar-On	Emotional and Social Intelligence	A cross-section of interrelated emotional and social competencies, skills and facilitators that impact intelligent behaviour, measured by self-report within a potentially expandable multimodal approach including interview and multi-rater assessment.	EQ-i	• Intrapersonal • Interpersonal • Adaptation • Stress management • General mood	• Measures products of EI rather than components • Lack of measures on emotional expression • High overlap with personality measures
Petrides & Furnham	Trait EI	Trait EI is a constellation of emotion-related self-perceived abilities and dispositions located at the lower levels of personality hierarchies.	TEIQue	Adaptability, assertiveness, emotion expression, emotion management (others), emotion perception, emotion regulation, empathy, happiness, impulsiveness (low), optimism, relationship skills, self-esteem, self-motivation, social competence, and stress management.	• High overlap with personality measures.
Goleman & Boyatzis	Emotional and Social Competencies	A set of related but different sets of behaviours organised around an underlying construct called intent.	ECI-2 ESCI ESCI-U	• Self-awareness • Self-management • Social awareness • Relationship management • Two cognitive competencies (only ESCI-U)	• High intercorrelations to personality • Does not measure expression of emotions • Lack of independent studies on face validity • Some competencies appear to be the product of EI rather than dimensions of it

2.2 Impact of EI and ESC

Emotional intelligence is hypothesised to have positive impacts on variables related to health and well-being, elements of social functioning such as conflict resolution or leadership effectiveness as well as performance in general. Some authors who are critical to the concept of EI have questioned the results of many studies, not only due to the lack of established validity in the measurement instruments but also based on the fact that most empirical studies report correlations among different variables and thus "only" establishing concurrent validity without being able to determine causality of the concept (e.g. Antonakis, 2003, 2004; Landy, 2005; Locke, 2005; Zeidner et al., 2002). Nonetheless, an increasing number of empirical evidence and recent meta-analyses suggest positive relationships among emotional intelligence and success related variables in the broad sense. Since all authors claim to measure EI, the following chapters combine results of the different approaches according to the outcome, rather than by separating into the different approaches. Where possible, distinctions are made in the explanations.

2.2.1 Relation to health, well-being and life satisfaction

Furnham and Petrides (2003) concluded in an empirical study with 88 students that trait EI explained over 50% of the total variance in happiness while no relation was detected neither between cognitive abilities and happiness nor between cognitive abilities and trait EI. Positive correlations were also found in empirical studies with students in Australia (Bastian, Burns, & Nettelbeck, 2005) and Spain (Extremera & Fernández-Berrocal, 2005) between dimensions of emotional intelligence and life satisfaction.

In an empirical study in the retail sector using Bar-On's EQ-i measure (self-report), Slaski and Cartwright (2002) found significant correlations between managers' EQ and health related variables. Concretely, the results showed that managers having higher levels of EQ suffered less subjective stress (negative correlation) and experienced better health and well-being. These results were later confirmed in a meta-analysis using 44 effect sizes of 7898 participants showing that higher emotional intelligence was associated with better mental, psychosomatic, and physical health (Schutte et al, 2007). At the same time, the authors confirmed that when EI was measured as trait the results associated more strongly with mental health than when measured as ability. Studies using a competencies approach were not included in this meta-analysis. Psychological distress was also shown to be negatively correlated with emotional intelligence in a study with 414 participants coping with negative life events (Armstrong, Galligan, & Critchley., 2011)

2.2.2 Relation to social interactions

If the fact that a person can detect another person's emotional state, adopt others' perspectives and is able to adjust communication and other behaviour, it seems logical that any social interaction should be affected by emotional intelligence. Consequently, it is not surprising to find numerous studies confirming related hypotheses. For example, the results of a study conducted by Jordan and Troth (2002) consistently showed that individuals with high emotional intelligence preferred to seek collaborative conflict resolution styles when they found themselves in a situation of conflict. Fewer negative relations were reported in a study with 103 students, if their EI scores were high (Lopes, Salovey, & Straus, 2003). Within the same study, individuals scoring high on the managing emotions subscale

of the MSCEIT reported more positive relations with others and perceived parental support, even after controlling for personality traits.

2.2.3 Relation to performance

Due to the close relationship between the conceptualisation of ability models and cognitive intelligence, it would be expected that EI - if measured using this approach - predicted successful performance, especially in academic grades. Nonetheless, results are mixed (Brackett et al., 2011). A study with high school students in Spain reported positive associations among the scores of the MSCEIT administered at the beginning of the course with final grades, even after controlling for personality and academic intelligence (Gil-Olarte Márquez, Palomera Martín, & Brackett, 2006). On the other hand, many studies initially show positive correlations between ability EI and academic performance, the results however often become non-significant if controlled for related variables such as verbal intelligence scores (e.g. Barchard, 2003; Brackett & Mayer, 2003) or there are no significant correlations at all (Bastian et al., 2005).

The predictive validity of EI on variables related to work performance is far more promising. Positive results from early research - primarily conducted in the USA - indicating the importance of EI and competencies for success in work outcomes (e.g. Boyatzis, 1982; Goleman, 1998; Spencer & Spencer, 1993) have been continuously expanded. In a similar study more recently conducted in Spain, results have also shown the predictive validity of emotional competencies on managerial performance (Guillén Ramo et al., 2009). Previously, Côté and Miners (2006) found that associations between EI and performance become more positive as cognitive intelligence decreases. In their recent meta-analysis, O'Boyle et al (2011) review 43

effect sizes and conclude that three approaches of EI have corrected correlations ranging from 0.24 - 0.30 with job performance.

Empirical studies have also shown positive correlations between EI and customer orientation and consequently sales performance (Kidwell, Hardesty, Murtha, & Sheng, 2011; Rozell, Pettijohn, & Parker, 2004). EI has also been linked to entrepreneurial performance in the UK in an empirical study with 528 participants to predict innovation as an entrepreneurial outcome (Ahmetoglu, Leutner, & Chamorro-Premuzic, 2011) as well as in Italy in a study with 53 entrepreneurs (Camuffo, Gerli, & Gubitta, 2012). In the latter study the authors describe self-control, information gathering, and visioning as threshold competencies and planning, empathy, business bargaining, organisational awareness, directing others and benchmarking as distinctive competencies for outstanding entrepreneur performance.

2.2.4 Relation to leadership

Even though leadership is also a form of social interaction and its effective outcome could be considered as a measure of performance, due to its relevance in organisations and the elevated number of research, it is reviewed separately at this point.

George (2000) argues that "leadership is an emotion-laden process, both from a leader and a follower perspective" (pg 1046) and suggests that emotional intelligence can help leaders deal with the following elements of effective leadership: "(1) development of a collective sense of goals and objectives and how to go about achieving them; (2) instilling in others knowledge and appreciation of the importance of work activities and behaviours; (3) generating and maintaining excitement, enthusiasm, confidence, and optimism in an organization as well as

cooperation and trust; (4) encouraging flexibility in decision making and change; (5) establishing and maintaining a meaningful identity for an organization." (George, 2000, pg 1039). Numerous empirical studies have followed to confirm the positive link between emotional intelligence and effective leadership, some measuring effective leadership through transactional leader behaviours (e.g. (Downey, Papageorgiou, & Stough, 2006; L. Gardner & Stough, 2002; Palmer, Walls, Burgess, & Stough, 2001), performance evaluations of the managers' supervisors (Rosete & Ciarrochi, 2005) or objective organisational outcomes (Cavazotte, Moreno, & Hickmann, 2012). Harms and Credé (2010) revisited 62 studies with a total sample size of 7145 managers for a meta-analysis and concluded that there is a significant relation between emotional intelligence and leadership with a validity estimate of up to .59 if ratings of both emotional intelligence and leadership behaviours were provided by the same source (self, subordinates, peers, or superiors). While none of the included studies were using competencies models, the results indicated that trait measures had higher validities than ability-based measures.

Studies have not only been conducted by focussing on the manager as an individual, but also by considering variables related to the follower. Castro, Gomes & de Sousa (2012) as well as Rego et al (2007) have found positive relationships between the managers' levels of EI and followers' creativity. Momeni (2009) and Klem and Schlechter (2008) have looked at the impact of the managers' EI on organisational climate, reporting positive correlations in both cases. In a different study, the levels to followers' job satisfaction have also been shown to be related to the managers' EI, while no significant relationships were found for employee performance, organisational commitment and job stress in the same sample (Lam & O'Higgins, 2012). Even in a spiritual setting, priests' demonstration of EI as seen by others had a positive effect on the improvement of parishioner satisfaction (Boyatzis, Brizz, & Godwin, 2010).

2.3 Developing EI and ESC

The aforementioned impact of EI on relevant life outcomes make the question of whether emotional intelligence can be developed an important one[1]. Goleman explicitly defines emotional competencies to be "learned capabilities" based on emotional intelligence (Goleman, 1998). Even more, Kanfer and Ackerman show, that fluid intellectual abilities associated with working memory, abstract reasoning, attention, and processing of novel information decreases with age, as opposed to crystallized intellectual abilities. These are related to broad aspects of educational or experiential knowledge and can increase with advancing age in adulthood as a consequence of experiential learning (Kanfer & Ackerman, 2004).

This might be one of the reasons why many organisations offer management development programmes to enhance their leaders' emotional intelligence. These

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[1] When working with EI a possible "use and abuse" has to be acknowledged: a dark side, so to say. Already when introducing the concept, Salovey and Mayer (1990) warned that "those whose [emotional] skills are channelled antisocially may create manipulative scenes or lead others sociopathically to nefarious ends" (pg 198). Austin et al (2007) show that individuals with high levels of Machiavellianism endorse emotionally-manipulative behaviour, although the extent to which they are successful in this behaviour is inconclusive. The concept of "getting along" versus "getting ahead" is also being used when talking about the quality of relationships which can have an impact on emotions. Kilduff, Chiaburu and Menges (2010) state that individuals with high levels of EI "are likely to be able to regulate feelings of compassion, guilt, and remorse so that the expression of such emotions serves the overriding goal of getting ahead". The authors thus imply that the use of EI is not merely about 'getting along' but can be successfully 'applied' to get ahead disregarding the emotions of others or even manipulating them to reach their own personal goals. In that sense, 'too much of a good thing' might eventually become bad (Grant and Schwartz, 2011) As for the use of EI, Côtè et al (2011) offer hope by implying that moral identity will help individuals with high levels of emotional intelligence to "stay on track".

programmes can vary from in-company or external trainings (Mintzberg, 2004) over developmental assignments (Dragoni, Tesluk, Russell, & Oh, 2009) to process designed training which is a combination of a humanistic approach for establishing a group context supportive of change and at the same time applying behavioural change methods for skill acquisition such as direct feedback. (Cherniss et al., 2010). Even though these authors present positive results indicating an improvement of EI due to the participation at these measures, Lindebaum (2009) expresses a contradicting opinion. He challenges the view that organisations can develop the EI of individuals as these trainings are often "imposed" and advocates a rather self-initiated modification of attitudes in order to foster enhanced self-awareness. This statement goes in line with the development of ESC in educational institutions, especially graduate schools. Participation in graduate school programmes is voluntary and usually initiated by the student who is interested in developing herself or himself. This is a positive premise for the successful development of EI.

2.3.1 Evidence of effectiveness of efforts to develop EI and ESC

ICT has successfully been implemented in the context of management education at Case Western Reserve University (Boyatzis, Cowen, & Kolb, 1995) and ESADE Business School (Batista-Foguet, Boyatzis, Guillen, & Serlavos, 2008) through the Leadership Assessment and Development Course (LEAD). Several longitudinal studies confirm that emotional and social competencies are developed at Case Western Reserve University and sustained over a period of time (Boyatzis et al., 2013; Boyatzis, Stubbs, & Taylor, 2002; Boyatzis & Saatcioglu, 2008). For a different program at Case Western Reserve University, the executive education programme called Professional Fellows Program, Ballou et al (1999) also reported positive change in most of the evaluated competencies after finishing the programme and

that participants experienced greater self-confidence, self-esteem, and the confidence to change.

Until the change of the century, outcome studies of development programmes for EI were not only scarce, but those few studies that looked at change in the participants showed important shortcomings. Zeidner, Roberts and Matthews (2002) also address the facts that most EI interventions were too broad and not focused on research based content as well as the inadequate research designs in conducting outcome. Recent publications have overcome these limitations and reported an increase in the level of EI – independent from the applied EI model - of the participants applying quasi-experimental designs with control groups to most of which participants were assigned randomly (Cherniss et al., 2010; Gignac, Harmer, Jennings, & Palmer, 2012; Nelis et al., 2011; Reuben, Sapienza, & Zingales, 2009). All studies reported positive change in the participants' levels of EI after the intervention, which could vary from a 2-day workshop to a 2-year programme. Nonetheless, Grant (2007) reports results of two EI interventions with different durations in which the changes in the levels of skills were stronger in a longer 13-week programme as compared to a 2-day compact workshop. Although the quality of the studies has improved significantly, many authors still mention the limitations of working with small sample sizes (Crombie, Lombard, & Noakes, 2011; A. M. Grant, 2007; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009) thus calling for further extended research. Also, with the exception of the research conducted at Case Weatherhead Reserve University, none of the other studies evaluate formal university programs or courses. This might be due to the fact that the development of EI and ESC is not always included in educational curricula (Bisquerra Alzina, 2012). Chapter 4 will thus describe some educational approaches which are relevant for the development of knowledge, skills, abilities and competencies, especially in higher education.

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Chapter 3: Learning and Developmental Philosophies

Philosophies of learning and development and specific theories to foster learning processes are often categorized into different "schools of thought". These philosophies differ in their underlying assumptions, for example as to whether learning is an individual or social process or whether it is a cognitive or emotional one. Depending on the specific philosophy, different theories would be considered appropriate to enhance the development of an individual. In the literature, these theories are sometimes grouped together differently. For example learning philosophies referring to the ideas of Piaget and Bruner are sometimes categorized as a cognitive philosophy (Woolfolk, 2011) or – still as a cognitive philosophy, but – separated from other cognitive approaches (Lefrançois, 2012). Others associate the names with constructivist philosophies (Cooperstein & Kocevar-Weidinger, 2004; D. C. Leonard, 2002) which can also be included within the cognitive learning philosophies (Ormrod, 2011). For clearer distinction, these ideas will be discussed separately in the present chapter which briefly reviews the most common learning philosophies and focuses on some examples of learning theories that are often used in higher education to develop competencies.

3.1 Behaviourist Philosophies

The origins in the behaviourist school can be traced back to Aristotle who mentioned the mental association between events for example like thunder

and lightning (Woolfolk, 2011). In the 20th century scholars like Ivan Pavlov, Edward Thorndike, B.F. Skinner, and John B. Watson further advanced the philosophy with an interest in behaviours since mental activities were not observable. Many of the reflexions originated from studies with animals and were then generalized to humans. A well-known example is the theory of conditioned reflexes based on research conducted by Pavlov in which dogs were given food while a bell is ringing. At some point the dogs associate the sound of the bell with food and start showing the same behaviours as if they were actually receiving food (in this case the segregation of saliva) (Pavlov, 1927). In general, the behaviourist approach assumes that learning occurs as an automated response to an external stimulus without considering internal thought processes. In Operant conditioning brought forward by B.F. Skinner, reaction to the stimulus and the resulting behaviour is "adjusted" through reinforcements or punishments: a) positive or negative reinforcements would increase the probability of repeating a desired behaviour and b) punishment is thought to decrease the frequency of a specific behaviour (c.f. Woolfolk, 2011). In the educational setting, this approach is teacher oriented as the teacher initiates the corresponding reinforcement or punishment. As a consequence, the key to effective teaching would be the creation of the best "set" of consequences – rewarding or punishing – for the desired behaviours (Merriam, Caffarella, & Baumgartner, 2012).

Learning theories under the realm of the behaviourist approach share the assumption that the external environment determines which behaviours will be learned. The behaviourist approach to learning might be criticized for being too simplistic since it does not consider reflections on the cognitive processes that happen in the brain when a stimulus is received and before a desired behaviour is visible, thus creating a "black box". Nonetheless there

are situations in which learning to "automatically react" to specific signals are crucial (Merriam et al., 2012) as for example might be the case for persons who have to give first aid and do not have time to reflect on what to do in an emergency situation.

3.2 Cognitivist Philosophies

The lack of consideration of the mental processes in the behavioural approach lead way to the cognitivist schools (Bandura, 1977 c.f. Woolfolk, 2011). This philosophy explores the "black box" of the cognitive processes like thinking, memory, knowing and problem-solving to better understand learning processes. There are two assumptions underlying the cognitive approach: First, the memory system serves as an active organized processor of information and second, that previous knowledge is important for the learning process (Lilienfeld, Lynn, Namy, & Woolf, 2013). Since knowledge is seen as schema or symbolic mental constructs learning is defined as changes in these mental constructs.

Mental constructs were studied in Gestalt theory which emerged in Germany around scholars like Max Wertheimer, Wolfgang Köhler, and Kurt Koffka (Olson & Hergenhahn, 1997). Gestalt can be translated as "configuration" and refers to the idea that individuals have the tendency of organising sensorial information into forms and relations. These relations or mental constructs are learned and then memorized (Woolfolk, 2011). In educational settings, this would mean that teachers help students form these constructs, for example as would be the case of a teacher showing a student how to recognize specific letters the result in a word.

3.3 Constructivist Philosophies

The constructivist educational philosophy can be traced back to scholars like Jean Piaget and John Dewey (D. C. Leonard, 2002) and include the works of Bruner, Vygotsky, Kolb and Montessori among others (Cooperstein & Kocevar-Weidinger, 2004). Good and Brophy (1997) explain the philosophy by stating that "Constructivists believe that students build knowledge through a process of active construction that makes connections between new information and existing networks of prior knowledge" (pg 336). This indicates that previous knowledge plays an important role in learning. By "making sense" of the environment, the learner thus creates an individual interpretation of the world and constructs new knowledge rather than acquiring it as was the case in the earlier philosophies. Also, as compared to the behaviourist and cognitive philosophies, in the constructivist approach the learner takes a more active part in the process. While previously, the teacher decided on the "right answers", now it is the learner who formulates questions, reflects and takes action based on previous experience (Good & Brophy, 1997). In this sense, experience is seen as interaction with the person's environment and learning is considered a continuous process which requires adaptations along the way in which the final outcome is the creation of knowledge (Kolb, 1984). The teacher consequently assumes the role of an instructor or guide (Good & Brophy, 1997).

By including the impact of culture and social interaction into the learning process, scholars like Vygotsky supported a social constructivist philosophy (Good & Brophy, 1997). An additional characteristic of this school is the idea that learning is developed through meaningful tasks or "real problems". This means that in educational settings appropriate activities are chosen to stimulate the construction of knowledge which will be necessary in real life

(Cooperstein & Kocevar-Weidinger, 2004). Some examples of constructivist learning theories which are – not only – applied in higher education will now be explained in further detail.

3.3.1 Action Learning

Action Learning was developed by Ravens as an approach to solve real, critical and urgent organizational problems and through that generate personal and organizational development (Edmonstone, 2003). Working in teams and reflecting on the results of the actions taken help to learn and as a consequence improve the problem-solving process and the solutions. With the formula "L=P+Q" Revans (1980) defines learning (L) as the sum of programming (P) and questioning (Q) to understand what people feel, see or hear. This formula was later extended into "L=P+Q+R" where the R stands for the reflections on the ongoing process (Marquardt, Leonard, Freedman, & Hill, 2009). Often a coach or facilitator is involved action learning processes with the objective to promote and facilitate learning as well as motivating the team for their self-management (Zuber-Skenitt, 1993).

Recently, Leonard and Marquardt (2010) have summarized studies that show cases where action learning was effective in developing a number of individual leadership and team problem solving skills. Even though it was originally developed to be applied in organizational settings, nowadays action learning can also be found as a framework for learning in higher education.

Most examples of the application of Action Learning in higher education come from the UK (Pedler, Burgoyne, & Brook, 2005) where the concept

originated and is meanwhile also used in management education (O'Hara, Webber, & Reeve, 1996). Nonetheless, this theory also spilled to the USA and other continents (Michael Marquardt & Waddill, 2004; Marsick & O'Neil, 1999). Zuber-Skenitt (1993) explains specific methodologies and techniques such as the nominal group technique, the repertory grid technique and other tools which will help reflection and group discussion during the learning process in higher education. Action Learning not only fosters the development of professional skills of students and their meta-adaptive skills (e.g. learning to learn) while still in university (Lizzio & Wilson, 2004), but has also been used for leadership development, for example in the case of a leadership development programme for women academics in South Africa (Louw & Zuber-Skeritt, 2009).

Action Learning is very similar to an alternative learning theory, Problem-Based Learning in which knowledge is also generated by working on real problems. This might lead to an incoherence in the use of the terms "Action Learning" and "Problem-Based Learning" in some literature (e.g. Burgess & Jackson, 1990).

3.3.2 Problem-Based Learning

Problem-Based Learning (PBL) emerged from the field of medical education as a response to unsatisfactory results of students' clinical performance but is nowadays applied in almost all faculties and numerous educational settings. Similar as in Action Learning, real problems are at the core of PBL and learning occurs by solving these problems. Barrows and Tamblyn (1980) define PBL as "the learning that results from the process of working towards the understanding or resolution of a problem. The problem is encountered

first in the learning process!" (pg 1). They emphasize the "first" in order to distinguish it from more traditional educational approaches in which the student has first been provided with some facts or principles. However, PBL reflects learning as it happens in real life when encountered with a problem (Barrows & Tamblyn, 1980)

The principal objectives of PBL are to help students "1) construct an extensive and flexible knowledge base; 2) develop effective problem-solving skills; 3) develop self-directed, lifelong learning skills; 4) become effective collaborators; and 5) become intrinsically motivated to learn" (Hmelo-Silver, 2004, pg 240). A teacher assumes the role of a facilitator and guides learners through the learning cycle of PBL. This learning cycle is represented in the following figure 3.1:
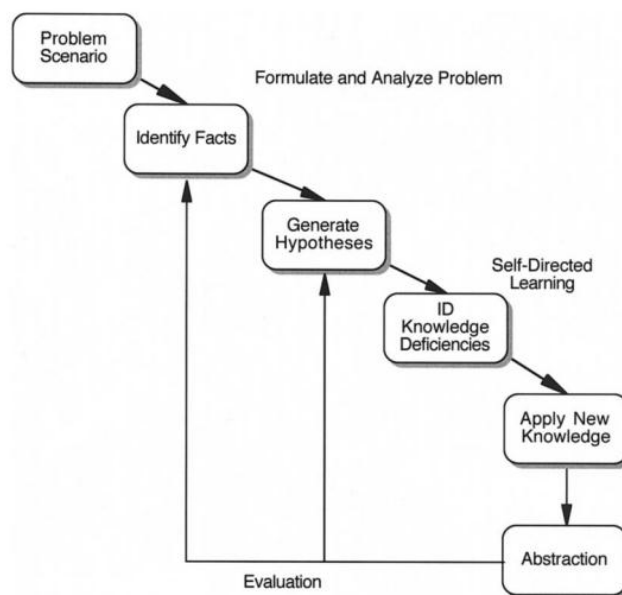
Figure 3.1: The problem-based learning cycle (Hmelo-Silver, 2004)

When students are presented with a problem scenario they start formulating and analyzing the problem by identifying relevant facts in order

to better understand the problem at hand. Based on these facts they generate hypotheses about possible solutions. As a result of this process students identify their knowledge deficiencies, i.e. they realize that they need specific information and knowledge which will help them solve the problem. In a self-directed learning process they then try to fill this knowledge gap. This newly generated knowledge then can be applied to the problem. Following this step, students then reflect on the abstract knowledge they have gained and evaluate their initial hypotheses and whether the information they had considered relevant at the beginning was actually the most important information or not. This reflection and evaluation will then help their problem solving skills for future cases.

Since this approach originated in higher education, numerous studies have been published on the application in different universities and the effectiveness of PBL. In their recent meta analysis, Dochy et al (2003) summarize the effect sizes of 43 empirical studies which compare the development of skills and/or knowledge through PBL versus a conventional learning environment. Their results indicate that PBL is more appropriate to develop skills than conventional learning approaches. The knowledge level of students leaning through PBL were slightly lower, however they showed better retention rates than knowledge obtained through conventional learning. Despite these positive results, PBL is not always implemented appropriately: educators might use problems that not sufficiently ill-structured, be too directive, or student groups might be ineffective in their collaboration (Dolmans, De Grave, Wolfhagen, & Van Der Vleuten, 2005). They suggest that research should look at how PBL can stimulate students towards constructive, collaborative and self-directed learning.

3.3.3 Experiential Learning Theory

Kolb (1984) defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" (pg 41). Learning occurs, when the conflicting tensions of these two opposing dialectics - grasping and transforming information - are resolved according to contextual demands. Concrete experience (CE) and abstract conceptualization (AC) are two opposite extremes of grasping information. During concrete experience, the learner relies on the tangible qualities of experience and accepts new knowledge through feelings and emotions in that specific experience. Abstract conceptualisation, on the other hand, is based on the cognitive processes of creating knowledge through the means of conceptual interpretation or symbolic representation. In this case, experience is usually broken down into meaningful events and categorised based on cultural or societal systems. The second dimension is that of transforming information into knowledge. This can occur via reflective observation (RO), a form of internal reflection on previously acquired knowledge, or active experimentation (AE) by interacting and actively manipulating the external world. Kolb considers learning to be a holistic process of constant adaptation seen as a learning cycle leading from concrete experiences to reflective observations, abstract conceptualization and active experimentation, which in itself results in new concrete experiences (Kolb, 1984) as represented in figure 3.2.
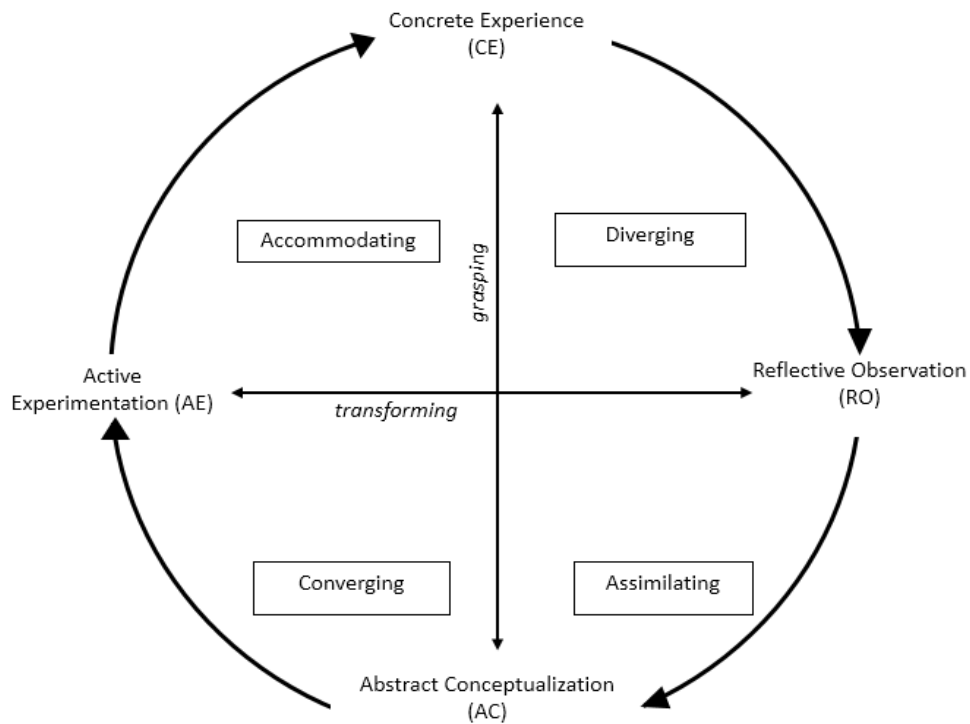
Figure 3.2: Structural Dimensions Underlying the Process of Experiential Learning and the Result of Basic Knowledge Forms. (Kolb, 1984, pg 42, reprinted with permission)

Based on aspects such as personality types, educational specialisation, professional career choices, current job roles, and adaptive competencies, each individual learner has personal preferences of which learning modes to apply. As a consequence, one of the four knowledge forms and learning styles - i.e. the personal preference of which learning modes to apply - will emerge as a type of "specialisation": accommodating, diverging, assimilating and converging. Even though an individual learner might have a "favourite" learning style, which is instrumentalised in the learning styles inventory (LSI) (Kolb, 1984), the specialisation is more related to the learning requirements of the specific context. This means that in an ideal learning

cycle the learner undergoes each mode accordingly to the necessities of the context, i.e. experiencing, reflecting, thinking and acting which in fact can be reiterative and of varying duration for each learning experience. In ELT this adaptability is referred to as adaptive flexibility (Kolb, 1984).

Empirical and theoretical limitations of ELT and the learning style inventory as its measure have been criticised since early publications of the concept. Early versions of the LSI were criticised due to concerns on the psychometric properties of the instruments (Freedman & Stumpf, 1980). Kayes (2002) confirms that most of these issues have been addressed in later versions of the LSI with the exception of the difficulty in cross-subject comparisons with ipsative measures. Ipsative measures deliver constrained data in which high assessments in one dimension automatically result in low assessments in a competing dimension.[2] However, simple statistical procedures can help correct the resulting minor empirical deviations (Greer & Dunlap, 1997). Critics to ELT have also expressed their uneasiness with the theoretical underlining of the concept. Some point at the lack of consideration for a possible influence of power relations such as status, gender and cultural dominance on learning which could actually act as learning inhibitors as they might provoke anxiety, fear and doubt (Vince, 1998). Holman et al (1997) criticise ELT as too individual in which emotions could lead to cognitive bias during the learning process and suggests to add a social perspective by including more social activities. Kayes (2002) defends ELT by arguing that most of the other above mentioned critiques address the underlying

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[2] The Leadership Development Research Centre is currently finishing a research project on ipsative or compositional data provided by LSI with the objective of reviewing appropriate statistical tool to assess psychometric properties (construct validity and internal consistency validity).

assumptions of ELT, specifically the humanist assumption that persons are able to learn and that learning occurs through problem-solving. As such, suggestions to overcome the limitations of ELT would be constructed on different assumptions about the nature of learning and are thus not constructive. As the only valid limitation, he maintains the lack of consideration for a relationship between social and personal learning. Additionally, the process nature of the theory has been questioned repeatedly (e.g. Engeström & Sannino, 2012; Miettinen, 2000). These critics mention the lack of argumentation for the order of the process steps, i.e. why the learning cycle is represented in the same order from concrete experience, reflective observation, abstract conceptualization to active experimentation often with unidirectional arrows. As part of their argumentation they cite sections of Kolb's theory which specifically indicates that learning processes can occur simultaneously. As a response, Kolb and Kolb (2005) cite Zull's (2002) neuroscience research which shows how each learning mode of the process in experiential learning is "executed" in different areas of the cerebral cortex as represented in the learning cycles.

Despite the numerous empirical and theoretical criticisms, until 2002 over 1500 studies in different outlets such as refereed journals, doctoral dissertations and working papers demonstrate the interest and applicability of this theory for management learning (A. Y. Kolb & Kolb, 2005). The ongoing persistence of ELT in higher education is also probably linked to its influence on management topics such as person-job interaction, strategy development, job counselling and – of course – design of management education (c.f. Kayes, 2002). For learners in management education to benefit as much as possible from ELT, Kolb and Kolb (2005) suggest that education should be designed around the following educational principles:

- Respect for learners and their experience

- Begin learning with the learner's experience of the subject matter

- Creating and holding a hospitable space of learning

- Making space for conversational learning

- Making space for development and expertise

- Making space for acting and reflecting

- Making space for feeling and thinking

- Making space for inside-out learning

- Making space for learners to take charge of their own learning

Learning outcomes will be more effective, if these principles are introduced in higher education as part of a holistic programme of institutional development, not only in curriculum design and student development, but also for faculty, administrative and staff development. (A. Y. Kolb & Kolb, 2005)

3.3.1 Communities of Practice

The concept of Communities of Practice (CoP) is relatively new in the field of learning philosophies and is attributed to the works of Jean Lave and Etienne Wenger on situated learning. They define CoP as "groups of people informally bound together by shared expertise and passion for a joint enterprise" (Wenger & Snyder, 2000). CoP are based on three elements: domain, community and practice. 1) The domain specifies the common interest, the "something" for which the group shares a passion or concern, which can be any topic such as innovation. 2) The community implies certain continuity of the participants who learn together over longer periods of time through interaction and by sharing ideas. 3) The practice refers to the

specific focus given in the broader context of the domain (Wenger, McDermott, & Snyder, 2013). In comparison to other social constructivist theories which place an important role on the social environment, but in which the cognitive process and learning outcome is still individual, learning in CoP happens in and with a social setting in which the newly generated knowledge changes the entire group and thus creates a social identity.

On their homepage, Wenger and Trayner reflect on the applicability of CoP in education and mention first initiatives in teacher training and peer-to-peer professional development activities. However, since learning is not only a means to an end as would be the application of CoP in organizational settings, but the end product itself, CoP in educational settings could actually change what the "business is about". The main challenge therefore lies in how to bring the learning that happens in the real world into the classroom (Wenger & Trayner, n.d.).

3.4 Humanistic Philosophies

A humanistic approach to development considers learning as a personal act to fulfil one's own potential based on internal motivations brought forward by authors such as Maslow or Rogers (c.f. Merriam et al., 2012). The baseline of this approach is self-directed learning. Some scholars agree that adult learning can only be successful if based on self-initiation (Lindebaum, 2009) and self-directed objectives (Boyatzis, 2006). This assumption gave way to new theories and terminologies such as lifelong learning or the Intentional Change Theory (Boyatzis, 2006). In parallel, higher education has been challenged to adopt their missions and promote values of responsibility. As

a consequence, service learning projects have increased in universities. These learning frameworks will now be discussed in further detail.

3.4.1 Intentional Change Theory

Intentional Change Theory (ICT) (Boyatzis 2006, 2008) is closely related to ELT as it suggests practicing individual development goals through experiential learning techniques. However, before deciding on individual goals, ICT offers a framework that helps increase a person's motivation to engage in the developmental process as well as aspects of the social context in which EI development occurs as represented. Figure 3.3 represents the Intentional Change Model as a theory of self-directed learning.
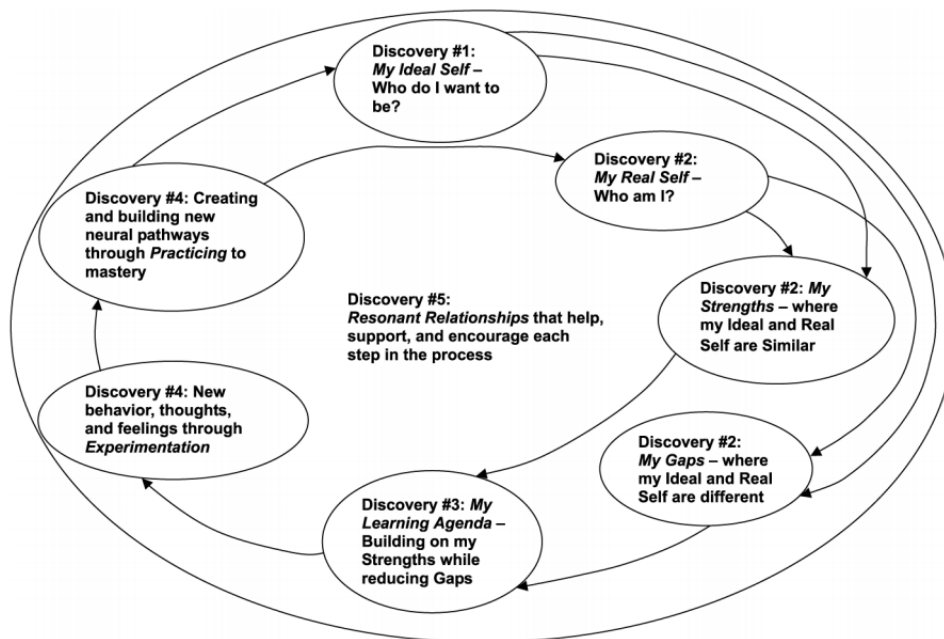
Figure 3.3: Boyatzis' theory of self-directed learning (Boyatzis, 2006)

In ICT, development is seen as an integrated process in which individuals first develop a clear longer-term vision of their life they would like to aspire to. Then, this future vision – also called the ideal self - is compared against the person's current state or real self in terms of competencies, values, and traits. For this, multi-rater feedback, psychometric assessments of personality variables and values, or assessment centre methodologies and simulations are often used to assess the individual. Comparing the ideal self with the real self motivates leaders to work to reduce the gap between the two selves and thus bring themselves more in line with their ideal self. A detailed vision of the person's ideal self and future life is of critical importance as it helps provide an emotionally engaging, positively framed ideal to which the leader can aspire. Otherwise, the motivation to develop would be limited and the ability of the learner to persist through obstacles and setbacks related to their development could be reduced. After defining the ideal and real selves the individual starts to set learning goals and to work on a learning plan. This individualized learning plan can include traditional skill-building courses (e.g. presentation skills) or developmental assignments which require a person display and practice specific competencies. With the plan completed, often with the help of a coach or mentor, the individual begins to implement the individual learning plan and begins to try out and practice with new behaviours and competencies - as mentioned above - primarily through experiential learning techniques.

In ICT, development is seen as a circular process: as one develops greater capacity and achieves the personal developmental goals, thus coming closer to one's ideal self as articulated in their personal vision, this vision needs to be revisited since the individual's role, career stage or life circumstances would have probably changed. Another important element in ICT is resonant relationships characterized by trust, support, and a positive emotional

connection with persons who provide the learner with encouragement, feedback and advice in the pursuit of the development goals.

The only known applications of ICT in higher education can be found in various programmes at the Weatherhead School of Management as a framework to develop emotional and social competencies (Richard E. Boyatzis et al., 2013; Richard E. Boyatzis & Saatcioglu, 2008).

3.4.2 Service Learning

Service learning is also a learning theory which promotes "learning by doing" and is based on experiential learning. However, students specifically work on projects that contribute to the development of the community. The extension of the course and the service can vary from one-time afternoon activities to intensive programmes in universities where students participate in interconnected courses while working on medium-term service projects in the respective communities (Eyler & Giles, 1999). The efforts of including service learning into education has grown over the last decades, mainly due to a shift in the values of educational institutions who want to support students in becoming responsible citizens (Bringle & Hatcher, 1996).

Due to the importance of this learning theory their impacts on different outcomes have been reviewed. An early experiment shows, for example, that students who participated in a service learning project reported that they had performed to the highest of their potential as compared to students of traditional discussion sections. The same study also reports that classroom learning, course grades and after-course participation in community service were higher in these students (Markus, Howard, & King, 1993). In a longitudinal study with 22.000 students, results show that

cognitive skills can be developed best when combining service with academic course material rather than offering generic community service (Vogelgesang & Astin, 2000). Nonetheless, the limits of service learning concerning the risk of insufficient quality of the service and the necessary definition of which specific skills and knowledge to develop have lately been emphasized (Eyler, 2000).

The following table summarizes the major learning philosophies and corresponding theories mentioned in this chapter.

Table 3.1: Overview of main learning philosophies and exemplary theories

Philosophy	Definition of Learning	Associated contributors	Related Theories (examples)	Implications for education
Behaviourism	Learning lies in the change of behaviours based on external stimuli	Watson, Pavlov, Thorndike, Skinner, Bandura	- Conditioned Reflex Theory - Operant Conditioning	Teacher as expert who decides on the desired behaviour and the corresponding reinforcements or punishments.
Cognitivism	Learning is defined as changes in mental schemata	Wertheimer, Köhler, Koffka	Gestalt Theory	Student plays a more active role in the learning process.
Constructivism	Knowledge is created through a process of active construction that makes connections between new information and existing networks of prior knowledge and experiences	Piaget, Dewey, Bruner, Vygotsky, Kolb, Montessori	- Action Learning - Problem-Based Learning - Experiential Learning - Communities of Practice	Teacher assumes the role of instructor or facilitator and coordinates appropriate activities to stimulate knowledge creation.

Humanism	learning is a personal act to fulfil one's own potential	Maslow, Rogers	• Intentional Change Theory • Service Learning	Teachers and coaches guide learners in detecting their potential.

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Chapter 4: "Measuring Emotional and Social Competencies: Establishing ESCI-U construct validity through Critical Incident Interviews"[3]

4.1 Abstract

While most of the measurement instruments of Emotional Intelligence (EI) are clearly focussed on one of the many competing models, research has shown that correlation among some of these models is as low as .21 making it difficult to argue that they are measuring the same thing. Taking a similar approach, but limited to one of these models, this study establishes convergent validity among two different instruments used to measure Emotional and Social Competencies from a behavioural perspective. On the one hand, the Emotional and Social Competencies Inventory - University Edition (ESCI-U) is a multi-rater questionnaire used in a leadership development course to evaluate 12 emotional and social competencies and 2 cognitive competencies. On the other hand, the Critical Incident Interview (CII) is a technique in which participants relate personal work-related experiences

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[3] A previous version of this paper was presented as: Batista, J.M.; Boyatzis, R.E.; Emmerling, R.; Serlavós, R.; Canboy, B.: Construct validation of competency assessment through 360º questionnaires (informant views) and behavioral observation from critical incident interviews. <u>European Survey Research Association.</u> Ljubljana (Slovenia), July 2013

which are then coded based on seven emotional and social competencies coinciding with those of the ESCI-U. For this study, we compare informant results of the 360º questionnaires from 87 students who have also participated in voluntary CIIs. The interviews have been coded by two trained coders with an inter-coder reliability of > .7 and then discussed to reach 100% agreement on presence of competencies for a final result. Many of the hypothesised appropriate raters to assess specific competencies were found to show interjudge agreements suggesting that they assess "the same thing". Assessments from the 360º measure which showed significant correlations with CIIs were colleagues for teamwork, spouses for adaptability (negative), conflict management (negative) and developing others. Also, students' own assessments showed significant correlations with CIIs on achievement orientation (negative), adaptability, developing others and influence. These results suggest that the often mentioned criticism on self-assessments should be revised.

Keywords:

Emotional and Social Competencies, Emotional and Social Competencies Inventory, Critical Incident Interview, Behavioural Event Interview, Emotional Intelligence

4.2 Introduction

At the beginning of the 21st century a heated discussion about the concept of emotional intelligence (EI) has emerged and thus far there is no sign of reconciliation. Is it intelligence? Is it a valid concept? Is it necessary? These question marks mainly emerged from empirical results which have not been able to convince sceptical scholars because a) authors who work on EI have not been able to

differentiate the concept from other related concepts like personality (Landy, 2005), b) other authors argue that it is a cognitive ability and is thus related to cognitive intelligence (Mayer et al., 1999) or c) as the two previous points somewhat contradict each other shows that scholars who measure EI with different instruments obtain different results (Cherniss, 2010). As a consequence, critical voices have warned that none of the empirical research showing positive impact of EI on life variables such as life satisfaction, health or performance should be considered valid since they are based on measurement instruments which have not been successfully validated or validation data is not openly accessible (Landy, 2005).

Today, more than 10 measurement instruments are used in scholarly research and countless others exist for organisational application (McEnrue & Groves, 2006). While all claim to assess EI, correlations among some of these models are as low as .21 (Brackett & Mayer, 2003) thus not being able to confirm convergent validity among these measures. At the same time, shortcomings of each assessment method make it difficult to effectively apply them: The use of performance based measures evaluated through consensus or by experts tend to have low face validity (McEnrue & Groves, 2006). Self-report measures are often criticised for their tendency to allow for social desirability effects (Nederhof, 1985). 360º measures are difficult to administer and do not guarantee for interrater agreement among raters in the same group (Mount, Judge, Scullen, Sytsma, & Hezlett, 1998) which might lead to results that are more confusing rather than helpful for the person being assessed (Nowack & Mashihi, 2012). Interviewing techniques in which the content is coded by expert coders are resource intensive (Spencer & Spencer, 1993). These limitations can be compensated if mono method bias is avoided through "triangulation", i.e. the use of different measures to evaluate the same concept through various perspectives as suggested by Campbell and Fiske (1959) in the multi-trait multi method approach (Batista-Foguet & Saris, 1992; Campbell & Fiske, 1959; Saris, Satorra, & Coenders, 2004; Saris & Gallhofer, 2007).

Emotional and social competencies (ESC) – as a behavioural approach to EI – are usually measured through 360º assessment tools (Boyatzis, 2009). These include self-report questionnaires as well as questionnaires completed by others. An alternative technique to measure competencies is the behavioural incident interview, often also called critical incident interview (CII) (Flanagan, 1954). While each measure has separately been applied in research for a long time (Boyatzis & Sala, 2004; David C McClelland, 1998; Ryan, Emmerling, & Spencer, 2009; Ryan, Spencer, & Bernhard, 2012) to the best of our knowledge there are no studies that have established construct validity of different measures of ESC. As a logical consequence, the question arises as to whether emotional and social competencies have been operationalised properly and these three measures – self-report, multi-rater assessment and CII – measure the same thing.

In social science, the need to establish construct validity represents the first step in any rigorous research and is therefore the focus of the present study. To do this, we compare results from the three different alternative measures for ESC. Students from a Spanish business school participated in a core course specifically designed to develop ESC and completed a 360º assessment including a self-assessment as part of the course. Additionally, through systematic random sampling, students were invited to participate in CIIs. In a first step, an analysis of interjudge agreement shows that many of the hypothesised raters could be appropriate to assess students on specific competencies. In a second step - to check convergent validity - results of the final sample of 87 students show significant correlations in four of the seven coded competencies among the CII and self-assessment, one competency as assessed by colleagues and three competencies as assessed by spouses. These results suggest that the 360 degree assessments can be made more efficient by having specific different questionnaires with different competencies for each rater. As a consequence of a shorter questionnaire, the participation of raters could increase with a positive impact on the quality of the assessments, which is a

necessary prerequisite for the appropriate use of the measurement instrument for developmental purposes. Nonetheless, since not all competencies showed significant correlations among different assessments, triangulation is suggested to be maintained until the measures can be improved.

4.2.1 Emotional and Social Competencies as a behavioural approach to Emotional Intelligence

While research on EI is often differentiated into competing approaches with different underlying operationalisations of the construct, when authors explain the concept, they often refer to Salovey and Mayer's (1990) original definition of EI "as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (pg 189). However, the way EI is measured in individuals differs significantly. In the abilities approach, EI is considered to be a cognitive ability and is thus measured as a performance: individuals answer questions on a self-administered questionnaire which have a "right" or "wrong" answer and which are rated based on consensus or expert opinions (Mayer et al., 1999). Other authors use only self-report measures (Law, Wong, & Song, 2004; Petrides & Furnham, 2000; Schutte et al., 1998); thus their work is sometimes categorized as EI models of internal (self) perception (Boyatzis, 2009). In a third group, 360º assessments are applied to capture opinions of various raters (Boyatzis & Goleman, 1996; Dulewicz, Higgs, & Slaski, 2003). Some of the authors have extended their previous self-report measures by later adding multi-rater questionnaires (Bar-On, 1997). If an individual is assessed by somebody else, this rater can only reason based on what the individual who is assessed does, i.e. her or his behaviour. As consequence, the ESC model is categorised as a behavioural

approach (Boyatzis, 2009). An important notion of the competencies model is that the exposed behaviour is intentional, i.e. the actions of a person are not coincidental. Emotional competencies often include emotional self-awareness (ESA), achievement orientation (AO), emotional self-control (ESC), adaptability (A), and positive outlook (PO). Social competencies include influence (I), empathy (E), organizational awareness (OA), inspirational leadership (IL), conflict management (CFM), developing others / coaching and mentoring (DO or CM), and team-work (TW). Some models also include cognitive competencies such as systems thinking (ST) and pattern recognition (PR). A description of these fourteen competencies is included in the appendix of this chapter.

4.2.2 Self-report methods

In self-report measures the individual responds to standardised questions related to his or her own emotions, perceptions or thoughts (Saris & Gallhofer, 2007). The questionnaires used in EI research can consist of up to 133 items, as in the case of the EQ-I (Bar-On, 1997). On the one hand, these measures are fast, easy to administer, results can be analysed quickly, and consequently allow operating with few resources (Saris & Gallhofer, 2007). On the other hand, self-report measures are highly prone to social desirability, i.e. the fact that respondents do not answer "truthfully", but based on a desired state which often results in inflated ratings (Dunning, 2005). If no questions are included in these measures that help control for social desirability, their validity could be threatened seriously (King & Bruner, 2000; Steenkamp, de Jong, & Baumgartner, 2010).

As a consequence, self-assessments are often used in combination with other measures or as a measure of self-awareness when comparing the self-assessment to the results of others to establish self-other-agreement (Yammarino & Atwater,

1997). There are some gender differences in self-report measures: not so much in the self-assessment *per se*, i.e. men and women do not tend to evaluate themselves differently (Hopkins & Bilimoria, 2008; Van Velsor, Taylor, & Leslie, 1993) but rather in how they predict that others will rate them. Here, women seem to be more critical and expect lower assessments from others, especially their managers (Taylor & Hood, 2011).

4.2.3 Multi-rater methods

Multi-rater methods, also referred to as multisource or 360º assessments incorporate different rater sources, such as an individual's subordinates, colleagues or bosses; sometimes even including sources from the person's personal environment like the spouse, friends or relatives. The rationale behind this approach is the idea that different sources of raters provide substantially unique but equally valid information about the person being assessed (Borman, 1997). This uniqueness is generally due to differences in the information available to each source because a person will show different behaviours in different situations (Lance, Hoffman, Gentry, & Baranik, 2008; Lawler, 1967). Different sources of raters also consider varying aspects of the same observed behaviour as important (Tsui & Ohlott, 1988). At the same time each rater source tends to have idiosyncratic rating tendencies leading to different measurement errors, like leniency, central tendency, and range restriction (Saal, Downey, & Lahey, 1980) which can be moderated by cultural assumptions (Ng, Koh, Ang, Kennedy, & Chan, 2011). However, dissensus not only exists among different rating sources: researchers have found evidence that raters from the same organisational level disagree as much as raters from different levels (Mount et al., 1998). In order to best make sense of the mixed

information from a 360º assessment, these should only be applied with a debrief from the individual's manager or coach (Nowack & Mashihi, 2012). Given the discrepancies in the perceptions of different sources of raters, to the best of our knowledge, no research has been conducted on the adequacy of which source could "best" evaluate another person. Therefore, part of the hypotheses presented in this paper are related to this question.

4.2.4 Interviewing techniques

An alternative technique used in research to assess EI, especially emotional and social competencies, is the behavioural event interview, also called critical incident interviews (CII). The "critical incident technique is essentially a procedure for gathering certain important facts concerning behavior in defined situations" (Flanagan, 1954, pg 9) which were used in academic research to determine critical requirements for specific occupational groups or activities (Flanagan, 1954). This technique was then extended by McClelland and his students with the objective of discovering differences in performances of outstanding employees in an organisation as compared to employees with average performance which resulted in the definition of specific competencies (Boyatzis, 1982; McClelland, 1998; Spencer & Spencer, 1993).

What makes the CII differ from other interviewing techniques is the underlying protocol: the trained interviewer asks interviewees about the most critical situations they have faced on their job and attempts to determine specific competencies and how they were deployed in specific work situations (Spencer & Spencer, 1993). These interviews are then used to interpret patterns and generate codebooks. For emotional and social competencies, Boyatzis (1998) offers a codebook on seven competencies which have shown to be adequate for coding in

CIIs: achievement orientation, adaptability, empathy, influence, conflict management, teamwork and developing others. As interviewers often do not know the interviewees and interpretations follow a coding protocol – often coded by two persons in parallel -, the assessments are usually more "detached" from personal bias and more objective as compared to other previously mentioned measured of EI. However, as the interviews are individual and require posterior time for coding, applying CII in research is very resource intensive (Boyatzis, 1998).

As a qualitative method, assessing the reliability and validity of CIIs is difficult. Nonetheless, some studies in which this technique was applied reported different aspects of reliability and validity, thus establishing credibility for this approach (Andersson & Nilsson, 1964; Ronan & Latham, 1974). However, in a review of the use of CIIs during the last fifty years, Butterfield et al (2005) detected a shift from the application of CIIs as a task analysis procedure that relied on observations or self-reports of observable behaviours towards a technique to explore personal experiences, psychological constructs, and emotions. This shift resulted in the application of many other alternatives to establish credibility for the interpretations generated through the use of CIIs which can include triangulation, face validity, and inter-rater reliability (Skiba, 2000; c.f. Butterfield, 2005).

4.2.5 Construct validity of EI measures

Some of the major criticisms on the concept of EI and ESC are related to issues of construct validity. Construct validity is defined as "the validity of inferences about the higher order constructs that represent sampling particulars" (Shadish, Cook, & Campbell, 2002; pg 38). While it seems that there is a consensus on the definition of EI as put forward by Salovey and Mayer (1990), the operationalisation of it is still criticised. As an ecological validity, for example, items that measure EI should

"mimic" the definition of EI, i.e. the wordings of the items should be related to how the construct is defined. Establishing construct validity always has to be the first step in any rigorous research, which has not yielded a lot of convincing results so far. As mentioned before, some of the different measures of EI share only 4% of the variance (Brackett & Mayer, 2003).

With a rise in studies claiming EI to have an important impact on variables such as performance or leadership (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003; Goleman, Boyatzis, & McKee, 2002), Antonakis (2003) questions the results by explaining that these studies did not control for competing variables such as cognitive intelligence or personality. In a follow-up publication he then reminds the academic community that thus far no study was published in a peer reviewed scientific journal which assessed the validity satisfactorily, including construct, criterion, discriminant, convergent or incremental validity (Antonakis, 2004). It seems that this criticism has helped improve the quality of research on EI as most of the following empirical studies included the mentioned points: Many studies now include measures of personality and find positive results of the impact of EI even after controlling for personality (e.g. Landa, Martos, & López-Zafra, 2010; Guillén Ramo, Saris, & Boyatzis, 2009; Lopes, Salovey, & Straus, 2003). Others even include different types of EI measures to establish content validity (Dulewicz et al., 2003) and find differences in the predictive validities especially when comparing expert rated measures with self-assessments (Côté, Lopes, Salovey, & Miners, 2010). However, none of the previous studies have compared alternative measures of ESC.

4.3 Hypotheses

Given the difficulties in establishing validity of ESC measures which use self-reports and 360º assessments combined with the demonstrated reliability of CIIs if measures of reliability such as inter coder reliability were used, we assume that the level of competencies detected through CIIs are valid and could thus be considered a "golden standard". As a consequence we base our objective to establish convergent validity and the related hypotheses on the seven competencies included in the CII codebook.

In the first step, we analyse as to whether specific sources agree – i.e. correlate – in their evaluations of ESC in others. We interpret this agreement as a sign that these rater sources have the best information possible to assess the specific person on a given competency. With a monotrait multimethod approach, in this case various raters of one person, we assume that raters are accurate if their assessments correlate as an indication of interjudge reliability (Bisbe, Batista-Foguet, & Chenhall, 2007; Nunnally, 1978). In addition, if the results from the surveys and CIIs correlate, this would be evidence of convergent validity. The aforementioned fact that raters in a multisource assessment see different aspects of an individual's behaviour and perceive them differently will be affected by which competency is assessed. In other words, some competencies are exposed differently according to specific life situations.

Achievement orientation is related to the notion of a person being interested in constant improvement. Even though improvement and change can also be generated in personal life settings, achievement orientation is also linked to setting goals. Since working with goals is more common in work situations, we hypothesise that

H_{1a}: Bosses and colleagues are the most accurate multirater sources to assess achievement orientation.

Individuals who show adaptability are able to adjust their behaviours to changing environmental factors. This is a phenomenon that occurs often in professional situations through changing priorities or information. However, adaptability could also be considered an internal attitude playing a role in interactions which require compromises – and thus adaptation - as could be the case in a partnership. Therefore, we hypothesise that

H_{1b}: Bosses, colleagues and spouses are the most accurate multirater sources to assess adaptability.

Empathy is a universal competency relevant in all life situations as it is related to the general interaction with others which shows an intention to understand thoughts and backgrounds of others. Since the pressures of the work environment might require a more "getting ahead" attitude, this could result in having to suppress the desire to show empathy at moments. We thus hypothesise that rater sources from the personal environment might be more appropriate to assess this competency.

H_{1c}: Spouses, friends and relatives are the most accurate multirater sources to assess empathy.

Conflicts can be present in any life situation. However, the type of interaction with others in the professional environment could be more prone to generate conflict, for example in meetings and during project work. Therefore with think that

H_{1d}: Bosses and colleagues are the most accurate multirater sources to assess conflict management.

Similar to empathy, influence is a competency which plays an important role in any life situation. Nonetheless, the asymmetric relationship with the boss, especially in

cultures with high power distance, might diminish the instances in which an individual can or want to influence her or his boss. Cultural phenomena could also affect the roles in partnerships, thus influence might also have a different interpretation in these relationships. Therefore we hypothesise that

H$_{1e}$: Colleagues, friends and relatives are the most accurate multirater sources to assess influence.

Developing others is strongly related to work environments. However, this competency has a strong notion of "giving moral support" to others. In a partnership this moral support is also expected to be visible which makes us think that

H$_{1f}$: Bosses, colleagues, and spouses are the most accurate multirater sources to assess developing others.

Teamwork seems to be a similarly work related competency. The operationalisation however includes elements like being respectful to others, soliciting input and encouraging participation. These behaviours can also be seen in the personal environment, for example when organizing an event with friends. As a results, we hypothesise that

H$_{1g}$: Bosses, colleagues, and friends are the most accurate multirater sources to assess teamwork.

The following table 4.1 summarizes the set hypotheses:

Table 4.1: Hypothesised rater sources per competency

Hypothesis	Competency	Rater source
H$_{1a}$	Achievement Orientation (AO)	• Bosses • Colleagues
H$_{1b}$	Adaptability (A)	• Bosses • Colleagues • Spouses

H_{1c}	Empathy (E)	• Spouses • Friends • Relatives
H_{1d}	Conflict management (CFM)	• Bosses • Colleagues
H_{1e}	Influence (I)	• Colleagues • Friends • Relatives
H_{1e}	Developing others (DO)	• Bosses • Colleagues • Spouses
H_{1e}	Teamwork (TW)	• Bosses • Colleagues • Spouses

In the second step, we look at convergent validity, referring to the idea that if all measures of ESC supposedly measure the "the same thing", the assessment of the corresponding source and self-assessment should correlate with the assessment through the CII. Self-assessments are included in this step, especially because the results could be able to indicate whether issues such as social desirability exist.

H_{2a}: There is a significant correlation between the results of the CII and the self-assessment for the seven competencies.

H_{2b}: There is a significant correlation between the results of the CII and the 360º-assessment for the seven competencies.

4.4 Method

4.4.1 Sample

The sample size consists of data sets from 87 MBA students from a Spanish business school. Based on a systematic random sample, some students were invited to participate at English CIIs between 2009 and 2012. The participation rate among all invited students is approximately 30%. The age of the participants ranged from 25 to 37 (Mean = 31.1, S.D = 2.696); 68.9% were men and 31.1% women from 37 different countries (the highest numbers being from USA 18.9%; Spain 10%; Germany, 8.9%; and India, 5.6%) and different educational backgrounds from social sciences as well as engineering and other academic degrees.

4.4.2 Measures

Emotional and Social Competency Inventory – University Edition (ESCI-U)

As part of a leadership assessment and development course (LEAD) at ESADE Business School in Spain, MBA students initiate a 360º assessment on 14 emotional, social, and cognitive competencies (Boyatzis & Sala, 2004). The ESCI-U consists of seventy items - 5 per competency - which measure the frequency of observed behaviours associated to the fourteen competencies. Each item starts with *"How often do you/does the target…?"* and is followed by a behavioural description such as *"…understand another person's feelings".* The Spanish version of the questionnaire uses an 11-point scale for each item to assess the frequency with which the target individual demonstrates each behaviour (Batista-Foguet, Saris, Boyatzis, Guillén, & Serlavós, 2009). The scales are described at 0 with "never" and at 10 with "always". In order to avoid results from respondents who do not know

the individual well enough, each question also includes an option to mark "I do not know" (Batista-Foguet & Saris, 1997). For a questionnaire to be considered valid, this "I do not know" option cannot be checked more than eight times.

At this business school, the ESCI-U is administered on an online platform: students complete a self-assessment questionnaire and select multiple external raters, who are then asked to assess the target student using the same questionnaire. Raters are informed about the purely developmental purpose of the assessment and that confidentiality and anonymity is guaranteed as only aggregated data will be reported to the participants. For this study five groups of raters were considered: one supervisor / boss (BS), two work-peers (CL), one spouse (SP), two friends (FR) and two relatives (RE) since these were the sources most students had included for assessment. Students who did not have evaluations from at least four of these seven possible raters were not included in the study. In total the assessments of 8 students were not included in the study due to this limitation.

Being aware that missing values should only be imputed if they are considered to be at random or completely at random, we have been somewhat flexible with some data coming from specific rater sources. Since some raters were not available for a few students, we assumed that this was also a random decision and thus imputed missing values using SPSS EM maximum likelihood method. In post hoc analyses we detected specific cases in which the results showed too many outliers which we associate with the calculation of missing values. Therefore we have excluded three more students from the sample.

Critical incident interviews

The participation at the CIIs was voluntary and had no impact on the students' grades of the LEAD course. Students were promised to receive in depth feedback on the results of the interviews once they were coded. One hundred three students

were interviewed in English. The interviews were conducted by trained and certified interviewers. The training implied the specific protocol of the interview structure, but also issues related to interviewing and questioning techniques. Since students should be able to speak as freely as possible, the interviewers were trained not to use any leading questions but rather use open questions which would probe for underlying thoughts or feelings. Common questions were for example "What were you thinking at that moment?" or "How were you feeling when that happened?" For the protocol of this research, respondents were asked to freely choose and describe two significant successes and two significant failures. The examples should be situated within the previous 12 months and preferably from a work or educational setting. Each incident was then discussed for approximately 15 min in the following order: one successful incident, two examples of failures, second successful incident. Interviews were recorded. The full protocol is added to the appendix of this chapter. A total of five interviews were excluded from the study, due to incomplete recordings, insufficient English skills or insufficient duration of the incidents. As a result, the final sample for this study consists of 87 full sets of measures.

In a second step, each interview was coded according to the competency codebook established through previous research for the aforementioned seven competencies: achievement orientation (AO), adaptability (A), empathy (E), influence (I), conflict management (CFM), teamwork (TW) and developing others (DO) (Boyatzis, 1998). Various coders were trained on this specific technique and codebook. Coders listened to the recordings and tried to queue into moments in which the student showed a specific competency according to the criteria established in the codebook. To be coded as a competency, the student clearly had to state the behaviour shown in a concrete situation and an indication that this behaviour was intentional. In the case of achievement orientation, for example, to be coded as present, the student could mention a specific situation in which the

person assesses inputs and outputs, or costs and benefits, with the expressed intent of maximizing efficiency. Each interview was coded by two coders independently for presence of a competency in each incident (maximum four codings per competency). A conservative approach to calculate inter coder reliability was chosen (Boyatzis, 1998). If the two coders obtained an initial inter coder reliability of .7 or above, the interview was discussed among both – if necessary with a third coder – to reach an agreement on a final competency profile for that participant. For this study, the competencies are coded into "present" or "absent" for the entire interview, independent from the fact whether a student shows a specific competency in one or in all four incidents. The average intercoder reliability is .79 for the 87 interviews included in this study.

4.5 Results and discussion

4.5.1 Interjudge agreement

Several methods are appropriate to establish construct validity. Often, the factor loadings in a confirmatory factor analysis are used to assess the internal consistency of the items as indicators of the underlying constructs. This method is appropriate if the items are reflective, i.e. they try to measure the same construct in different ways. In the case of the ESCI-U, most of the items are formative, i.e. they measure different aspects of the same construct. In this case, the information of factor loadings is not sufficient and therefore inappropriate (Bisbe et al., 2007; Diamantopoulos & Winklhofer, 2001; Edwards & Bagozzi, 2000). An alternative approach that we suggest is to look at interjudge agreement: in this study, this means to compare the assessments of the different rater sources with each other.

As justified in the hypotheses, we believe that some rater sources will be more appropriate to assess specific competencies than others. Consequently, these rater sources should agree in their assessments which would be visible in significant correlations among the results of these rater sources. Therefore, since the competencies are assessed on an interval scale, we have reviewed Pearson correlations of the hypothesised raters for each competency, including self-assessments (SE).

The results of an initial run showed some inconclusive correlations. Some relationships were double checked in scattergrams which indicated the presence of outliers in the assessments of some individuals. Three students who showed the most number of outliers in their results were eliminated from the study. The following analyses were then computed on a sample of 87 participants.

Table 4.2 summarizes the results related to the established hypotheses, the full tables with all correlations are included in the appendix of this chapter:

Table 4.2: Interjudge correlations for hypothesised rater sources per competency

H	Comp.	Rater source	Results
H_{1a}	AO	• Boss (BS) • Colleagues (CL)	• No significant correlation among BS and CL • Significant correlation among CL and SE
H_{1b}	A	• Bosses (BS) • Colleagues (CL) • Spouse (SP)	• No significant correlation among BS and CL • Significant correlation among BS and SP • Significant correlation among CL and SE
H_{1c}	E	• Spouse (SP) • Friends (FR) • Relatives (RE)	• No significant correlation among SP with FR or RE • Significant correlation among FR and RE • Significant correlation among SP and BS
H_{1d}	CFM	• Bosses (BS) • Colleagues (CL)	• No significant correlations among BS and CL • Significant correlations among FR and BS
H_{1e}	I	• Colleagues (CL) • Friends (FR)	• Significant correlation among BS and CL

		• Relatives (RE)	• Significant correlations among FR with CL and RE • Significant correlations among SE with BS, CL, and FR
H_{1e}	DO	• Bosses (BS) • Colleagues (CL) • Spouses (SP)	• Significant correlation among BS and CL • Significant correlation among CL and SE
H_{1e}	TW	• Bosses (BS) • Colleagues (CL) • Friends (FR)	• Significant correlation among BS and CL • No significant correlations among FR; BS and CL • Significant correlation among BS and SE

In five out of the seven competencies at least two of the hypothesised raters showed significant correlations among each other: 1) To assess adaptability, colleagues and spouses seem to agree in their assessments. 2) For empathy, friends and relatives are appropriate sources. Initially we argued that in the work environment sometimes empathy would have to be suppressed and therefore raters who see an individual only at work might not be appropriate to assess this competency. However, the results also show significant correlations among spouses with bosses. These are two separate constellations. The current results cannot indicate which "combination" of raters, i.e. bosses/spouses or friends/relatives might be more appropriate to assess empathy. 3) For influence, correlations among friends with relatives and colleagues are significant as expected. In addition, the assessments of bosses and colleagues also indicate agreement, showing that influence can also be assessed adequately by bosses. We had initially argued that the asymmetric relationship of the employee with the boss might impede behaviours related to influence. In light of the results, a possible counter-explanation might be that actually due to this asymmetric relationship, an individual has to specifically show influence competencies with the boss. If an individual wants to "get his or her way", it has to be through convincing the boss as they cannot just decide to do anything against the opinion of the supervisor. 4) For developing others, bosses and colleagues agree in their assessments. 5) The results for

teamwork are similar as bosses and colleagues also agree in their assessments as hypothesised. The last two cases, DO and TW show interjudge agreement among bosses and colleagues, the two work-related rater sources. This could be an indicator for the fact that participants show coherent behaviour at the workplace when being around their bosses as well as their colleagues. In contrast, spouses and bosses correlate in their assessments on adaptability and empathy even though they do not observe the participant in the same environment. These results could confirm that adaptability and empathy are competencies that can be demonstrated in any life environment.

It is also interesting to note the high number of significant correlations with some raters and the self-assessments: colleagues agree in their assessments with those of the students' assessments in four of the seven competencies, concretely achievement orientation, adaptability, influence and developing others. The fact the colleagues agree with the self-assessments could be due to the idea that students probably ask colleagues who have a similar background in education and a similar type of work which could lead to similarities in interpreting specific behaviours and their importance related to the discussed competencies. Influence is the competency in which most raters correlate with the self-assessments. Bosses, colleagues and friends coincide in their opinions with those of the assessed student. These agreements with the self-assessments might be an indicator that students are more realistic about their own assessments than would have been expected due to social desirability.

The next step of the analysis might confirm some of these interpretations.

4.5.2 Convergent validity

In a second step, convergent validity of the ESCI-U is examined against external variables, in this case the CIIs. The results of the CIIs are compared to those of the self-assessment as well as the 360º assessment. Since the results of the CII are coded as a dichotomous variable (i.e. presence or absence of competency) while ESCI is an interval variable, the appropriate measure of association between variables of this nature is the biserial correlation, as a particular case of Pearson's correlation.

The following table 4.3 shows the results of the correlations of each competency as assessed in the CII with the different rater sources in the 360º assessment including the self-assessments:

Table 4.3: Correlations among 360º assessments, self-assessments and CIIs

CII	BS_360	CL_360	SP_360	FR_360	RE_360	SE
AO	,094	-,120	-,115	-,112	-,141	-,225*
A	,022	,028	-,243*	,025	,031	,233*
E	,116	-,129	,046	,068	,042	,022
CFM	,070	,177	-,226*	,042	-,078	,060
DO	,016	,145	,182*	-,005	,125	,208*
I	-,108	-,093	-,024	-,133	-,163	,290**
TW	-,113	,209*	-,044	,110	,140	,017

*. Correlation is significant at the 0.05 level (1-tailed).
**. Correlation is significant at the 0.01 level (1-tailed).

In the following, the results will be reviewed for each competency related to the relationship between the CIIs and the 360º assessment. The self-assessment will then be discussed separately due to the aforementioned peculiarities of self-reports in general.

Achievement Orientation

None of the rater sources from the 360º assessment show significant correlations with the results of the CIIs in assessing achievement orientation. Combined with the missing correlations among the appropriate raters as suggested in the interjudge agreement, achievement orientation might be a competency that is exposed differently by the individual. An alternative explanation would be that the questions in the measurement are interpreted differently. The validity of the measures for AO thus remains inconclusive.

Adaptability

Spouses' assessments show significant correlations with the results of the CIIs on adaptability. The correlation however is negative which means that students who have been coded in the CIIs to show examples of adaptability have received lower assessments from their spouses as compared to those who have not been coded for these competencies. Since the interjudge agreement indicated that spouses could be appropriate rater sources for adaptability, a possible explanation could be the selection of incidents as students are asked to talk about work-related incidents during the CII. It might be the case that many students assume different roles at work and at home which makes them "deal with" things differently in these situations. The adaptability they show in their professional life might not be necessary in their private life, especially if considering that a partnership could be considered as a stable counterbalance to the fast moving professional environment. As a result, we cannot say with confidence that the ESCI-U, and concretely the spouses' assessment, and the CII measure the "same thing".

Empathy

None of the raters show significant correlations with the results of the CIIs on empathy. This result is somewhat surprising, since interjudge agreement showed

correlations among bosses and spouses on the one hand, and among friends and relatives on the other hand. This indicates inconsistencies in the interpretation of the indicators for empathy. Even though empathy is a social competency, it conveys a rather internal process of understanding others. This might indicate that some competencies are more complex and more difficult to be assessed by others through the ESCI-U.

Conflict Management

Similar to adaptability, the results of conflict management correlate negatively with souses' assessments. As mentioned before, this could either be related to the type of incidents chosen by the participants in the interviews which might be linked to the exposure of different behaviours in the workplace. As long as the reasons for these negative correlations are not confirmed, the assessments of conflict management have to be interpreted with caution. Another explanation of the lack of correlation could be due to attenuation of the results when working with averages from the five indicators which measure the construct of conflict management. This is especially the case, since the indicators of conflict management are both formative and reflective. For example, indicator 1 "Try to resolve conflict by openly talking about disagreements with those involved" and indicator 4 "Tries to resolve conflict by bringing it into the open" refer to the idea of not shying away from talking about conflictive issues and are therefore reflective. Indicator 3 "When resolving conflict, de-escalates the emotions in the situation" adds the element of emotions to the construct and is therefore reflective. As a results, calculating the average for conflict management can mask a possible correlation.

Developing Others

The third competency that correlates significantly with the results of the CIIs in the spouses' assessments is developing others. This result is somewhat surprising as no interjudge agreement was present among the hypothesised raters for this competency. And developing others also does not show convergent validity among the CIIs neither with the bosses' ESCI assessment nor the colleagues' ESCI assessments. Nonetheless, as mentioned when arguing for the adequacy of spouses' assessment, many of the indicators of developing others include a notion of supporting others in their effort to achieve their own goals. Spouses could thus have a relationship that allows observing how the participant supports others and maybe themselves. Therefore, in this case spouses should be considered as adequate raters for this competency.

Influence

The missing significant correlations in influence are also surprising since many of the raters showed significant correlations in the interjudge agreement. Due to these surprising results, parallel boxplots were generated for each of the rater source to check for possible outliers. However, even though outliers were present, none of them were repetitive, thus suggesting that they were at random. This leaves the question open as to whether the raters measure the same phenomena. As a consequence, we are not able to suggest an appropriate rater source to assess influence reliably through the ESCI-U.

Teamwork

The colleagues' assessment of the students correlates significantly with the results of the interviews on teamwork. The interactions that are underlying teamwork seem to be natural to happen among colleagues. In combination with the significant

results in the interjudge agreement with the bosses, it seems coherent that colleagues are especially adequate to assess teamwork.

Independent from the correlations we looked at for the posed hypotheses, the results also show that colleagues' assessments of teamwork correlate significantly with all other competencies as measured by the ESCI-U. This might be an indication that – from the colleagues' perspective – effective teamwork implies high levels of all the other competencies. If this though is developed further, a possible interpretation of the missing correlations in the other competencies could be related to the idea that the absolute level of ESC is not as important as we assume, but rather their relative "constellation" as compared with other competencies.

Self-assessment

Self-assessments have shown the highest number of competencies with significant correlations with the CIIs: achievement orientation, adaptability, developing others and influence. Interestingly, the correlation for achievement orientation is negative, i.e. students who evaluate themselves high on achievement orientation in the self-assessment mention fewer cases in the interviews in which they talk about specific incidents where they have shown to behave that way. A possible explanation could be that achievement orientation is a competency especially prone for effects of social desirability, i.e. students would tend to assess themselves high on this competency even if they do not give behavioural examples during the interviews.

The fact that four out of seven competencies correlate significantly with the results of the CIIs might be related to the circumstance that students choose the topics they want to talk about in the interviews and that there would be a natural tendency to choose incidents which they relate to their own perceived strengths. This tendency would confirm Butterfield et al's (2005) observation that the CII has evolved into a

technique to explore personal experiences which would naturally relate to self-assessments.

The present findings might sound contradictory to opinions made by scholars who prefer the use of CIIs over 360º assessments by arguing that CIIs are a more "objective" measure since they are coded by two coders independently who do not know the participant (e.g. Ryan, Emmerling, & Spencer, 2009b; Ryan, Spencer, & Bernhard, 2012b). Nonetheless, when combining these results with the high interjudge agreements with several other raters on the same four competencies (achievement orientation, adaptability, influence and developing others) and teamwork as a fifth competency, these results might put the value (and validity) of self-assessments into a new light. With the exception of achievement orientation, three competencies correlated with the results from CIIs indicating that MBA students have a "realistic" self-perception about their levels of adaptability, developing others and influence. With the inclusion of simple measures of social desirability, the effects on competencies such as achievement orientation could be controlled (King & Bruner, 2000; Steenkamp et al., 2010).

In summary, fewer than expected correlations were found among the 360º assessments and the CIIs. In combining the findings of interjudge agreement and convergent validity of specific competencies, we can imply that colleagues seem to be the most appropriate raters to assess teamwork. Spouses also show many significant correlations both with other raters, as well as with results from CIIs. However in the case of adaptability and conflict management these correlations are negative which could be a possible indication that students impersonate different roles in the workplace in contrast to the private environment. Alternative explanations are that competencies such as adaptability and empathy are more "complex" and thus more difficult to be measured through 360º assessments. Or

comparisons should include the levels of the competencies relative to other competencies, rather than the absolute level of each single competency measured separately. Also, self-assessments show high interjudge reliabilities with other raters on achievement orientation, adaptability, influence and developing others as well as teamwork.

Achievement orientation, adaptability, influence and developing others also correlate significantly with the results of CIIs, suggesting that self-assessments are more "realistic" than expected. The fact that the correlation on achievement orientation is negative indicates that this competency could be especially prone to social desirability. While limitations of self-report measures were often compensated through triangulation via multi method multi trait approaches, the present findings actually confirm the results of self-assessment. Erzberger and Prein (1997) proposed that results from different measures could be convergent, complementary or dissonant. According to our results we could tentatively imply that self-assessments and CIIs seem to be partially convergent. At the same time, the high number of significant correlations of interjudge agreements in the 360º assessment through the ESCI are not in dissonance with the self-assessment or the CII. As a logical consequence, the results suggest that the 360º assessment could be complementary to the CIIs, i.e. it could be assessing different aspects of the same reality. This makes sense if we acknowledge that "the approach based on the *complementarity* of findings starts from the assumption that neither methodological tradition can perceive reality per se, but only certain aspects which have to be put together" (Erzberger & Prein, 1997; pg 145).

Nonetheless, we also have to acknowledge that the assessment and discussion of the results were made on the assumption that CIIs would represent a "golden standard", which does not necessarily have to be the case. This will be further commented on in the limitations.

4.6 Limitations

As this study focussed on establishing construct validity, the limitations are related to the threats to this type of validity or to statistical conclusions validity.

On the one hand, probably the main threat to construct validity in this study is an inadequate explication of the construct. Even though both measures, the ESCI-U and the CII were explicitly applied to assess competencies the underlying assumptions while developing these measures could have been different. In the case of the ESCI-U, this assumption might have affected also the development of the items which measure the suggested constructs.

On the other hand, the overall small sample size indicates threats to statistical conclusions validity related to relatively low statistical power. In order to be able to include analyses on the convergent validity with the critical incidents, the study was limited to 87 students. However, interjudge agreement can be reviewed with a larger sample. Currently, ESADE Business School has data available from almost 2000 students, thus an increased sample size would allow using more refined statistical methods, such as structural equation models.

A second threat to statistical conclusion validity is related to the possible unreliability of the used measures. This sounds ironic as the objective of the study was to look for evidences of construct validity of the ESCI-U. However, there is no guarantee that the coding process for the CIIs might not have suffered from reliability issues, despite the extensive training of the coders and the satisfactory intercoder reliability. Additionally, the missing values calculated for the study might also have contributed to the unreliability of the 360º assessments. Future research

Even though we assumed that the CIIs could represent the "golden standard", the above mentioned limitations affect all measurement instruments. Therefore none of them could be established as a "more valid" instrument. This also includes the

assumption that by interjudge agreement the correlating raters would be accurate in their ratings. Further studies which compare the ESCI-U and CII to "objective" outcome variables such as performance or life satisfaction could help determine which of the two instruments offer better predictive validity. This would then also enable more sound comparisons of the adequacy of different rater sources for specific competencies.

Recent studies have started using various measures of EI in the same research. Nonetheless, studies that establish convergent validity among the competency measures with other instrument such as the MSCEIT, TEIQ, EQ-I, or EIQ have not been published yet. At the same time, studies establishing discriminant validity of the CIIs with measures of IQ or personality have also not been published. These studies could help clear some of the criticisms in the current debate on the role of EI and the link of ESC with other measures of EI.

Another line of research could look at cross cultural studies: for this study, critical incident interviews have only been coded in English language. About 100 CIIs are also available in Spanish language. Once these are coded, different patterns in competencies and the types of chosen incidents could indicate how cultural differences impact behaviours. These cross-cultural studies do not have to be limited to CIIs. The results from the 360º assessments of almost 2000 students, for example categorised into the 10 groups as suggested in the GLOBE studies could corroborate findings with the CII studies or with studies conducted at other universities using the same measurement instrument. These studies could amplify related research by shedding light on the questions as to whether some of the detected problems could be due to cultural interpretations of the questions in the ESCI-U.

On a more methodological note and referring to the restriction of range, further research could try to understand whether idiosyncratic characteristics of the raters

account for part of the variance of their assessments. This would allow us to correct for this effect.

4.7 Implications

Despite the mentioned limitations of the present study, the findings have theoretical and practical implications.

First, the results suggest revisiting the items of the questionnaires. Especially the operationalisation of conflict management seems to cause problems since the results did not show significant correlations among raters or with CIIs. An improvement in the quality of the measures will without a doubt help affront some of the voiced criticisms about the competencies model.

Second, the understanding of which rater sources are adequate to rate which competencies can help streamline the questionnaire and the assessment process. Since we have established the adequacy of colleagues to assess teamwork, those five questions could only be included in the questionnaires sent to colleagues. As a result, the questions that the remaining raters would have to assess would be reduced. This would increase the face validity of the questionnaire since many raters complain about the number of questions to answer. As a consequence, the availability of raters to provide their honest assessment would increase.

4.8 Conclusion

In an attempt to establish convergent validity for the ESCI-U we established two sets of hypotheses: First, we suggested certain raters as appropriate sources to assess

specific competencies. For five of the seven hypotheses (adaptability, empathy, influence, developing others and teamwork), at least two of the expected raters showed significant correlations among themselves. For example, to assess developing others and teamwork the interjudge agreements among bosses and colleagues were significant as expected. For achievement orientation and conflict management, the hypothesised raters did not show significant correlations. Then, when comparing the assessments of the 360º assessments and the self – assessments with the CIIs, raters who showed significant correlations were colleagues for teamwork as well as spouses for adaptability (negative), conflict management (negative) and developing others. As a result, we can confirm evidence of construct validity for teamwork as assessed by colleagues and developing others as assessed by spouses. Further research should help interpret the underlying reasons of the negative correlations of adaptability and conflict management as assessed by spouses. The ESCI-U might have to be further developed to more appropriately measure competencies that seem to be more internal and therefore of a more complex nature, such as adaptability or empathy.

Also, students' own assessments showed significant correlations with CIIs on achievement orientation (negative), adaptability, developing others and influence. These results suggest that the often mentioned criticism on self-assessments should be revised. Some of the negative correlations might indicate differing roles and students' associated behaviour in different environments and in the case of the self-assessment also social desirability. Further studies can help improve the quality of the measurement instruments used in the behavioural approach to emotional intelligence even though the measures could be continued to be used in parallel as a complementary approach in triangulation.

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4.9 Appendix

Emotional Competence Inventory (ECI-U) - University version (Boyatzis & Goleman, 2007)

Emotional Self-Awareness: ESA is awareness and recognition of your feelings and to understand how they affect your behaviour. It is also the awareness of your own strengths and opportunities for development. It includes seeking feedback and help from others when and where needed.

Achievement Orientation: AO is seeking performance improvement for yourself and others by setting measurable, challenging goals and calculating related risk; continually learning and teaching ways to do better.

Adaptability: A is changing your behaviour to better fit the situation. It is often associated with a tolerance for ambiguity and uncertainty.

Emotional Self-Control: ESC is the inhibition of personal needs or desires for the benefit of organisational, family, or group needs by managing disturbing emotions and impulses and even channelling them in useful ways.

Positive Outlook: PO is to seeing circumstances, yourself and others in a positive, possibility-filled way.

Empathy: E is understanding others.

Organizational Awareness: OA is understanding organissational networks and relationships and how things get done in an organisation.

Conflict Management: CFM is surfacing conflict, acknowledging the feelings and views of all sides, and redirecting the energy to a common ideal that everyone can endorse.

Developing others / Coaching and mentoring: DO / CM is helping others to develop. It includes understanding their goals, strengths, and weaknesses to stimulate that person to develop his/her abilities or improve their performance toward an objective.

Influence: I is persuasively and engagingly convincing others of the merits of or to adopt an attitude, opinion, or position (i.e., getting others to do or think what you want them to do or think).

Inspirational Leadership: IL is inspiring and moving others to follow by imparting a compelling vision or shared vision.

Teamwork: T is stimulating members of a group to work together effectively.

Systems Thinking: ST is seeing a collection of things or processes in terms of a set of multiples causal relationships.

Pattern Recognition: PR is identifying a pattern in an assortment if unorganised information or seemingly random data.

Protocol Critical Incident Interviews

ESADE – Critical Incident Interview Protocol
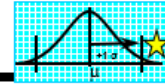
State Purpose: We are conducting a study to identify the current competencies of students in the MBA programs here at ESADE. To collect data for the study, I will be asking you about times when you felt that you have been effective and also a couple of incidents where, you tried, but felt that you were not successful. *The interview today will be kept strictly confidential and will not be used to evaluate your performance within the program for the purpose of grading for any courses.*

Interview Flow (70 Min. Total)

Introduction	Warm-up	Incident 1 (+)	Incident 2 (-)	Incident 3 (-)	Incident 4 (+)
3 Min.	7 Min.	15 Min.	15 Min.	15 Min.	15 Min.

Introducing the Critical Incident Interview (3 Minutes)

❑ I will be asking you to describe experiences, ideally within the last 12 months where you felt that you were effective.

❑ I am very interested in learning about what you actually did in these situations, what you said, thought and felt in specific cases.

❑ Before we get into the detail of each situation I will ask you to provide me a brief overview, about 30 seconds or so, of what led up to the situation or how you got involved and what the actual outcome was.

❑ Normally when we talk about these types of situations it is typical to use the word "we". For the purposes of this interview it is important for me to know what your specific role was. What you did, said, felt or thought **during** the episode.

❑ We will try to cover 4 specific incidents, 2 incidents when you felt you were successful and 2 when you felt that you were not successful. **The interview will last approximately 70 minutes.**

❑ Ask for permission to record the interview

START TAPE RECORDER

Warm up (5-7 Minutes): Start by asking for some basic information to establish rapport. Typical questions include the following:

◈ Current (or Previous) responsibilities, projects, or activities
◈ Current career objectives or area of academic focus

Positive Behavioral Incidents (15 Min. Each): Ask interviewee about a recent experience.
◈ **Stem Question**: "Tell me about a time when you felt effective (in your current or previous role)?."
◈ Give me a brief 30 second overview of what happened.
◈ Give me some "bullet points" or key things that happened during this incident
◈ What about the situation made you feel effective and what was the outcome?

Negative Behavioral Incidents (15 Min. Each): Ask interviewee about a recent experience.
◈ **Stem Question**: "Tell me about a time when you felt ineffective (in your current or previous role)?."
◈ Give me a brief 30 second overview of what happened.
◈ Give me some "bullet points" or key things that happened during this incident
◈ What was the outcome of this incident or what was the end result?

1
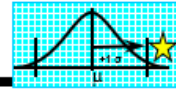
Effective Probes and Follow-up Questions

Situation
- How did you first get involved in the situation?
- What led up to this situation?
- Take me back to the beginning, how did it start?

Thoughts
- What where you thinking at that time?
- How did you come to that decision?
- What was going through your mind as that was happening?
- How did you know that?
- How did you know that he/she was thinking that?

Feelings
- What were you feeling at that moment?
- When that happened what were you feeling?
- When he/she said that what were you feeling?
- When he/she did that what were you feeling?
- How did you know they were feeling that why?

Dialogue
- What did you actually say to him/her?
- Can you remember what you actually said at that meeting?
- Can you tell me, to the best of your recollection, what you actually said in this case?
- If I had been there what would I have heard you say?

Behavior
- What did you actually do?
- What did you actually do in this case?
- If I had a movie camera on you during that meeting what would I have seen you doing?
- If I had been there at that time what would I have seen you doing?
- Can you tell me step by step what you did in this case?
- What did you do first?
- What did you do next?

Outcomes
- What was the end result of this situation?
- What was the outcome of this situation?

"We statements" are uncodable. Always probe "we statements" to clarity what the interviewee's role was and what he or she *actually did, said, thought or felt at the time of the incident*. **Example**: "We made the presentation and the client was convinced." **Response**: What was **your role** in the presentation, what did you actually do to convince the client?

Probe "buzz words" that interviewees use. Example: "I just coached him." **Response**: How did you coach him, what did you actually do in this case? **Example**: I always use a participative leadership style." **Response**: Can you think of a specific time you applied a participative leadership style, what did you actually do in that situation?"
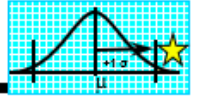
Remember your familiarity with certain roles might make you reluctant to probe responses that seem familiar or routine to you. Although it might seem a bit awkward, have interviewees describe in detail common or known procedures to the extent that someone unfamiliar with the role would be able to know exactly what had occurred.

Example: "I did a standard portfolio review and I saw that his investments were underperforming."

Response: "What did you do exactly to review the portfolio, can you walk me through what you actually did in this case step by step?"

STOP TAPE RECORDER

<u>Conclude the Interview</u>

Thank the interviewee for their time and for the insights that they have provided. Remind them that the information collected will be kept confidential and will be combined with the others in the study.

Pearson correlations on interjudge agreement

AO	SE	BS	CL	SP	FR	RE
SE	1	-,116	,270**	-,080	,096	,205*
BS		1	-,026	,040	,133	,048
CL			1	-,069	,166	,132
SP				1	-,014	,046
FR					1	,178*
RE						1

A	SE	BS	CL	SP	FR	RE
SE	1	,044	,264**	-,161	,097	,142
BS		1	-,029	,154	,106	,095
CL			1	-,016	,283**	,124
SP				1	,039	,047
FR					1	,219*
RE						1

E	SE	BS	CL	SP	FR	RE
SE	1	,074	,059	,075	,172	,013
BS		1	,150	,239*	,073	-,148
CL			1	,098	,141	,022
SP				1	,074	-,004
FR					1	,196*
RE						1

CFM	SE	BS	CL	SP	FR	RE
SE	1	,078	,013	,008	-,061	-,042
BS		1	,106	,092	,208*	,002
CL			1	-,009	,071	-,104
SP				1	-,098	,032
FR					1	,147
RE						1

DO	SE	BS	CL	SP	FR	RE
SE	1	,053	,235*	,134	,126	,145
BS		1	,278**	,145	,142	-,073
CL			1	,040	,124	-,042
SP				1	-,039	,080
FR					1	87
RE						1

I	SE	BS	CL	SP	FR	RE
SE	1	,224*	,189*	-,042	,260**	,053
BS		1	,193*	,001	,200*	-,020
CL			1	,120	,195*	-,022
SP				1	,076	,062
FR					1	,199*
RE						1

TW	SE	BS	CL	SP	FR	RE
SE	1	,261**	,140	,004	-,042	-,039
BS		1	,216*	,084	-,062	-,022
CL			1	-,070	-,003	,012
SP				1	,051	,046
FR					1	,093
RE						1

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

Chapter 5: "Module 9: A new course to help students develop interdisciplinary projects using the framework of Experiential Learning Theory"[4]

5.1 Abstract

This paper offers an example of how to introduce student-centred knowledge creation and competency development in a systematic way into a master's programme. The curriculum of a new course called Module 9 was framed according to Experiential Learning Theory (ELT). While student teams work on self-selected projects, their learning processes are accompanied by workshops and tutorials. As a consequence, practical experience drives students' learning within the applied projects that were implemented in collaboration with local companies. Coding of learning memoranda show that each team applies each learning mode during the different stages of the projects. While evaluations of the experiences were generally positive, awareness of the learning processes can be increased throughout the course. Reflections include important lessons and improvements for the next cohorts

Keywords: Emotional and Social Competencies, Curriculum Design, Experiential Learning Theory, Competency Development, Higher Education

5.2 Introduction

In this increasingly complex and competitive environment, universities are strongly called on to prepare students for a society in which employability is an important concern. Therefore, educational institutions must endow their students not only with current technical knowledge, but also with practical skills and competencies that will make them attractive to future employers. Universities are thus pushed to adopt teaching approaches by shifting focus from the curriculum based teaching

contents (i.e. teaching oriented methodologies like lectures) to the learning needs of students via student-centred methodologies, such as experiential learning, action learning, problem-based learning, or service learning. Despite a long history of these student-centred approaches (going as far back as Socrates and Plato) and today's general consensus on their positive impact, many universities still lag behind in fully integrating them into their programmes. Possible reasons why universities have not been able to adequately renovate their teaching methodologies could be due to a general resistance to change by teaching staff. This resistance may be the result of teachers seeing themselves in a 'teacher-as-expert' role (Boyatzis, Cowen & Kolb, 1995); or that they perceive excessive bureaucratisation (Salaburu et al., 2011) when implementing adjustments to on-going courses.

This paper describes how interdisciplinary project work was introduced into a master's programme at a law school as an example of such a student-centred approach. The teaching framework of Experiential Learning Theory (ELT) was applied to provide students with the opportunity to integrate knowledge obtained from other modules during the development of applicable projects – and eventually develop practical skills and competencies. Unique to this case is the fact that the university has allocated 'official' time for this interdisciplinary project work within the master's programme by creating an additional course called 'Module 9'. This new module includes several workshops that follow the different phases of ELT with the objective of guiding and supporting student learning processes. A critical review of the information obtained from interviews and questionnaires from various stakeholders – as well as project outcomes and learning memoranda – has helped to shed light on how ELT can be systematically incorporated into higher education by providing the necessary support for experiential learning processes and examining student impressions. Although students felt they had developed useful practical competencies as an outcome of the project work, we detected room for improvement in the social support given during the entire process by adding further

practical workshops and tools for students to manage emotional issues within the learning process.

5.3 Experiential Learning Theory

Kolb's (1984) Experiential Learning Theory derived from the theories of John Dewey who during the first half of the 20th century advocated the importance of rooting learning in experience (Dewey, 1938/1998). In ELT, learning is defined as 'the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience,' (Kolb, 1984: pg 41). Kolb (1984) considers learning to be a holistic process of constant adaptation through a learning cycle leading from *concrete experience* (CE) to *reflective observation* (RO), *abstract conceptualisation* (AC) and *active experimentation* (AE), which in itself results in new concrete experience. Using swimming as a simple example, a child may know how to swim without drowning (CE), however by watching other swimmers in the pool they may observe how these swimmers move their arms differently (RO). Once the child has understood that the arms have to move in separate sequences resembling a mill (AC), the child may try these movements (AE) until feeling comfortable with the new technique (CE). ELT suggests that in an ideal learning cycle the learner undergoes each mode according to personal preferences and the necessities of the context, i.e. experiencing, reflecting, thinking, and acting – which in fact may be reiterative and of varying duration for each learning experience.

5.4 Background

The part-time Master's Programme in Intellectual Property and the Information Technologies (IP & IT) in a Spanish law school was modified into a new design with nine modules. Technical content is distributed in eight modules. New to the programme is a ninth module, simply called 'Module 9', which is dedicated to accompanying students during interdisciplinary projects. This redesign of the curriculum emerged from the need to better prepare students for the expectations of future employers. Simultaneously, this change enabled aligning the programme contents and objectives with the propositions of the European Higher Education Area (EHEA): which include the shift towards a student-centred approach; a focus on the development of skills and competencies and the combination of academic content with organisational requirements of the 'real world'.

5.5 Module 9 and interdisciplinary projects

Module 9 is distributed over the entire academic year and features four practical workshops (focusing on different learning steps according to ELT) to help students generate ideas for self-directed and applied projects. The workshops were:

1. Introduction – *reflection*: structure and define the projects

2: Project design – *thinking*: plan and start executing the action plans

3: Action plan – *thinking*: give feedback to allow for possible adjustments

4: Interdisciplinary analysis – *thinking and acting*

The general structure of Module 9 relative to ELT is represented in the following figure 5.1.
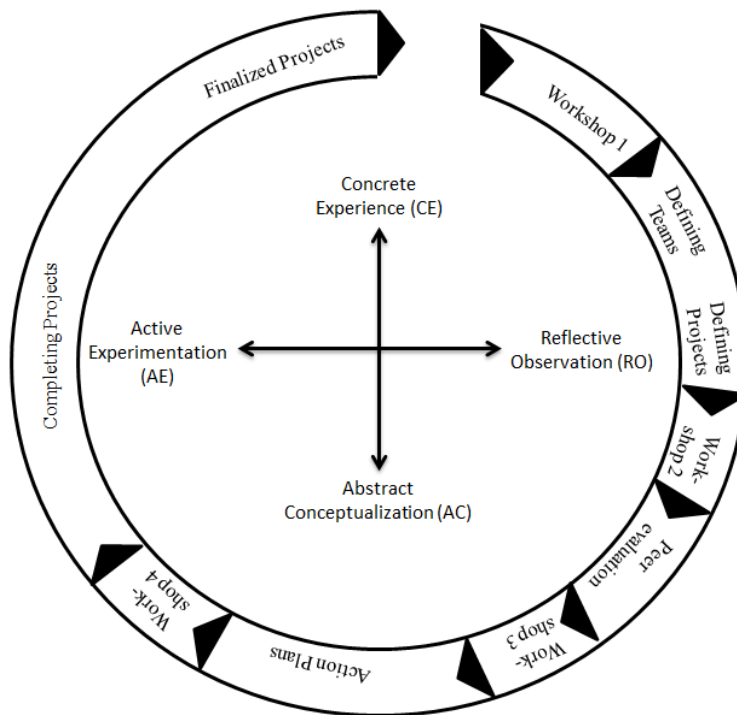
Figure 5.1: Distribution of Module 9 relative to the ELT (adapted from Kolb, 1984)

Different stakeholders are involved in the module: professors of the eight modules give continuous feedback and final evaluations to ensure an adequate integration of technical knowledge. From a more didactical perspective, the programme director worked with internal pedagogical consultants to ensure that the course curriculum was effectively designed. Last but not least, small start-up companies from the university's business innovation park offered collaborations in which student teams could help these organisations on current legal issues and thus create a win-win situation by linking the domains of law and business.

The module also included peer evaluation to foster open communication and improve the learning process. Peer evaluation was administered twice throughout the course: first at the halfway point to offer early feedback and then again at the end of the course as part of the overall evaluation. The following table 5.1

summarises the general structure of Module 9 with the objectives and outcomes of each component.

<div align="center">Table 5.1: Organisation of workshops</div>

	Workshop 1. **Introduction** *(November)*		Workshop 2. **Project design** *(December)*		Workshop 3. **Action plan** *(January)*		Workshop 4. **Interdisciplinary analysis** *(February)*	**Tutorials** 1, 2, 3, 4, and 5	Tribunal
Objectives	Presenting the interdisciplinary project (Module 9) and ELT Creating safe learning environment Defining evaluation criteria (competencies) Initiating ideas on possible projects and teams	Defining teams and project proposals	Presenting projects *(teams)* Analysing and defining projects in further detail Establishing project objectives	Peer evaluation	Peer evaluation If necessary, readjusting actions	Elaborating development plans with reflections on learning progress	Analysing applied knowledge area Generating knowledge in this specific area Solving problems and doubts. Offering new perspectives and ideas to be incorporated in projects (professors)	Organsed according to team needs	Project presentation and defence
Outcomes	Brainstorming with list of possible projects		Defined projects		Adjusted action plan		Alternative reflections to enrich projects		

The structure of the module builds a safe space for students with students receiving multilevel support from experts, professors, tutors, or the programme director. 'What happens in Room 404 stays in Room 404' was created as a motto of trust by the programme director to encourage participants to experiment with the project work and reassure them that mistakes are part of any success and therefore expected and accepted.

The interdisciplinary projects are substitutes for individual master theses. Teamwork in groups of five to six students was preferred on the basis of research

suggesting that learning in social situations is more effective and sustainable (Kayes, Kayes, & Kolb, 2005) because it allows for the natural social tendencies of human beings to be included in the learning process (Lieberman, 2012).

From experience to reflecting. The module started with a practical workshop with three objectives: firstly, students were informed about the objectives of Module 9 and the nature of the interdisciplinary projects. These projects must offer solutions to practical, new, and unsolved issues. Project outcomes were to be evaluated based on the applicability of the solutions to organisations outside the university, adequate integration of content knowledge from all eight modules, and the quality of the learning reflections produced by the group. Secondly, students and professors reflected and decided together on the competencies to develop and include in the evaluation criteria for the final grades. Consensus was quickly reached on 'creativity and innovation', 'knowledge application', and 'communication and presentation skills'. Thirdly, students generated tentative ideas for projects. At this point, previous concrete experiences that students may have obtained in other classes or through work served as antecedents for ideas generated during this brainstorming session. This could be considered the starting point for the learning cycles. At the end of the workshop, students presented their suggestions individually and this opened the stage for reflective observations: participants saw the other ideas and were then invited to further discuss these suggestions and start defining possible projects by establishing teams.

From reflecting to thinking. The reflective phase transitioned into abstract conceptualisation, when the teams set the direction of their projects by formalising objectives, contents, and desired outcomes. This process was supported with the next two workshops. The first (Workshop 2) was designed to receive feedback from the programme director on the preliminary proposals and focus on technical content. Workshop 3 was dedicated to presenting and interpreting results of the

intermediary peer evaluation of the contributions of the individual team members to the advancement of the project work. Following these workshops, teams were able to refine their still abstract action plans into more effective planning tools.

From thinking to acting. As the teams decided on the responsibilities for their tasks, each student had the opportunity to actively decide which experience they wanted to be involved in. These decisions were based on individual learning goals as to which competencies they preferred to develop or strengthen. Intermediary deliverables captured the progress and required reflections on any difficulties that teams may have encountered in their activities so far. In the fourth workshop professors from all content areas gave interdisciplinary feedback on the current state of the projects: opinions and suggestions being given by specialists and those from other areas of expertise offered alternative points of view. At this point, the integration of what had been learned so far and the feedback received from the professors, peers, and companies gave students a certain level of confidence when they now started making further efforts to complete the tasks. Knowing that the final evaluation was based on the 'real products' the teams used the final months to put their action plans into practice, and thus actively experiment with their responsibilities, and eventually close the learning loops by creating new concrete experiences.

5.6 Evaluation of the pilot programme: results and discussion

5.6.1 Learning experience

Following the idea of meta-learning suggested by Biggs (1985), i.e. creating awareness of and taking control of one's own learning processes as well as the suggestion by Kayes et al. (2005) that teams can increase their effectiveness if they intentionally focus on learning, written memoranda in which students reflect on their learning experiences were included in the grading. The first memoranda were due just before the last workshop and the second memoranda were handed in together with the final projects at the end of the course. The contents of the memoranda were colour coded for each learning mode: CE, RO, AC and AE. The following table gives an overview of the projects and examples for each learning mode as mentioned in the memoranda:

Table 5.2: Overview of the individual projects and learning experiences

Project	What is it?	Learning experiences
1	A web portal for small and medium sized law firms that offers services related to intellectual property.	CE: '*We have seen that* an organisation such as X – just like other public, private or mixed organisations – does not have a 'local' site where they can get information on the protection of intellectual property.' RO: 'We had the opportunity to meet with a representative of company X *and learn about* their legal doubts regarding intellectual property and data protection, we had a new experience of 'reality' which *helped us understand the problems the organisation faces ..'*. AO: 'We have visualised which would be the most attractive functions we could contribute to the 'target market' and the agents…among which we decided on the following (functions)…'

		AE: 'We have *acquired* a name for a real domain, *evaluated brand names* for team 1, *created the contracts* which will establish relationships with partners, publishers, and users…'
2	A user guide for geolocalisation functions in smartphones – informing users and providers about characteristics, risks, and responsibilities related to privacy regulations	CE: 'We are starting on a geolocalisation project as this is a latent topic *that lacks the required attention within the legal sector*.' RO: 'This initial phase of lack of knowledge was overcome with a process we could call *information*, in which each of us looked for any possible information related to this technology, advantages and risks in its use, and sharing this information weekly.' AC: 'With this new focus *we need to consider*: use of the app, trademarks, registered web page…' AE: '…we were able *to write* legal advice for company A and company B.…we *filled in the forms* for the data protection agency.'
3	A report on legal and economic considerations for companies that sell audio-visual content in the Spanish market.	CE: The decision by Netflix not to *offer services in Spain made us question* whether the legal framework in Spain can stop a company offering audiovisual services.' RO: '…we have taken an x-ray of the real market situation on global and national level…' AC: '…we have focused on understanding the mechanisms of market relations and current technologies, trying to categorise each component.' AE: '…*write* the corresponding part for each team member…'
4	A company that represents artists / musicians and manages the related copyright issues for their work through a digital platform.	CE: '…with this digital environment *the existence of intermediaries becomes less and less necessary*. In this digital environment … the company emerges as an integrated service compiling services that were previously offered by others.' RO: 'We have *searched the web* (to confirm whether there were similar products) and other legal entities which are relevant for our project.' AO: '*Organise ideas*' AE: 'We have started writing for the final project'

Project	What is it?	Learning experiences (cont.)
5	A guide for teachers on the legally correct use of visual material in teaching	CE: 'What motivated us to do this project was that *we saw that the limits of applying patent rights were generating conflict* since they were unable to provide legal security in light of the latest technological and social tendencies.' RO: '*We have studied the idea of fair use and how it solves conflicts* in the application of patent rights, we have compared it with the system of limits put forward by the Intellectual Properties Act, the Bern Conventions of 1886 and...' AC: '…we have learned to *capture concepts, shape them* and give them a practical use' AE: 'Writing down ideas and concepts from readings and syntheses of reviewed materials, such as *writing the content* for the user guide.'

We found that reflections on concrete experiences were mostly limited to the argumentations of why the chosen projects were relevant. This phenomenon is in line with how ideas emerged in the brainstorming sessions during the first workshop. Most comments coded as reflective observations are related to gathering relevant information for the specific content of the projects. In some cases, students also commented on the importance of meetings with organisations and tutors which resulted in an understanding of the current needs of the 'real world'. This was categorised as a reflective observation as it is information given to the students and then integrated into the planning – conceptualisation – of their projects. Surprisingly, the memoranda contained very few comments that could be coded as abstract conceptualisation. We assume that students did not reflect on the already abstract planning processes because they had to submit the action plans – the output of the abstract conceptualisation – at the same time as the memoranda. Even though students were encouraged to start working on the projects as soon as possible, few activities were included in the memoranda that

were due before Workshop 4. Practical efforts coded for active experimentation were mainly found in the final memoranda indicating that teams dedicated the first part of the course to brainstorming and the planning of projects and started 'working' through their action plans during the final months, thus following the structure established in Module 9. While the memoranda seemed to be good tools for making students reflect on their thought and work processes, there are no indications as to how writing these reflections may have helped the teams better structure their learning processes. In future editions of the master's programme, instructors may need to better explain the importance of the reflections on the individual and team learning processes in order to emphasise the role of the memoranda.

5.6.2 Outcome assessment

The programme director actively sought feedback on the first edition of Module 9 and the interdisciplinary projects from all stakeholders. All of the 22 students and 8 professors answered an 8 or 6-item questionnaire respectively with questions about organisational aspects of the course, as well as general satisfaction levels (all questions and results can be found in the Appendix). The items were rated on a 1-5 Likert-like scale. Even though the number of students and professors is low, the total participation represents a response rate of 100% and consequently includes a full spectrum of impressions.

General outcome. Overall satisfaction with the interdisciplinary projects was high: students evaluated this item with an average of 4.60 points (SD 0.99) while professors assessed it with an average of 4.63 points (SD 0.52). This might be a tentative indicator that the faculty supported the initiative of including more experiential and project-based methods in the programme. Additionally, the

positive evaluation might reflect the high quality of the delivered projects. We assume this could be due to the fact that inviting students to propose their own projects and choose the focus of the learning interests probably had an impact on student motivation and commitment levels.

Testimonials of some of the professors, tutors, and collaborating companies reinforced the positive results of the questionnaires, also implying a perceived improvement in the quality of the programme itself when compared to previous years:

> *"The skills that this module provides to the students of this master's programme are of extraordinary value, contributing to a qualitative leap relative to previous editions…" (Professor)*

Transferability to organisational environments. One of the main objectives of introducing experiential learning through project work was to promote the development of knowledge, skills, and competencies that students would later need in their jobs. Therefore, it was positive to see that both students and professors felt that the projects were all relevant to the organisational environment. Student impressions about the transferability of the projects were the highest rated item with an average of 4.8 points (SD 0.89). This result could seem subjective and inclined to suffer from a social desirability bias as students might think: "I have put so much effort into this project that it just has to be applicable". However we have confidence in the critical responses from students because their current and previous work experience enables them to correctly estimate the impact of the project in a professional context. Professors' ratings averaged 4.43 points (SD 0.79) and match student impressions. Collaborations with some companies were ongoing and satisfactory:

"[The students] completed the activities that were most needed even before the initial planning, and we are tremendously grateful. We would not have been able to do the work they did and so we are very satisfied. Thank you for the attention and for this great opportunity which I hope that many other companies will also have," (collaborating company).

By saying 'We would not have been able to do the work they did' the representative implied that the students possessed and applied skills and knowledge that are necessary in organisations. As a consequence, it is expected that students generated practical knowledge and developed skills and competencies that are also applicable in work.

Peer evaluation. Peer evaluation was used for the first time in a master's programme at this law school. Students understood this as an additional source of individual feedback since the items were based on the same competencies evaluated throughout the coursework. Student responses about the usefulness of this instrument were surprisingly low with an average of 2.90 points (SD 1.62). This result could be due to an initial resistance to a relatively new method that differed from the conventional education that the students may have received so far. In a community that is not used to openly giving peer feedback, students may have shied away from being sincere and hoped that 'nobody would harm anybody'. Student reactions to the feedback process were more proof for the programme director about the need for a change in the professional profile of future lawyers since managing feedback will be part of their experience at work. Therefore, the importance of this tool should be better explained in future editions by focusing on how it contributes to personal learning, as well as the quality of the project outcomes – and eventually the final grades.

5.6.3 Feelings and emotions

Some of the qualitative feedback from tutors was related to the need for students not only to manage project work but also their emotions in order to make the most of this learning experience. Kolb and Kolb (2005) emphasised the importance of emotions and feelings as relevant aspects in the process of learning – since negative feelings could block learning while positive feelings could increase the interest in learning. Feelings and emotions can thus determine what somebody learns. This suggestion adds a new dimension to Module 9: the inclusion of academic support for students to understand and manage their own emotions and those of others would be another step towards developing the person as a whole. This approach is coherent with the underlying learning theories of John Dewey who advocated a holistic approach in education (Dewey, 1938/1998). By including the management of emotions into the programme design, emotional and social intelligence competencies would become part of the competency repertoire (see e.g. Goleman, 1995 or Boyatzis, 2009) for students to enhance.

5.7 Theoretical and practical lessons

This is an initial review of the experience of introducing interdisciplinary projects for experiential learning in the curriculum of a master's programme. The current impressions could be more conclusive if data on learning outcomes was available from previous cohorts or other similar programmes that do not include practical project work as part of the course. Such comparisons could also include the effectiveness of the various components of the course such as: learning memoranda; peer evaluation; or learning in teams versus individual projects. Longitudinal studies could also help us gain an understanding of whether the

knowledge, skills, and competencies students develop while working on these projects are successfully applied later in their jobs and provide a 'competitive' advantage for job placement, performance, career advancement, or job satisfaction.

We have observed that professors have noticed an improvement in the quality of the programme and in the skills of the students when compared to previous editions. At the same time, students had the opportunity to learn more about the real world during their collaboration with companies. The importance of the student work in these applied settings is seconded by these collaborating companies. Last but not least, reflections on the learning processes at different moments of the project – and learning stages – indicate that all the teams have gone through each learning mode while working on the projects.[5] The advantages of each tool for the learning outcome and a positive impact on final grades must be well explained to students to ensure the most effective use of the learning memoranda and peer evaluation. Further improvements for the next cohort could include additional workshops on communication skills, and the integration of emotional and social intelligence competencies for a more holistic approach to learning.

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[5] As suggested by one of the reviewers, future studies could reflect on how students with specific learning styles coped with possible challenges in the different phases of the learning process as well as how and whether they adopted different learning styles in different moments.

5.8 Conclusion

The case of Module 9 as part of the Master's IP & IT is an example of how student-oriented teaching approaches can be systematically integrated into a programme curriculum. Students do not work on applied projects and 'happen' to learn new knowledge, skills, and competencies based on experiences and so the curriculum of the master's programme was redesigned to allocate time for extra seminars that follow the framework of ELT and guide students step-by-step in their respective team projects and learning outcomes. Coded learning memoranda show that every team experienced each learning mode and that collaborating with companies helped students learn about new realities. The general satisfaction with the course and the transferability of the projects to real workplaces were positively evaluated by students, professors, and collaborating companies. Even though this experience is limited to one programme in one university and potential for further improvement was detected, its general design make it transferable to most areas of education and thus interesting for and applicable to other faculties.

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Appendix
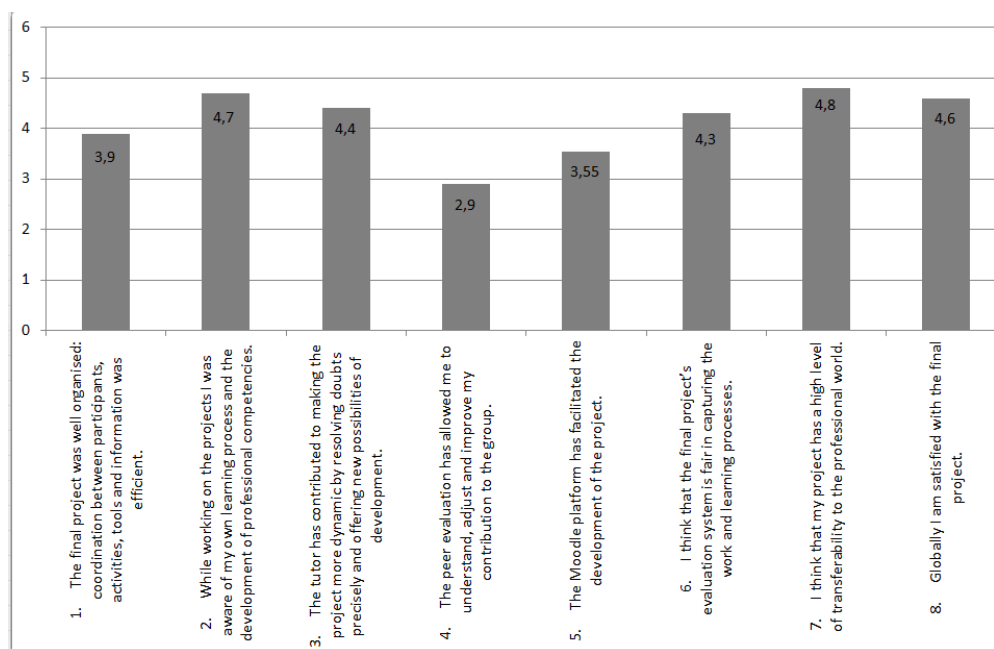
Figure 5.2: Average results from satisfaction questionnaire given to students
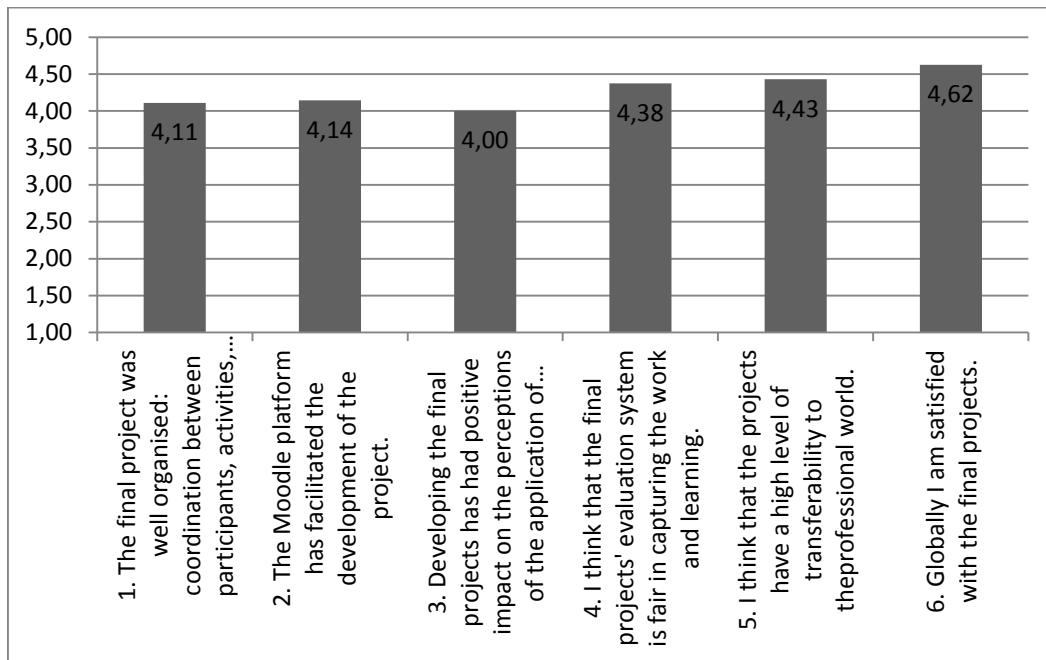
Figure 5.3: Average results from satisfaction questionnaire given to professors

Fundings

Chapter 6: "Integrating interdisciplinary project work with the development of emotional and social competencies in higher education: a pilot study"[6]

6.1 Abstract

Universities nowadays have to endow their students not only with technical knowledge but also with practical experience, skills, and competencies. In a master's programme at a Spanish Law School, an interdisciplinary project work in teams to promote experiential learning was combined with a personal development programme based on Boyatzis' Intentional Change Theory (ICT) to create a framework of self-directed change. In addition to eight workshops and various tutorials, students are offered three individual coaching sessions to ensure the best possible alignment of personal and team goals. Emotional and Social Competencies

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[6]A previous version of this paper was presented as: Canboy, B.; Montalvo, A.; Buganza, M.C.; Emmerling, R.: Integrating interdisciplinary project work with the development of emotional and social competencies in higher education: a pilot study. EURAM conference. Valencia (Spain), June 2014

(ESC) are measured twice during the academic year with 360º assessment instrument: first, after 3 months into the programme and then again at the end of the academic year. Despite the small sample size of 18 volunteers, results show promising indications that the suggested framework can help students develop ESC in higher education within one academic year. Further research is needed to confirm these tentative findings.

Keywords: Emotional and Social Competencies, Curriculum Design, Intentional Change Theory, Competency Development, Higher Education

6.2 Introduction

When signing the Declaration of Bologna, twenty nine Ministries of Education from the European Union agreed to adapt course designs in higher education in their respective state universities by including the development of competencies into the curricula. The objective of higher education institutes is to endow their students with technical knowledge as well as practical experience. As a consequence, the likelihood of these students to be better prepared for and consequently be successful in their future workplace would be increased. Thus, the decision to integrate the development of competencies into the curricula of all educational programmes in higher education reflects the importance of these as an element related to personal and professional success. At the same time the ministers of education show confidence, that universities are able to provide an adequate environment to foster and develop these competencies as part of students' personal development.

The decision to include systematic competency development in educational programmes probably stems from research confirming that behavioural competencies, especially emotional and social competencies, play an important role in organisational settings. Numerous studies have shown positive relationships with variables such as outstanding professional performance (Richard E. Boyatzis & Ratti, 2009; Richard E. Boyatzis, 1982; Camuffo et al., 2012; Guillén Ramo et al., 2009), perceived leadership (Sivanathan & Fekken, 2002) or organizational climate (Momeni, 2009b). As a result, the interest in finding ways to help individuals successfully develop these ESC has increased continuously over the last years. Some studies offer in depth analyses of the different methods used in development programmes generally (Day, 2000), such as 360-degree assessment techniques or coaching (Richard E Boyatzis, Smith, & Blaize, 2006). Cherniss et al (2010) show, that ESC can be developed in organizational settings. However, outcome studies and longitudinal studies of full university courses are limited. Exceptions are assessments at Case Western Reserve University's Weatherhead School of Management (WSOM) (Boyatzis & Saatcioglu, 2008) where Intentional Change Theory (ICT) (Richard E Boyatzis & Akrivou, 2006) is used as a framework for personal development in management education since 1984 (Boyatzis et al., 1995).

Since there seems to be a consensus on the need to develop ESC which predict positive organizational outcomes such as outstanding performance, but a lack of examples on how pedagogical methodologies can systematically be implemented in higher education, the objective of this current study is to shed light on two questions:

1. How can emotional and social competencies be developed in higher education?

2. Can students develop ESC within one academic year?

The authors present the structure and content of a newly included course after a curriculum redesign which integrates interdisciplinary project work with personal development through ICT. Workshops distributed throughout the academic year, self-assessments and 360º assessments, individual coaching sessions, team tutorials and feedback from professors on the project work are the major components of this module. To evaluate the impact of this new course, 18 students voluntarily repeated self-assessments and a 360º assessment at the end of the year showing positive change in the levels of all measured competencies.

6.3 Emotional and Social Competencies

6.3.1 What are Emotional and Social Competencies?

In a study at the US State Department's Information Service, McClelland (1973) studied and compared the behaviour of a sample of exceptional workers with those of regular workers at their workplace with the objective of finding indicators for outstanding performance. As an outcome of this observation, McClelland was able to group the examples of behaviour under common labels converting these into a compendium of observable behaviours which are considered to be the origin of the first competencies. Boyatzis (1982) defines competencies as, "the underlying characteristics of a person that lead to or cause effective and outstanding performance" and as "a set of related but different sets of behaviours organized around an underlying construct called intent" (Boyatzis, 2009). These competencies are typically grouped into three major categories: 1) cognitive competencies such as systems thinking or pattern recognition, 2) emotional competencies which include emotional self-awareness, emotional self-control, adaptability, positive

outlook and achievement orientation, and 3) social competencies including empathy, organizational awareness, teamwork, influence, conflict management, coaching and mentoring, and inspirational leadership (Goleman, Boyatzis, & McKee, 2004; D Goleman, 1995).

Many scholars have been able to empirically demonstrate that ESC can cause or predict outstanding leader, managerial or professional performance (Boyatzis, Good, & Massa, 2012; Boyatzis, 1982; Camuffo et al., 2012). Interest in ESC originated from the dissatisfaction with the traditional measures of intelligence (IQ) to account for large amounts of variance in measures of life success and vocational performance or the effectiveness of managers and leaders (McClelland, 1973). Traditional measures of intelligence, although providing some degree of predictive validity, have not been able to account for a large portion of the variance in work performance and career success. Thus, one of the primary reasons for the importance of the assessment and development of ESC is their association with success in a person's professional and personal life in general (Goleman, 1995; Goleman, 1998). Higher education institutions have merely started to include this perspective into their responsibilities for a holistic development of their students which still seems to be far from common practice.

6.3.2 How can Emotional and Social Competencies be developed?

Goleman explicitly describes emotional and social competencies as capabilities which are learned (Daniel Goleman, 1998). This might be one of the reasons why many organisations offer development programmes to enhance their managers' ESC. One example is a process designed training which is a combination of the humanistic approach for establishing a group context supportive of change and at the same time applying behavioural change methods for skill acquisition such as

direct feedback which helped 162 managers of nine different organisations to develop ESC (Cherniss et al., 2010). In the setting of higher education, longitudinal studies with students at WSOM of Case Western Reserve University who participated in the Leadership Evaluation and Development Programme (LEAD) - a course specifically designed to develop ESC – show that participants improved their competencies as compared to students who had not participated in the programme (Boyatzis & Saatcioglu, 2008; Richard E. Boyatzis et al., 2002). This LEAD programme is structured based on several personal discoveries mentioned in Intentional Change Theory (ICT) (Richard E Boyatzis & Akrivou, 2006) as described in detail in the next section.

6.3.3 What is Intentional Change Theory?

Intentional Change Theory (ICT) offers a framework for self-directed learning through an integrated process with the objective of fulfilling one's full potential (Boyatzis & Akrivou, 2006). The crucial word here is "intentional" as it underlines the assumption that change can only be sustainable if it is self-initiated. In ICT, individuals first develop a clear longer-term vision of their life in general. This future vision, called the ideal self, is later compared against that individual's real self: their current state in terms of competencies and values. This comparison generally depicts gaps which motivate individuals to work on reducing these differences and bring themselves more in line with their ideal self. At this point, one starts to set learning goals and to work on an individualised learning plan, often with the help of a coach or mentor. The individual then begins to implement the activities of the learning plan and begins to practice these new behaviours and competencies as an experiential learning process (Kolb, 1984). As ICT describes a circular process for development, the individual will eventually revisit the question of the ideal self and

personal vision and probably review both. In order to be able to persist in the face of obstacles and setbacks during this process, it is crucial for the ideal self and the expressed vision to be framed positively and in an emotionally engaging way. Within the framework of ICT the role of resonant relationships - for example with coaches, mentors, specific family members or friends - are central if they are characterised by trust, support, and a positive emotional connection. These relationships provide the learner with additional encouragement, feedback and advice on the pursuit of their development goals.

6.4 Methodology

6.4.1 The new course: "Module 9"

The part time Master's Programme in Intellectual Property and the Information Technology (IP & IT) at a Spanish Law School has been modified in its "classic" course approach into a new design with nine modules. Eight modules cover different technical content in traditional class format. The ninth module, "Module 9", is dedicated to interdisciplinary projects, as a substitute for the master thesis combined with elements of personal development according to ICT (for a description of an earlier format of "Module 9" without ICT see Canboy, Montalvo, Buganza, & Emmerling, n.d.). Working groups generate their own knowledge and skills through an interdisciplinary project that is applicable and useful to the professional reality, such as a consulting project on legal aspects of opening an online business. At the same time, each person enhances emotional and social competencies, to ensure the success of their personal development and, consequently, also that of the practical project. The integration of elements on the

personal as well as professional level supports individual reflections on the desired personal and professional identity.

"Module 9" is distributed over the whole academic year and offers eight workshops which continuously interchange the focus between the more content-based learning through the interdisciplinary project and the personal development through self-knowledge exercises or assessment tools. Students are offered three individual coaching sessions to ensure the best possible alignment of personal and team goals and enhance the desired personal change of each student.

For the purpose of this study we have amplified Boyatzis' model of ICT by the elements related to the interdisciplinary project. It was important for students to understand the theoretical model and its link to performance from the beginning which would allow them to create meaning for their own work at each stage of process, both for the personal development as well as the project work.

1: *My Ideal Self-* Who do I want to be?

2: *My Ideal Project-* What do I want to work on?

12: How do I look at my future?

4: How does my personal vision link to the project work?

3: *Learning Styles* - How can I contribute to the team work?

5: *Our project-* where do we want to go with our project?

11: *Double checking:* What has changed?

Resonant relationships: Coaching and Tutoring

6: *My Real Self-* Which are my strengths and improvable competencies?

10: New behavior, thoughts, and feelings through *Experimentation*

8: What do I want to change?

7: *Our Real Project-* Where are we now?

9: *My Learning Agenda-* What do I include in my personal development plan?

Figure 6.1: Integrating interdisciplinary project work into the framework of Intentional Change Theory. Adapted by permission from Richard E. Boyatzis, originally appearing in Boyatzis, R.E. (2008).

Concretely, the curriculum covers the following contents: (1) Introduction to the ideal self with various self-reflection exercises related to aspects such as values, learning styles, philosophical orientation, and career anchors. After the first workshop students write their personal vision statements, i.e. what kind of life they envision for themselves and what kind of a person they would like to be in the far future, i.e. in at least 20 years from now. (2) Introduction to the project work in which students describe their "ideal project". At this moment, the presentations are individual; however, the students are then invited to create teams of five to six students based on related ideas and decide on the final project. (3) Review of individual learning styles and how these can positively contribute to different phases within the project work in teams. (4) The first coaching session focusses on strengthening the individual visions and linking them to the team goals. (5) Students present the outlines of their project work and receive content based feedback from the class. (6) Introduction to the real self: Students complete self-assessments on 14 emotional, social and cognitive competencies, and initiate a 360º feedback with the same questionnaire. The next workshop helps elaborate change mechanisms and prepare the learning objectives as to which competencies each student wants to develop further. (7) Students present the current state of their work to all professors of the master's programme in order to receive feedback on technical aspects and contents. Each professor can confirm that relevant issues of his or her class are correctly covered in the projects. (8) The second coaching session is dedicated to analysing individual strengths and weaknesses, however with a stronger focus on strengths, and setting the stage for the elaboration of a personal development plan. Students are recommended to choose only one or a maximum of two competencies they would like to potentiate in order to be able to focus their

efforts during the brief duration of the academic year. (9) This development plan has a twofold objective: on a long-term perspective, students should develop competencies that will bring them closer to their personal vision. On a short-term perspective, competencies should be developed that will help them be more efficient in the project work. At the same time, learning goals can be fixed to concrete tasks in the project in order to create additional opportunities for practice. (10) Two workshops are offered to specifically practice communication and presentation skills with the objective to improve the final defence of the project. (11) Near the end of the programme the self-assessment and 360° questionnaires are repeated on a voluntary basis. (12) Results are reviewed during the final optional coaching session. Coaches and coachees evaluate the individual competency development so far and work on possible necessary modifications for the future by connecting the "work-still-to-be-done" to each student's personal and professional identity.

6.4.2 Sample

All 27 participants of the Master's Programme in IP & IT completed a self-assessment of ESC and 360° assessment at the beginning of the programme as part of the course work. Participants were all Spanish speakers; however some had an international background. Eighteen students voluntarily repeated the self-assessment and 360° assessment at the end of the course year which represents a participation rate of 66.7%. The lowered participation at the end of the semester might be due to coinciding with other exams and the pressure of finishing the interdisciplinary projects. For the following analyses we will only consider the information of those 18 students who have completed the assessments at both stages of the programme. The age of these participants ranged from 23 – 35 with

an average of 27.2 (SD= 3.0) and a distribution of 78% females. While the age of the voluntary participants is comparable to the entire class, fewer male students have participated in the voluntary assessment. The class distribution is 67% females to 33% males. Given the low numbers of students, we feel that the distribution of the voluntary participants is still representative for the entire class. At the beginning of the course, these participants received feedback from an average of 12.6 raters (range 5- 20; SD=5.5). At the end of the course the average of the raters were 4.8 (range 2 - 14; SD=3,2). In order to guarantee the anonymity of the assessments, the online system is not set up to track the identity of the raters. This means that we do not have any information on whether the raters at the end of the course are the same as at the beginning.

6.4.3 Measurement

The Emotional and Social Competency Inventory-University Edition (ESCI-U)

The Emotional and Social Competencies Inventory – University Edition (ESCI-U 360) is a multi source feedback instrument which each participant completes individually as a self-assessment and also asks other raters for feedback (Boyatzis & Sala, 2004). The questionnaire consists of seventy items which measure the frequency of observed behaviours associated with the fourteen competencies, resulting in five items measuring each competency. These competencies are: emotional self-awareness (ESA), achievement orientation (AO), emotional self-control (ESC), adaptability (A), and positive outlook (PO), influence (I), empathy (E), organizational awareness (OA), inspirational leadership (IL), conflict management (CFM), developing others / coaching and mentoring (DO or CM), and team-work (TW) systems thinking (ST), and pattern recognition(PR). All questions start with: "How often do you/does the target…?" and continue with the specific behavioural item.

The Spanish version of the questionnaire uses an 11-point scale to assess the frequency with which the participant demonstrates each behaviour (from 0 = "never" to 10 = "always") (Batista-Foguet et al., 2009) that has shown higher reliability than the usual 5-point Likert scale for this type of frequency of displayed behaviour. The response scale also incorporates an "I do not know" response box. For the questionnaire to be considered valid the "I do not know" response cannot be checked more than eight times. Respondents were made aware of the eight response limit in the instructions. Although this scoring procedure resulted in participants receiving item level missing data, data was complete at the competency level. Standardised but customisable instructions were provided to all respondents. In particular, raters were informed about the pure developmental purpose of the assessment and the confidentiality of the results.

6.5 Results and Discussion

The lack of a comparison group and random sampling have implications on the internal and external validity of the results. The following interpretations and discussions of the results are thus conditional to the limitations which will later be mentioned in further detail.

6.5.1 Competencies chosen as learning objectives

The ICT is a framework which offers individual insights and therefore learning objectives are also chosen individually. According to students' personal visions, each participant has chosen up to two competencies from the ESC repertoire they wanted to focus their efforts on during the rest of the course. As a first objective,

positive outlook was the competency most students wanted to enhance (5), followed by empathy (3), influence (2), achievement orientation (2), team work (1), coaching and mentoring (1), emotional self-awareness (1), organizational awareness (1), inspirational leadership (1), and emotional self-control (1).

 Visual representations in form of scattergrams depicting the levels of those competencies chosen as objectives at the beginning of the programme ("Obj_1_pre") to the levels of the same competency at the end of the course ("Obj_1_post") show that most individuals lie above the 45º line. This indicates that participants perceived improvements in their competencies since they provided higher evaluations in their self-assessments at the end of the course as compared to the beginning of the course. The labels on each point (representing each participant) indicate the competency chosen as an objective and are sometimes repeated as same competencies were chosen by several students as their first objective.
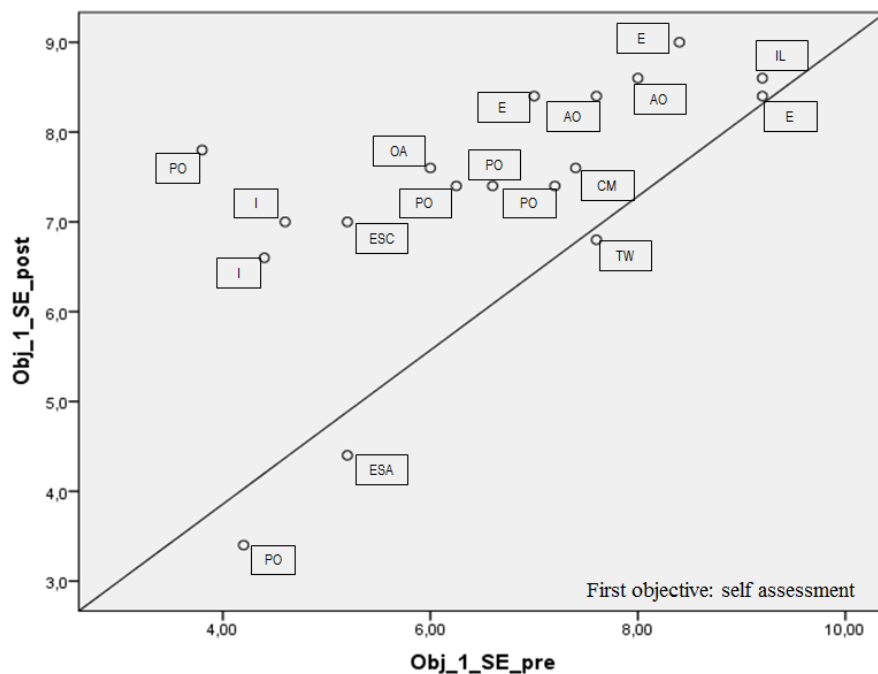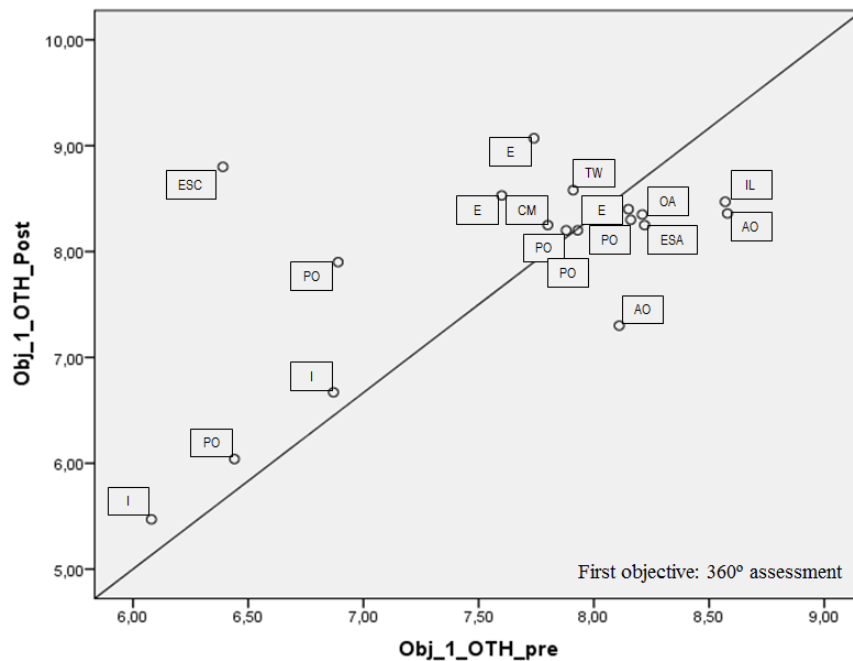

Figure 6.2: Pre and Post evaluations of competencies set as first objectives (self-assessments)

Students who chose to work on empathy, achievement orientation, influence, coaching and mentoring and inspirational leadership perceived an improvement in their objectives at the end of the course. With the exception of one, all students who decided to work on positive outlook also improved according to their own perceptions. The one student who did not perceive improvements in positive outlook seems to be very critical in general as it is the lowest assessment in comparison to all other students. Two participants who wanted to work on emotional self-awareness and teamwork have assessed their competencies lower than at the beginning of the course. Wanting to improve emotional self-awareness might have had a "humbling" effect: the fact that the participant becomes more conscious about her or his emotions could be uncomfortable at first since the person still lacks the experience to "deal with" this new information. As a result the person might feel irritated and adapt a more critical perspective resulting in a lower assessment of this competency at the end of the course. The third student with a lower assessment at the end of the course of the objective competency has chosen to develop teamwork. As a social competency, teamwork involves the interaction with others. In a conscious attempt to "practice" this competency the student might not have felt comfortable, thus behaving in an unnatural way. This might have negatively affected the interaction with the team members leaving the student with the impression of a lower command of the competency.

The fact that most evaluations in the self-assessment are positive would have to be considered with caution. Some of the major criticisms of self-evaluations are related to the possibility of social desirability affecting the results of the evaluations. Especially when considering that students are participating in a master's programme with relatively high tuition fees, expectations for positive change might be reflected in self-evaluations. In the case of Module 9, additional assessments from other persons who know the students were also included in the form of 360º assessments. Here, too, each point represents one students and is labelled with the

self-selected first objective (several students with the same objective competency).
These also show positive change as most results lie above the 45º line, however in
a different constellation:

Figure 6.3: Pre and Post evaluations of competencies set as first objectives (360º assessment)

The efforts of students wanting to improve their influence, emotional self-control,
coaching and mentoring, and empathy have been noticed by others and assessed
at a higher level at the end of the course as compared to the beginning of the course.
The results on positive outlook were mixed. With the exception of inspirational
leadership and organizational awareness all other students that have received
lower assessments on their objective competencies have wanted to improve
emotional competencies. These are more "internal" competencies and imply fewer
interactions with other persons. As a consequence change in these competencies
might be more difficult to be perceived by others. Even though organizational
awareness is a social competency, it is measured with indicators in which the
questions always start with "How often does the person *understand*…?". Therefore

it can also be considered a more internal phenomenon difficult to be evaluated by outsider observers. Inspirational leadership on the other hand requires interactions with others. A possible interpretation for the negative result could thus be similar to the case mentioned before on teamwork: If a person starts to behave more consciously in a specific way, the first attempts will probably not be very comfortable for the person. This might be perceived by others as an ineffective result and thus reflected in a lower assessment.

In general, with the exception of the student who has improved on emotional self-control, it is also visible on all other competencies that the results do not vary strongly. The differences might simply be due to indecisiveness of the rater on how to assess within a specific range of points.

Seventeen students chose a second competency to work on during the academic year as an additional learning goal (Obj_2). Most of the competencies chosen as the first objective were emotional competencies; the second objective was more from the repertoire of social competencies. Here, students wanted to enhance empathy (4), emotional self-control (3), teamwork (2), influence (2), achievement orientation (2), conflict management (2), adaptability (1) and inspirational leadership (1). The specific competencies are labelled in the following scattergram for each student.
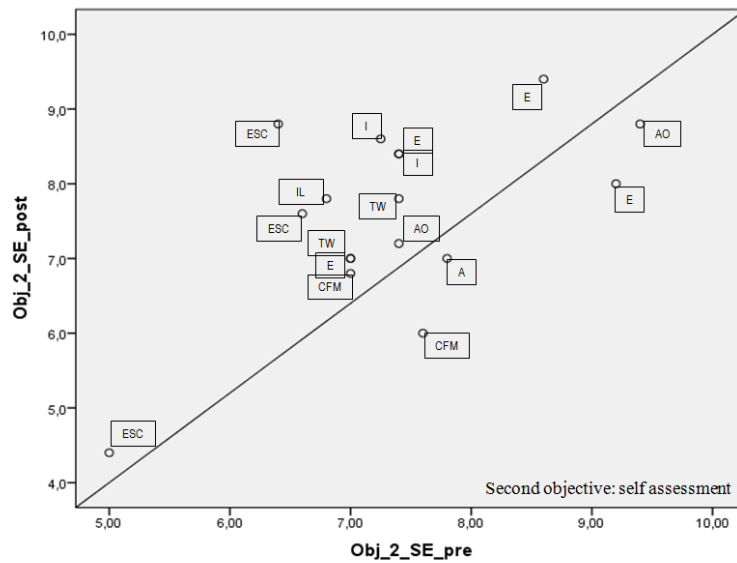
Figure 6.4: Changes in the competencies set as second objectives as assessed by students (self).

While the results in the self-assessment show a visibly positive change, the results of the 360º evaluations do not show that others perceived these improvements as clearly which was similar in the case of the first objective.
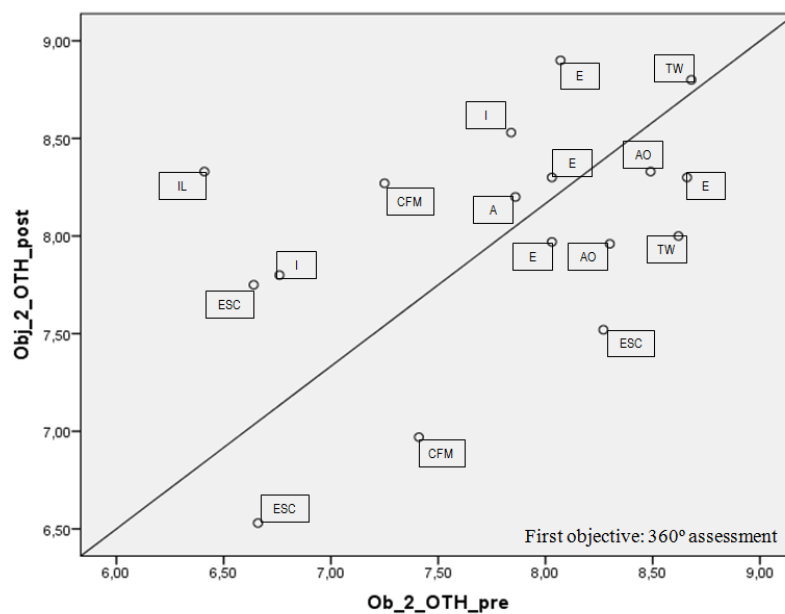
Figure 6.5: Changes in the competencies set as second objectives as assessed by others

When considering the distribution of the specific competencies, the results are also less conclusive as to a possible pattern. Influence is the only competency that has been assessed with positive change in all instances. Empathy and conflict management, on the other hand, have been assessed with positive as well as with negative change. This is the case both as assessed by the students themselves or through the 360º assessment. Also the interpretation of the results on the first learning goals referring to the difficulty in assessing emotional competencies through 360º assessments seems to be not applicable with the second learning goal. The lack of a specific pattern in the results might be interpreted as a counterargument for development plans and the question whether these types of programmes can help develop competencies. However, this can also be an indicator for the fact that during the learning process students live through "ups and downs" while they experiment with new behaviours and until they establish the desired level of craftsmanship. As a consequence, one could conclude that one academic year might be too short a time to develop more than one competency well or at least well enough to be perceived by others. An alternative interpretation could be that for some students it is more difficult to develop specific competencies. Or, there could be an effect of "regression to the mean artefact": There is no information about the criteria involved in the selection process for acceptance to the master's programme. Since all students have to pass an admissions interview, it can be assumed that factors such as attitude or previous experience might have an impact on the admissions decision. The same factors might also have an impact on the level of the competencies of these students. As a result, a separation would have been established among students who left a good impression in the interview with a higher level of competencies as compared to those who have not been accepted to the program. In this context, "regression to the mean" could explain why some students were assessed lower at the end of the course as it represents a natural tendency for assessment results to move towards the mean of all

competencies (of all students including those who have not been admitted to the programme).

Additionally, we have explored the changes in competencies according to gender. The following scattergrams are labelled by gender (0=female, 1=male):
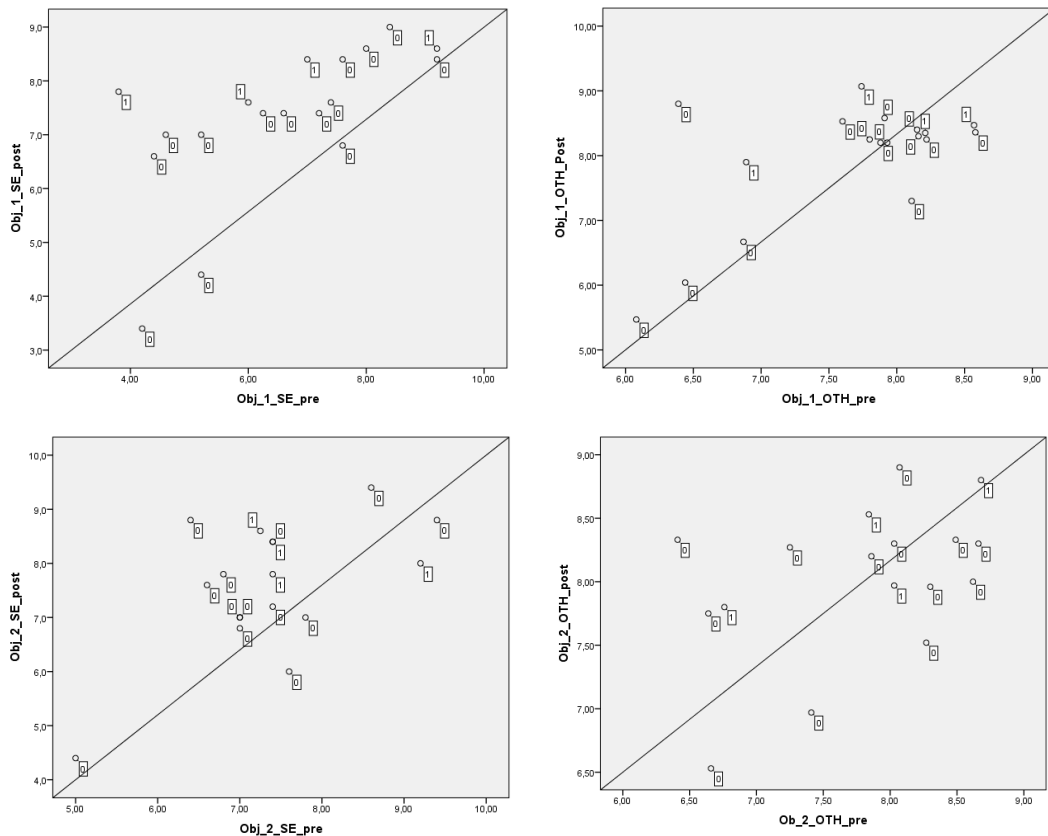
Figure 6.6: Changes in the competencies by gender

There seem to be no visible differences in the assessments of the participants when separated by gender. Only in the self assessments of the first objectives do the male participants perceive more change in their competencies as their female peers. This is however not the case neither with the second objective nor the assessments given by others. Therefore it would be too bold to attribute this result to any phenomena possibly related to self-assessments (e.g. social desirability or tendency of overestimation). There is also no specific pattern in the competencies chosen as

first objectives for these four male participants who decided to work on positive outlook, organizational awareness, empathy and influential leadership, a mix of emotional and social competencies.

In order to obtain a more quantitative view of the overall results, paired differences were calculated for this pilot study. In these comparisons each individual plays the role of a block. The results are positive in all cases: for both objective competencies in the self-assessments as well as the 360º assessments. This is an indicator that – in average – the students of this course show an improvement in the levels of the competencies they have individually chosen to focus on.

Table 6.1: Paired differences in competencies chosen as objectives

| Competency | Label | Paired Differences | | | t | Sig. (2-tailed |
		Mean	SD	Std. Error Mean		
First Objective	Obj_1_SE_post - Obj_1_SE_pre	,77500	1,32557	,31244	2,480	0,024*
First Objective	Obj_1_OTH_Post - Obj_1_OTH_pre	,31167	,76425	,18014	1,730	,102
Second Objective	Obj_2_SE_post - Obj_2_SE_pre	,22059	1,03063	,24997	,882	,391
Second Objective	Obj_2_OTH_post - Ob_2_OTH_pre	,26353	,73568	,17843	1,477	,159

The perceived change in the first objective is significant: i.e. the changes noticed in the competencies which students chose as their first learning goal as assessed by

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[7] Due to the small sample with students who did not participate through random sampling, no inferences can be drawn from the statistical tests presented in this section of the paper. As a consequence, any statistical inference about the significance of our conclusions must be understood more as a descriptive statement.

themselves (positive outlook (5), empathy (3), influence (2), achievement orientation (2), team work (1), coach and mentor (1), emotional self-awareness (1), organizational awareness (1), inspirational leadership (1), and emotional self-control (1)). Even though the remaining results on change in the targeted competencies are not marked as significant, overall these results are encouraging in their interpretation as they corroborate with the idea that the suggested course design can be adequate to help students develop emotional and social competencies as posed in the first research question. Additionally, the timeframe of an academic year as part of the second question seems to be sufficient to notice change in oneself as evaluated through the self-assessment, and to some degree also by others.

6.5.2 All competencies from the ESC repertoire

With this small sample and the short period of time that students could practice their competencies during the project work, we expected that only those competencies students had targeted would show positive change. However, even when looking at the development of each competency individually, the means of the paired differences are positive in all cases:

Table 6.2: Paired differences in all competencies (self-assessment)

Competency	Label	Paired Differences			t	Sig. (2-tailed)
		Mean	SD	Std. Error Mean		
ESA	ESA_SE_post - ESA_SE_pre	,4778	,8627	,2033	2,350	0,031*
AO	AO_SE_post - AO_SE_pre	,0778	,7425	,1750	,444	,662
A	A_SE_post - A_SE_pre	,4667	,7941	,1872	2,493	0,023*
ESC	ESC_SE_post - ESC_SE_pre	,4667	1,3856	,3266	1,429	,171
PO	PO_SE_post - PO_SE_pre	,61111	1,57074	,37023	1,651	,117
E	E_SE_post - E_SE_pre	,1333	,7971	,1879	,710	,487
OA	OA_SE_post - OA_SE_pre	,3333	,8167	,1925	1,732	,101
CFM	CFM_SE_post - CFM_SE_pre	,3556	1,0072	,2374	1,498	,153
CM	CM_SE_post - CM_SE_pre	,6111	,8904	,2099	2,912	0,010*
I	I_SE_post - I_SE_pre	1,21944	1,29560	,30538	3,993	0,001**
IL	IL_SE_post - IL_SE_pre	,89722	1,60756	,37891	2,368	0,030*
TW	T_SE_post - T_SE_pre	,2333	,7396	,1743	1,338	,198
ST	ST_SE_post - ST_SE_pre	,78889	,92856	,21886	3,604	0,002**
PR	PR_SE_post - PR_SE_pre	,7778	,9020	,2126	3,658	0,002**

The highest difference in the change of means is in influence in which the average of the self-assessment has increased in 1.22 points. These results are significant on $p < .01$. Additionally, despite the small sample size, the positive changes in emotional self-awareness, adaptability, coaching and mentoring, inspirational leadership are significant on $p < .05$. Students also perceive an improvement in the cognitive competencies included in the ESCI-U: systems thinking and pattern recognition. The statistical results are significant at $p < .01$. Again, the statistical

significance of these results has to be interpreted with caution due to the lack of a comparison group or random sampling.

Table 6.3: Paired differences in all competencies (360º-assessment)

Competency	Label	Paired Differences			t	Sig. (2-tai
		Mean	SD	Std. Error Mean		
ESA	ESA_OTH_post - ESA_OTH_pre	,47833	,59080	,13925	3,435	,003**
AO	AO_OTH_post - AO_OTH_pre	,04722	,53508	,12612	,374	,713
A	A_OTH_post - A_OTH_pre	,26889	,37933	,08941	3,007	,008**
ESC	ESC_OTH_post - ESC_OTH_pre	,44722	,91343	,21530	2,077	,053
PO	PO_OTH_post - PO_OTH_pre	,26056	,57095	,13457	1,936	,070
E	E_OTH_post - E_OTH_pre	,34500	,60187	,14186	2,432	,026*
OA	OA_OTH_post - OA_OTH_pre	,22333	,33958	,08004	2,790	,013*
CFM	CFM_OTH_post - CFM_OTH_pre	,42722	,69447	,16369	2,610	,018*
CM	CM_OTH_post - CM_OTH_pre	,24111	,53891	,12702	1,898	,075
I	I_OTH_post - I_OTH_pre	,51389	,57960	,13661	3,762	,002*
IL	IL_OTH_post - IL_OTH_pre	,31000	,81106	,19117	1,622	,123
TW	T_OTH_post - T_OTH_pre	,14722	,56368	,13286	1,108	,283
ST	ST_OTH_post - ST_OTH_pre	,49056	,38974	,09186	5,340	,000**
PR	PR_OTH_post - PR_OTH_pre	,49889	,74007	,17444	2,860	,011*

Influence is also the competency showing the highest increase in the mean of the paired differences when evaluated by others. Overall positive and significant changes (p >.05) can also be seen in the means of empathy, organisational awareness, conflict management, influence and pattern recognition. Significant changes on p < .01 are reported for emotional self-awareness, adaptability and

systems thinking. The results on emotional self-awareness are somewhat surprising since this is a competency often difficult to be evaluated by others. The fact that four out of the seven competencies usually categorised as social competencies have noticeably changed indicates that the behaviours also affect the interactions with others.

These preliminary statistical results are confirmed in qualitative comments of students, for example in the case of empathy. One student mentioned how pleased she was with the course by stating:

> *"I didn't know I wasn't listening to others. As soon as I found out I decided to I work on my empathy. And I believe that because of this I performed well in my job interview and have received an offer. But I also think that this course helped me to better cope with difficulties in my team which eventually allowed us to become good friends."* (Student 1)

Another student started not only understanding the importance of the course for himself but also for others:

> *"In the beginning of the course I was very sceptical. I had signed up for this master's programme to learn about intellectual property. But now I see how this can help me. At my work there is a woman who has negative relationships with all her co-workers. She is very direct and invasive so that people just avoid her even though she might have good ideas. If she could take this course, she would start to understand and have a chance to change."* (Student 2)

These comments show that students understand the importance of the appropriate use of emotional and social competencies in their personal as well as professional lives and the possible impact of specific behaviour on others. The significant changes in the overall results of emotional self-awareness assessed both by the

students themselves as well as by others underline this "change of mind". At the same time, they indirectly confirm that they notice the improvements in their competencies, thus substantiating the above mentioned results of the assessments that both the suggested framework as well as the time allocated within one academic year is adequate to develop competencies in higher education. This pilot study could be a first small step to corroborate previous positive results on the development of competencies as reported at WSOM (Boyatzis & Saatcioglu, 2008) as an integrated course in higher education.

6.6 Limitations and future research

The results of this pilot study have to be interpreted with caution: even though two thirds of the class participated in the voluntary second assessment, self-selection bias could have had an impact on the current results. The small sample and the lack of random selection in this first edition of the new pedagogical design limit the possible quantitative analyses with the given data. These limitations are partially related to low statistical power, possible unreliability of the used measures and a restricted range in the assessments. With a sufficiently large sample, further variables such as professional background of the participants or previous work experience could also be taken into consideration as they might impact the development process. Also, students freely choose their raters at the beginning and the end of the course such that the raters at the end could have been different than in the first assessment, which could represent another threat to internal validity. In future studies an identification system could be introduced which would allow matching the assessments of raters who repeat assessments at the end of the

course while still guaranteeing the anonymous communication of the assessments towards the participants.

A quasi-experimental design with a larger sample and a comparison group of students who have not participated in a similar project can allow establishing more refined conclusions on the impact of this curriculum design on the development of competencies. While the possibility of assigning students randomly to the groups is difficult as they participate in specific programmes, a large enough population could allow including the participants randomly in the study. This design would allow controlling for phenomena which represent a risk to the internal validity of the study. Some of these issues are related to history or maturation, i.e. the fact that students just "happen" to develop competencies due to changes in their environment, like participating in a master's programme (history), or simply by growing older (maturation). Also, the fact that students chose freely who they ask for evaluations and are not controlled for whether the persons who assess them at the beginning of the course are the same as at the end, is an example for the threat of instrumentation. The comparison group would help understand the impact of the LEAD programme on the development of the competencies as the "cause" of this change.

Longitudinal studies would allow shedding light on the questions whether (1) learning styles might have a mediating effect on the development of competencies, (2) the chosen learning methods are coherent with the learning styles and have an impact on the level of development (3) some competencies are more difficult to develop than others, or (4) changes are sustained over a longer period of time. As ICT has been used as a framework for competency development in other settings, however without the interdisciplinary project, comparative studies could also help understand the role of the interdisciplinary project work within the developmental process. Another field of research could tackle the ESC of the coaches and the

quality of the relationship between coach and coachee as these variables could also have an effect on the student's motivation to change or the intensity of the development. These results show assessments within a programme during its first year of implementation with the given design. Research could also look for possible optimisation of different components of curriculum (treatment strength), for example the amount and duration of coaching sessions or the possible impact of an initial workshop dedicated to inspiring students on their journey to lifelong learning.

Naturally, as a pilot study, this is a first step towards a bigger study which can then help compare results to previous studies at other universities and establish a certain level of generalisability and thus external validity of the answers to the research questions.

6.7 Implications for higher education

This pilot study presents a framework for the systematic integration and development of ESC into higher education in line with one of the main ambitions of the Bologna process [8]. Notably, in its objective to create a European Higher Education Area (EHEA) lies the commitment to introduce the training of ESC as an instrument of convergence among European universities. Since the inclusion of ESC development in graduate programmes is now standard criteria for granting

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[8] This pilot study as well as other studies related to the development of individual and group emotional competencies are conducted under the realm of the project "Emotional and Social Competencies Development Program within the European Higher Education Area (ESCDP-EHEA)" for the Spanish Ministry of Science and Innovation (MICINN) with the objective of advocating best practices in the development of ESC in higher education as well as promoting validated assessment tools.

accreditation especially to business schools in both in Europe (Equis) and the US (AACSB) the above presented framework can be considered one step towards a convergence among universities. The content as suggested in the adapted ICT model can easily be adjusted to the needs of each university, the time that can be allocated to the different elements of the programme, and the needs related to the offered degree. Most universities probably have staff that can prepare the workshops and guide students during the learning processes. Some might even already work with coaches such that the implementation will not require excessive resources.

6.8 Conclusion

By combining project work based on experiential learning with a personal development programme using ICT, this university has been able to offer a setting within a master's programme that helps students develop emotional and social competencies. Participants have reflected on an ideal self, received feedback about the real self, established individualized learning agendas with a focus on practicing ESC while working on an applied interdisciplinary team project and had the support of coaches and professors along the way. Initial results show that this design has yielded positive change, not only on the targeted ESC, but on all other measured competencies as well and thus represents a possible framework for competency development in higher education. The question as to whether one academic year is enough time to develop competencies can also be answered tentatively with "yes". Limitations of the study due to small sample size, the lack of random sampling and a comparison group call for extended research using a quasi-experimental design to assure the validity of statistical inferences. Further research could also look at other

variables that can have mediating or moderating effects on the development of ESC within a complex environment. Even though this approach was implemented in a law school, its general curriculum design is applicable to any faculty or department at any school that wishes to support students' developmental processes and at the same time align their curricula to the requirements established in the Declaration of Bologna.

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Chapter 7: Overall Discussion, Research Quality, Future Research, Implications and Conclusion

7.1 Overall Discussion

On the Overarching Research Questions

The studies presented in this thesis were related to three overarching research questions:

1. Are ESC properly operationalised and measured?
2. How can developmental theories such as Experiential Learning Theory (ELT) and Intentional Change Theory (ICT) be systematically incorporated into higher education?
3. Is higher education the appropriate setting to develop competencies, and specifically ESC?

The first question "Are ESC properly operationalised and measured?" is related to conceptual and epistemic issues of ESC. The results of the first study (Chapter 4) suggest that this is partially the case. Convergent validity of the ESCI-U could be

established through the CIIs for teamwork (colleagues as raters) and for developing others (spouses as raters). Also, the fact that five of the seven hypothesised interjudge agreements were supported, suggest that adaptability, empathy, influence, developing others and teamwork are operationalised and measured properly, or at least that various raters measure "the same thing". Evidence of convergent validity also exists for adaptability, developing others and influence based on the significant correlations of the CII with the self-assessments and thus adding to the suggested adequacy of the measurement instruments.

Influence is one of the competencies which shows many correlations: In chapter 4, the results indicated interjudge reliability among various raters and significant correlations among self-assessments of the ESCI-U and the CIIs. In chapter 6 the results of the pilot study also indicate some consistencies as both the students as well as the other raters agree that influence is the competency which has shown the strongest level of change in one year. This also contributes to the first research question regarding the proper measurement of influence.

While these results suggest that teamwork, developing others and influence show consistencies among raters and with different measurement methods in different studies, the answer to the question whether adaptability, achievement orientation, empathy and conflict management are properly operationalised remains uncertain. One competency that has not shown any correlations at all is conflict management. This could mean that raters either do not interpret the indicators the same way, or maybe observe different behaviours and thus "do not measure the same thing", at least in a European setting. In a parallel study at ESADE, unidimensionality could not be rejected for any of the competencies included in the ESCI-U, except for conflict management (Mouawad, 2014) which is another indicator of inconsistencies in this competency. The operationalisation of conflict management should therefore be reviewed and - if possible - indicators adjusted.

Another competency that has been discussed in different papers is achievement orientation: it has shown negative correlations in the validity study in chapter 4 which was interpreted as a possible sign of social desirability. In the pilot study in chapter 6, AO was mentioned as the competency that showed the lowest level of change. Both the students as well as the raters from the 360º assessments agreed that the participants least improved achievement orientation. Relating these findings to the overall research objective might suggest a different interpretation. From the perspective of the construct (first research question), it could mean that achievement orientation is not correctly operationalized. Even though the participants and external raters agreed in their assessments, the low change might be due to the fact that the measure does not capture the dimensions of achievement orientation appropriately and that therefore change cannot be detected. From the perspective of the second research question, it might mean that AO is difficult to develop within the framework of ICT, maybe a different framework would be more adequate. Since PBL fosters learning by solving problems, i.e. improving situations, and many indicators of AO capture the idea of the effort to do things better, maybe the results of the development of AO would be different if PBL had been used instead of ICT. And from the perspective of the last research question, maybe universities are not the appropriate settings to develop AO. Further research would thus have to focus on detecting the correct interpretations.

The second research question refers to how learning theories that have the objective to develop competencies can be integrated systematically into higher education. This thesis presents two alternative proposals on how to modify an existing curriculum and combine classwork (workshops) with project work. This does not mean that ELT and ICT are the only frameworks that would be appropriate to develop specific skills or competencies. The review of the theory in chapter 3 indicates that many theories are effective. A similar curriculum could be designed around PBL, however bearing in mind that in that case students should work on

projects which represent real problems and should be ill structured (Dolmans et al., 2005). In the case of ESADE the projects in both chapters 5 and 6 mainly derived from "market needs", i.e. students for example identified areas in which the legal frameworks had not been adjusted to new technologies.

The final research question has also been confirmed in the studies presented in chapters 5 and 6. Through a more qualitative approach, the results of the study in chapter 5 indicate that "creativity and innovation" as well as "knowledge application" were developed through experiential learning. In chapter 6, the framework of ICT helped students develop their individually chosen emotional and social competencies. Eyler (2000) mentioned the importance of defining the objective of a learning initiative. Even though she referred to the framework of service learning, this could be one of the reasons why the outcomes of both studies were positive. Naturally, this information also indirectly confirms the appropriate integration of the curriculum into higher education relative to the second research question. Here too, one could ask whether ELT and ICT are the only appropriate frameworks to develop competencies. If looking at the objectives of the common learning theories, the decision on which framework to use should depend on the skills and competencies a higher education university wants to foster. If it is problem solving skills, action research and PBL might be more appropriate. ELT leaves the flexibility to adjust the objective. However, to the best of my knowledge, there are no studies which compare the effectiveness of different learning theories.

On the criticism of ESC and its measures

The opportunity of finding solutions to some of the criticisms of ESC and its measures had partially motivated the studies presented in this thesis. Some of points mentioned in table 2.1 can now be addressed:

McEnrue & Groves (2006) indicate that some of the competencies seem to be the outcome of EI rather than being an element of it. They give the examples of initiative, achievement and customer service orientation. In the ESCI-U, customer service orientation is not contemplated and initiative is integrated into achievement orientation. In the previous chapter I have discussed possible interpretations and implications of the results for achievement orientation. When combining this discussion with the interpretation of McEnrue and Groves, another possible interpretation can be added: what if the model of emotional and social competencies is not flat in the sense that all competencies are independent? Maybe they are organized in different layers. Even though Boyatzis (1982) and Goleman (1995) mention the fact that the competencies build on each other, this is not formally represented in the model and its operationalisation. This could be represented visually in a model similar to the one currently used to explain the levels of personality (Figure 2.1). But instead of the interrelations of constructs like traits, values and philosophical orientations in relation to competencies, the different competencies and the interrelations among them would be depicted.

As for the criticism referring to the low face validity of the ESCI, the findings of the study presented in chapter 4 suggest that the items in the questionnaires can be adjusted to the specific raters. This would lead to customized and shortened questionnaires.As a consequence, the raters would feel they are assessing something they actually can assess and not feel overwhelmed with the large amount of items to reply to which would thus help increase the face validity of the ESCI.

Another criticism is related to the high intercorrelation of ESCI with personality measures. Even though previous studies have shown the independence of personality from competencies in their role as predictors of successful performance (Guillén & Saris, 2013), the studies in this thesis have not included measures of

personality. This issue would have to be covered in future research as will be further discussed in the following chapter.

7.2 Research Quality and Future Research

Propositions, inferences and conclusion in research are valid if they represent the best available approximation to the truth. The quality of any research is judged based on this validity (Trochim & Donnelly, 2006). By being situated in the realm of social sciences, the research presented in this doctoral thesis is prone to a number of threats to validity. Shadish, Cook and Campbell (2002) suggest the appropriate framework to address these issues systematically.

Some of the points have been mentioned in the limitations within the corresponding chapters. At this point, each threat is revisited and interpreted based on the results of the studies. Solutions to many of the threats to the validity of our conclusions or inferences have not been able to be included in the studies and thus have implications for further research.

7.2.1 Threats to construct validity

Inadequate Preoperational Explication of Constructs

As suggested by Cherniss (2010), scholars working on Emotional Intelligence and Emotional and Social Competencies have to clearly state which approach they are pursuing. The present studies are all situated in the behavioural realm as mentioned throughout the thesis. Even though many authors use Salovey & Mayer's original definition of EI, the thesis has also shown how the operationalisations differ among these approaches. This might be a reason why some authors of the more recent

studies on ESC do not necessarily explain it as an alternative approach to EI but as an "independent" construct (Camuffo et al., 2012; Ryan et al., 2009a). If future studies continue detecting the lack of convergent validity among these different models, this "segregation" might become more common. In parallel, since the evidence for convergent validity in the present study does not cover all competencies, the question as to whether the ESCI-U might not be the appropriate instrument to measure the concept of ESC for some of the more complex competencies such as empathy remains open.

In order to address construct validity of ESC as represented in its measures, the indicators should be revisited. While studies of the HayGroup confirm internal consistency of the questionnaires, the problems that emerged in the current studies might be due to interpretations of the participants and raters from Europe who have a different background than the mostly North American and Asian participants of the studies conducted at Case Western Reserve University (Batista-Foguet et al., 2008). Just like the 11-point - rating scale has been found to show higher reliability in Spain (Batista-Foguet et al., 2009), further research could therefore focus on adapting the items in the administered questionnaires to the European context and expand the work on the cross-cultural comparisons as started at ESADE.

Construct confounding

Some of the earlier criticism on the trait and behavioural models of EI were related to the overlap with constructs such as personality. Since recent studies have included measures of personality in addition to measures of EI or competencies, the results show sufficient discriminant validity (Côté & Miners, 2006; Guillén Ramo et al., 2009). As a consequence, the studies in this thesis did not include additional measures of personality to avoid construct confounding.

A different construct mentioned and considered as antecedents of the competencies are McClelland's intrinsic motives. While it is hypothesised that motives would be antecedents to emotional and social competencies, there is only one known study that looks at this relationship (Guillén & Saris, 2013). Therefore, further studies could consider the role of motives as predictors of how an individual behaves in a specific situation, i.e. which competency to apply as the intent might differ based on the underlying motive.

Treatment strength

This threat to construct validity is specifically present in the studies related to the development of competencies. The studies in chapters 6 and 7 both represent applied research on a curriculum which has been changed in its structure. Unfortunately, measures of ESC were not available of students who participated in the interdisciplinary project as framed on ELT (chapter 5). This would have allowed comparing differences in the treatment. In the second year, the LEAD programme was introduced for the first time. Here too, the presented pilot study (chapter 6) does not allow controlling for variations in the treatment strengths. Currently, the second year of the LEAD programme is about to finish with a slightly modified structure, for example including a motivational workshop at the very beginning of the course. The ongoing research would thus be able to compare changes in participants of the first and the second LEAD programme with possible indications of how the variations in the two programmes might yield different results in the level of development of the participants' ESC. As mentioned also within chapter 6, extended outcome assessments and other research elements will help to determine whether and how the current structure if the LEAD programme can be optimised.

Mono-method bias

The objective of the first study presented in the paper was to triangulate the results of different measures of ESC. Even though the results were not in all coherent, the fact that some competencies measured through the CII correlate significantly with the self-assessment (achievement orientation, adaptability, influence and developing others) and other competencies correlate with the assessments from the 360º assessments (teamwork as assessed by colleagues and adaptability, conflict management and developing others as assessed by spouses) indicate that these instruments can and should be used in parallel. It has also been discussed that some competencies are more complex and require a more internal reflection. Therefore, if assuming that the instruments assess different elements of ESC and overlap in some points it would confirm the suggested importance of triangulation as a multi method multi trait approach. Future research should therefore continue to include several methods for measuring ESC.

7.2.2 Threats to statistical conclusions validity

The fact of not detecting the expected number of construct validity among measures of ESC evidences in the study presented in chapter 4 even if there is a relationship might be due to type II error because of measures unreliability or because of range restriction.

Unreliability of measures

The lack of convergent validity for some competencies might be due to the fact that data from the ESCI-U could be inappropriate to be analysed under a classical test theory framework. Many of the items in the questionnaire were formative while a higher number of reflective items could have helped to specify the usual factor analysis models to correct for measurement error. In addition, the quality of the CIIs and the coding process might have been low due to trained but inexperienced

interviewers and coders. Measurement error resulting from this unreliability of both the ESCI-U and the CII might attenuate bivariate relationships and effects, likely cause of low correlations.

Restriction of range

Most raters, including the self-assessments of the participants tend to use only a small portion of the provided scales. The majority of the ratings in the ESCI-U are usually from 7 to 10. This might happen by choice of the rater or reflect a "ceiling effect" since most of the participants in a master' programme might be selected because they already excel in some of the competencies. But, most likely the restriction of range might happen because of social desirability playing into the self or other assessments. This restriction of range reduces the correlation between two variables and thus might have affected the statistical results.

7.2.3 Threats to internal validity

Even though some of the following threats also affect the study on construct validity (chapter 4), most of the threats to internal validity will be present in the studies related to the development of competencies (chapters 5 and 6), due to the small sample size, the lack of the possibility of random assignment and the lack of a comparison group. Currently planned on-going research however offers solutions to most of the threats:

Maturation

With increasing experience, any person matures and develops her or himself. This can also effect the development of ESC. Even though the masters' programme in the underlying studies only have a duration of one academic year, i.e. practically ten months, maturation can affect the results. Future research therefore has to include

a comparison group. Random assignment will not be possible, since students are subscribed to specific masters' programmes. Nonetheless, their profiles tend to be comparable as to age and educational background. The outcome study presented in this thesis is a pilot study for an on-going research. Currently, data is collected from two parallel masters' programmes which have not included a LEAD course and the current LEAD course. Comparisons of the level of development of ESC among both groups will help control for the effect of maturation.

Instrumentation

A threat the internal validity through instrumentation is present in the pilot study since it is not clear to which extend 360° assessments include possible bias, as they still reflect subjective evaluations from the different rater sources. For example the significant but negative correlations of the spouses' assessment of adaptability with the results of the CII indicate the need to further investigate possible reasons of this result. An additional limitation in the pilot study is that the raters of each student might be different in the assessment at the beginning of the course as compared to the raters at the end of the course, even though they were advised to choose the same raters. For the on-going research the online platform will be modified to automatically suggest the same raters for the post-assessment. This will incentivise students to choose the same raters as it will be easier to send out the invitations and links.

Testing

The outcome study presented in chapter 6 has a pre-post design. This means that participants repeat the same questionnaires at the beginning and the end of the LEAD programme. As students learn about ESC during the course and how these are

measured, they will probably be able to relate the specific questions to the corresponding competencies by the time they repeat the assessment at the end of the course. Since the validity study suggests, that results from CIIs are comparable to those of self-assessments, future studies could include CIIs to "correct" for effects of testing in other outcome studies. Additionally, we propose to study the differences among "new" and "repetitive" raters, for example by using a Solomon's design: If, in a study new raters are included in the assessment at the end of the course, their results could be compared to raters who have participated in the pre-assessment and are now repeating the assessment at the end of the course. If the results among these raters do not differ significantly, the threat to testing could be avoided by involving different raters at different stages of the research. At the same time, this research could establish that there is no threat to instrumentation by using different raters.

Social interaction threats

All results of the research as part of social sciences are affected by human interactions. Since in the present studies no comparison groups are used, threats like diffusion or compensatory equalisation of treatment were eliminated automatically. However for future outcome studies with comparison groups, aspects such as social exchange have to be taken into account. Future outcome studies could try to establish collaborations with universities of a similar profile, however geographically distant to each other in order to avoid threats to internal validity based on social interaction.

Regression to the mean artefact

Regression to the mean artefact surfaced as a possible threat in the pilot outcome study. The rationale behind it is the assumption that the students pass through an admissions test for the masters' programme. Even though ESC are not an explicit

selection criteria, students who have left a better impression in the admissions interview might also demonstrate a higher level of competencies as compared to the students who were not admitted. If this is the case, regression to the mean artefact could have occurred, i.e. the tendency of the overall results in the second assessment at the end of the course to be lower as they would be closer to the mean of the whole population, including the students which were not admitted to the programme.

A future line of research could study the criteria used in the admissions interviews which could include formal aspects such as education and work experience as well as informal issues like ambition or communication skills. It could be hypothesised that these elements correspond to specific ESC: ambition could be visible in behaviours related to achievement orientation and applicants with good communication skills might be showing empathy and influence during the interviewing process. If this were the case, a modified version of the ESCI-U could be introduced as a selection instrument in specific programmes.

7.2.4 Threats to external validity

Generalisability

A major shortcoming of the presented outcome study is the fact that it was conducted for the first time at ESADE. Additionally, the small samples and the related limitations do not allow drawing conclusions about the generalisability of the results. Future studies are designed as a multi-cohort approach, which will allow comparisons among subsequent cohorts. At the same time, ICT as the underlying developmental approach in the pilot study is similar to studies offered at other universities, especially the Weatherhead School of Management at Case Western University. Further studies could therefore gather data which would enable a

comparison of the results between different universities. The fact that European ministries of education have a special interest in the development of competencies, comparative studies should also include results from similar programmes in higher educational settings in Europe.

7.3 Implications

As part of the project of the Spanish Ministry of Science and Education (MICINN) the studies presented in this thesis contribute to the overall objective related to the introduction of the development in higher education within the Bologna process. The current studies advance research and provide practical support to higher education institutions on several levels:

1. Increasing the quality of measures of ESC

Frequently researchers in social sciences do not have a critical attitude neither about the particular operationalisation which the used measurement instruments represent nor about the quality of the measures. We tried to detect weaknesses of the instruments which we and many others have been using for many years. Even though some of the hypotheses on the adequacy of specific rater sources for certain competencies did not hold, significant correlations on other raters and competencies showed that the indicators for competencies such as for developing others or teamwork suggest good reliability. This means that in an ongoing effort to improve the measures of ESC the focus should be set on the other competencies for which our evidence suggest revisions, such as for achievement orientation or conflict management.

2. Streamlining assessment processes

One of the problems of long questionnaires with 70 or more items is the loss of interest of the raters to dedicate time which might result in abandoning the assessment process or not giving enough thought to the questions and adequate punctuation. Either case would lead to results which do not reflect the real perceptions of the rater. There seems to be a general consensus that shorter questionnaires tend to be more efficient. Therefore, the presented research in chapter 4 helps streamline the assessment process by distributing the items related to specific competencies only to the "appropriate" raters. More specifically, we have been able to establish that colleagues are appropriate raters to assess teamwork. As a result, the five items could be deleted from the questionnaires that will be sent out to all other raters and thus reducing the size of the questionnaires. Shorter questionnaires will help increase availability of any rater to collaborate and provide information that is as honest as possible.

Additionally, the negative correlations of achievement orientation in the self-assessments with the results of the CIIs indicate that the self-assessments have to include additional questions to control for social desirability. Even though this step would increase the number of items in the self-assessments, the increase in the reliability would justify this decision.

3. Offering best practices on competency development

The studies around the interdisciplinary project offer two concrete alternatives to develop competencies. Higher education institutions can either learn from the experience of working with interdisciplinary projects to develop general competencies or through a framework that offers a focus on ESC. Both papers explicitly communicate the curriculum design with relevant information on the different modules. Critical reflections on the experiences in terms of "lessons

learned" are also included. This allows other institutions to consider for themselves which approach could best suit their own environment and decide how they could integrate the development of competencies into their own curriculum. As mentioned in the papers, both approaches are universal and can be appropriate for any faculty.

4. Transferring knowledge to managerial training

Despite the small sample size of the outcome study, the preliminary results in combination with the qualitative information through student testimonials indicate that the suggested curriculum is promising and applicable in adult education. The combination of ICT and project work can also be transferred to management training. Especially for medium to long term in-company training, a programme similar to the one at ESADE can be presented. Managers attend workshops related to the development of ESC, and at the same time work on interdisciplinary projects coordinated within their companies. This would give managers the opportunity to practice competencies directly on specific tasks and settings.

7.4 Concluding Thoughts

Have we been able to make sure that emotional and social competencies are properly operationalised and measured? The effort of establishing convergent validity among different measures of ESC has been able to confirm that colleagues measure teamwork the same way as the results of the CIIs show. And spouses measure developing others similar as in the CIIs. At the same time, four of the seven

competencies measured in the CIIs show significant correlations with the self-assessment. Convergent validity can therefore also be confirmed with adaptability, influence and developing others as assessed by the participants themselves. However, achievement orientation and empathy do not show significant correlations with the CIIs for any raters. Achievement orientation shows significant but negative correlations, which implies that the items might be prone to effects of social desirability. Nonetheless, the significant correlations suggest that self-assessments can be taken seriously if slightly adjusted, for example by including items to control for the effects of social desirability. Other alternative explanations about achievement orientation would have to be explored in future research.

So, even though construct validity has not been able to be established for all seven measured competencies, does it still make sense to continue with the efforts of developing them in higher education? The answer couldn't be any other than "Yes":

First, because some of the unexpected results probably have alternative explanations which need further investigation. Even though the CII was considered as a "golden standard", both measurement instruments – the ESCI-U and the CII-might show weaknesses which could explain the difficulties in finding evidence of construct validity. On the one hand, by focussing on behaviour, the ESCI-U might be inappropriate for detecting competencies which are more internally rooted such as empathy. On the other hand, the CII which is usually based on recent work events might not be an appropriate instrument for assessing other competencies such as adaptability. In any case, a critical attitude has helped suggest improvements in the operationalisation of the ESC which is frequently taken for granted by researcher in social sciences

Second, because evidence from the studies on the curriculum redesigns shows that we are on the "right track". This thesis presented two different examples of how curricula in higher education can be modified to systematically include the

development of competencies into masters' programmes as required by the Bologna framework. Initial results, even though mostly qualitative, indicate that higher education is an appropriate setting to develop competencies, either by using a framework constructed around ELT to structure learning processes and promote the development of general competencies, or by using ICT as the underlying framework to develop emotional and social competencies. Since both approaches are generic and applicable to any degree the experience can easily be transferred to any context.

Despite the fact that an outcome study is only presented in form of a pilot study with a reduced sample, this should not hold instructors back from improving programmes and designing curricula that can help students better prepare for the expectations of the organizations. Complementary research is too compelling with results that show the impact of ESC on life outcomes like performance.

Some of the suggested research is ongoing, as part of the MICINN project. This project especially reinforces the idea of lifelong learning. On the one hand, this can be interpreted from the students' perspective: the developmental process through ICT is represented in a circle, in which participant might change their personal vision once they close the gap between their real and ideal selves, having to start over the developmental process again and converting it into a lifelong learning spiral. On the other hand, lifelong learning is also applicable to related research. This thesis makes a humble contribution to research in a more applied sense by suggesting and testing ways to develop emotional and social competencies. However, it should be noticed that the thesis also includes a large number of suggestions for follow-up or continuous research which shows that the lifelong learning process is also valid for researchers and instructors.

And, last but not least, the completion of this doctoral thesis is also part of a personal lifelong learning process: learning about the typical difficulties in

conducting research, critical reflections on conceptualization and operationalisation of constructs, effects of measurement error and their impact on the quality of any research study and the validity of the conclusions. But also the use of common sense and the effective communication with colleagues have all been part of a journey that has just started.

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