# Emotional Intelligence and Graduate Employability

**by**

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# ABSTRACT

This thesis explores the role played by emotional intelligence (EI) in graduate employability. It also investigates whether or not it is possible to teach EI within a Higher Education (HE) environment in order to develop these abilities in undergraduate students and enhance their employability potential.

To evaluate possible measures for this research, Study 1 investigated the underlying dimensionality of a new self-report measure of EI, the Emotional Self-Efficacy Scale (ESES) and its relationship with more established measures of individual differences: ability EI, trait EI, personality and cognitive ability. Participants included 822 undergraduate students and 263 graduates already in the workplace. Analysis of the data suggested a multi-dimensional factor structure for the ESES which could be used as a reliable measure of emotional self-efficacy (ESE). The results of the study were also interpreted as offering support to theoretical models of ESE that propose a difference between people's actual emotional skills (ability EI) and their judgments of these abilities. From the findings of Study 1 the measure was deemed appropriate for use in Studies 2 and 3.

Study 2 investigated the relationship between ESE and graduate employability. The ESES was used, together with measures of employability and career satisfaction. These were completed by 306 graduates in the workplace and the data analysed using structural equation modelling. ESE was found to be an important predictor of graduate employability. Additionally, employability was found to mediate the relationship between ESE and career satisfaction. Previous theoretical work has proposed that

adaptive emotional functioning is a key element in the development of graduate employability. This study is the first to provide empirical evidence of this relationship and some recommendations in light of these findings are proposed.

There is evidence to suggest that EI is an important predictor of health, wellbeing and, more importantly for this research, a number of employability-related outcomes. Study 2 established that ESE is also an important predictor of graduate employability. Study 3 investigated whether or not it is possible to teach and develop EI and ESE in undergraduate students who will shortly join the graduate working population. An innovative intervention delivered through a taught undergraduate module based on established EI theory was developed. This was delivered to 66 undergraduate students, who completed measures of ability EI and ESE at pre and post intervention. The study included a control group of students who participated in a different taught module and provided comparative pre and post intervention data. The findings demonstrate that it is possible to improve both ability EI and ESE in young adults, through teaching and learning strategies aimed at increasing knowledge and understanding of emotional functioning. This is the first study to design, deliver and evaluate an ability EI and ESE intervention for UK based undergraduate students.

The findings from Studies 2 and 3 provide support for the idea that ability EI and ESE can be taught within HE with the resultant positive implications for graduate employability.

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# LIST OF COMMON ABBREVIATIONS

| | |
|---|---|
| CBI | Confederation of British Industry |
| EI | Emotional Intelligence |
| ESE | Emotional Self-Efficacy |
| ESES | Emotional Self-Efficacy Scale |
| HE | Higher Education |
| HEI | Higher Education Institution |
| IPIP | International Personality Item Pool |
| MSCEIT | Mayer-Salovey-Caruso Emotional Intelligence Test |
| TEIQue | Trait Emotional Intelligence Questionnaire |

# CHAPTER 1

# INTRODUCTION: OVERVIEW AND AIMS OF THE THESIS

## 1.1 Introduction

Emotional intelligence (EI) has been conceptualised as an emotion-related cognitive ability (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004) comprising a set of four emotion-related skills which include i) Perceiving emotion in oneself and others through facial expressions, voice tone and body language; ii) Using emotion to facilitate thought and decision-making; iii) Understanding emotion in oneself and others; and iv) Managing emotion in oneself and others. EI has also been defined as a constellation of emotion-related self-perceptions at the lower levels of personality hierarchies (Petrides, Furnham & Mavroveli, 2007). These two distinct perspectives are usually referred to as ability EI and trait or mixed models EI (e.g. Mayer, Salovey & Caruso, 2000); meta-analytical studies find a weak correlation of .14 between the two, confirming their distinctiveness (Van Rooy, Viswesvaran & Pluta, 2005). Different methods of measurement are utilised dependent upon the EI perspective taken, with ability EI using more objective performance based measures and trait (mixed models) EI utilising self-report methodology.

The ability model of EI is based on theoretical and empirical work in the fields of intelligence, emotion, cognition and affect (Mayer & Salovey, 1997). The theory of ability EI, which has been developed and refined by Mayer and Salovey over a number of years, clearly articulates and narrowly defines the concept and is widely accepted by researchers (Côté, Lopes, Salovey & Miners, 2010; Gohm, Corser & Dalsky, 2005;

MacCann, Fogarty, Zeidner & Roberts, 2011). However, there is currently only one extant performance ability EI measure that includes items to address all four branches of the ability EI model, the Mayer-Salovey-Caruso Emotional Intelligence Test or MSCEIT (Mayer, Salovey & Caruso, 2002).

Trait EI is defined as behavioural dispositions and self-perceptions of one's ability to recognise and understand emotions (Petrides & Furnham, 2000, 2001), which are assessed through self-report questionnaires. Such questionnaires require an individual to reflect on their own perceived ability to recognise and understand emotions in themselves and others, but they also tap into other areas of individual difference including self-motivation and adaptability (Petrides & Furnham, 2000, 2003). This broader conceptualisation of EI has been criticised for including a large number of personality traits mixed in with some socio-emotional skills. There is often no reason for including some traits and emotional abilities but not others other than the possibility that they may predict success (Mayer, Salovey & Caruso, 2008). Further criticism of the concept of trait EI arises from the finding that it is so closely related to other personality traits that it becomes difficult to justify as a separate construct (Joseph & Newman, 2010).

More recently, the notion of emotional self-efficacy (ESE), as distinct from the trait or mixed models EI approach, has been discussed (Kirk, Schutte & Hine, 2008). It has been argued that emotional self-efficacy is an appropriate alternative label for trait EI (Petrides & Furnham, 2001; Petrides, Pérez-González & Furnham, 2007). However, Kirk et al. (2008) argue that although ESE may be an aspect of trait EI, the two are not identical: other aspects and dispositions are encompassed within the trait EI concept.

ESE is solely concerned with confidence in one's emotional functioning capabilities as operationalised by the original ability model of EI. This does not include elements such as self-perceptions of adaptability or self-motivation, which are included in trait EI models (e.g. see Sanchez-Ruiz, Pérez-González & Petrides, 2010). As such, the two concepts are not interchangeable. Kirk et al. (2008) developed a measure of ESE based on the four-branch ability model of EI, the Emotional Self-Efficacy Scale (ESES). As the ESES is a relatively new measure, there have been very few published studies that examine its psychometric properties. The need to establish the ESES as a valid measure is important in order to further define the construct of ESE. This is the proposed purpose of Study 1 of this PhD.

There have been a number of studies which indicate that ability EI may have an important role to play in relation to academic achievement (Qualter, Gardner, Hutchinson, Pope, & Whiteley, in press; MacCann, Fogarty, Zeidner & Roberts, 2011) and other specific work-related outcomes such as job performance (O'Boyle Jr., Humphrey, Pollack, Hawver & Story, 2010), negotiation skills (Mueller & Curhan, 2006), effective leadership (Kerr, Garvin, Heaton & Boyle, 2006; Rosete & Ciarrochi, 2005), successful team-working (Vitello-Cicciu, 2001), greater revenue generation and better customer retention in sales professionals (Kidwell, Hardesty, Murtha & Sheng, 2011). This evidence suggests that ability EI is an important element of interpersonal functioning that leads to better communication in the workplace. This implies that adaptive emotional functioning has an important role to play in the development of graduate employability. EI ability in workplace settings is often studied using the MSCEIT. However, whether or not people feel confident about or motivated to use their

EI ability (ESE) has received little empirical investigation. The development of the ESES now allows this type of research to take place. This measure is used in Study 2 to investigate the relationship between ESE and graduate employability.

Graduate employability has been discussed for some time, but it has been termed a 'slippery concept' due to difficulties with definition and conceptual clarity (Sewell & Dacre Pool, 2010: Lees, 2002). There are now more widely accepted definitions (e.g. Dacre Pool & Sewell, 2007), models (e.g. Dacre Pool & Sewell, 2007; Knight & Yorke, 2004; Yorke & Knight, 2002) and measures of employability (e.g. Berntson & Marklund, 2007; Rothwell & Arnold, 2007), which are appropriate for use with graduate populations. However, employability remains an under-researched concept (Rothwell, Jewell & Hardie, 2009). Some models and theories of employability (e.g. Fugate, Kinicki & Ashforth, 2004: Knight & Yorke, 2004; Van der Heijde & Van der Heijden, 2006) have alluded to adaptive emotional functioning as an aspect of employability but there is a need to empirically investigate this theoretical viewpoint. Research that explores the possible predictors and outcomes of graduate employability is crucial in order to advance this field further. Study 2 begins to address this issue by investigating the associations between emotional functioning, graduate employability and career satisfaction.

A further important concern is that having established the significance of adaptive emotional functioning for graduate employability, whether or not it is possible to help students to develop the emotion-related abilities and self-efficacy that will help them to enhance their employability. This is essential if they are to choose, secure and retain occupations in which they can experience satisfaction and success. There are currently

very few empirical studies which demonstrate that it is possible to increase levels of EI and ESE through teaching interventions that look to improve knowledge, understanding, skills and efficacy in relation to emotional functioning. Although there are many EI training courses commercially available, few have a strong theoretical underpinning or have been systematically designed to result in long-term change (Zeidner, Roberts & Matthews, 2008). There is clearly a need for theory based interventions that have been subject to empirical evaluation. Having established the link between adaptive emotional functioning and graduate employability in Study 2, the purpose of Study 3 is to design, deliver and evaluate a taught EI intervention for undergraduate students.

The three studies described above form the overall research strategy for this thesis. Study 1 involves a sample of undergraduate students and graduates in the workplace completing the ESES, which provides data suitable for exploratory and confirmatory factor analysis. A sub-sample of this group also completes other measures of individual difference that enable relationships between ESE and other variables to be explored. Study 2 looks to establish whether emotional competence has an important role to play in graduate employability and entails working graduates completing an online questionnaire which measures ESE, employability and career satisfaction. Structural equation modelling techniques are utilised for the analysis of this data. The final study involves the design and delivery of an EI/ESE intervention to undergraduate students. This is evaluated using pre and post intervention measures of ability EI and ESE and the results compared with a control group.

## 1.2 Aims and Significance of the Research

There were three main aims to this research. The first was to investigate the psychometric properties of a new measure of ESE, the Emotional Self-Efficacy Scale (Kirk et al., 2008). This research was conducted with a sample of undergraduate university students and graduates already in the workplace. This study was crucial in order to inform decisions concerning measures to be utilised in further research to be undertaken. Theoretical issues addressed in this research included i) the underlying dimensionality of the ESES, ii) the relationship between ESE and ability EI, iii) the relationship between ESE and trait EI, iv) the relationship between ESE and personality and v) the relationship between ESE and cognitive ability. The findings suggest that ESE can be reliably measured using the ESES. They are also interpreted as providing support for theoretical models of ESE (e.g. Bandura, Caprara, Barbaranelli, Gerbino & Pastorelli, 2003) that propose a difference between people's actual emotional skills (as measured by performance ability tests) and their judgements of these abilities. However, although the concepts of ability EI and ESE are distinct, both may be important in terms of the behaviour they predict and as such are worthy of further research.

The second aim of this research was to investigate the theoretical viewpoint that adaptive emotional functioning is an important aspect of graduate employability. The results of Study 1 provided support for the psychometric properties of the ESES as a reliable measure of ESE, which was chosen for use in Study 2 alongside published measures of employability and career satisfaction. It would have been desirable to include the MSCEIT (as a measure of ability EI) in this study, but this was not possible due to practical considerations. These were mainly concerned with the length of time

required for the participants, who were all working graduates, to complete the test. There was also a cost implication as the MSCEIT is a commercial product.

Very limited empirical research has been conducted which investigates the predictors and outcomes of graduate employability and none has specifically investigated the role of adaptive emotional functioning. Therefore, it was necessary to establish if any theoretical associations existed between the concepts of adaptive emotional functioning, employability and career satisfaction in a graduate sample. The findings of this study provide justification for attempting to develop emotional skills in undergraduate students, thereby enhancing their employability, which should lead to greater career satisfaction.

The third aim of this research was to investigate if it is possible to improve levels of EI and ESE in undergraduate students by designing a theoretically sound teaching intervention and delivering this over eleven weeks. Study 1 had established that ability EI and ESE were distinct constructs and provided evidence for the psychometric properties of the ESES. As such, the participants completed both the MSCEIT and the ESES pre and post intervention. Study 2 and other evidence from the literature established emotional functioning as an important predictor of graduate employability, justifying the inclusion of teaching activities to improve EI and ESE within Higher Education curricula. However, there have been very few empirical evaluations of EI training interventions (Nelis, Quoidbach, Mikolajczak & Hansenne, 2009) which was addressed by Study 3. Standard evaluation methodology was used with a control group included to provide comparative pre and post intervention data. This research supports the suggestion that EI and ESE are aspects of individual difference that can be developed and improved in a young adult population through teaching and learning strategies.

### 1.3 Organisation of the Thesis

Chapter 2 provides a review of the literature on employability. Chapter 3 introduces the CareerEDGE model of graduate employability which includes EI as a key element. The fourth chapter explores issues surrounding the measurement of graduate employability. Chapter 5 includes a review of the literature on EI, with the focus on ability conceptualisations of the construct. A rationale for including EI as an essential element of graduate employability is also presented. There is also a review of the available literature relating to ESE.

Chapter 6 details Study 1, which investigates the dimensionality of the ESES and looks at its associations with an objective performance based measure of ability EI (MSCEIT), trait EI (TEIQue), personality (IPIP), and cognitive ability (Ravens Advanced Progressive Matrices). Chapter 7 details Study 2, which explores the relationship between emotional functioning, as measured by the ESES, employability and career satisfaction, in a sample of graduates in the workplace. Chapter 8 details Study 3, which involved the development, delivery and evaluation of an intervention designed to improve levels of EI and ESE in undergraduate students. Chapter 9 summarises the thesis and includes implications of the key findings together with suggestions for future applications of the research. Limitations of the studies and suggestions for further research are also included in the final chapter.

# CHAPTER 2

# GRADUATE EMPLOYABILITY

## 2.1 Introduction

The opening sentence of an earlier literature review on graduate employability reads, *'Employability is a difficult concept to define succinctly and comprehensively'* (Lees, 2002, p. 1). Nine years on, this is possibly still the case; it could also be argued that considerable progress has been made with regard to defining this 'slippery concept' and clarifying its meaning within the context of Higher Education (HE).

It would be an impossible task to try to include everything written about employability and, more specifically, graduate employability, in this literature review. The aim, instead, is to cover the main issues. Some researchers have made distinctions between three dimensions in relation to the employability literature; i) employability at a national workforce level; ii) employability within human resource management and iii) employability within formal education, although admit to a certain amount of overlap between these dimensions (Rothwell, Jewell & Hardie, 2009). The main focus of this thesis is on the employability of university graduates and as such, this literature review reflects the most important areas that inform employability discussion in relation to this specific group. This will begin with some historical background of the topic, including areas of controversy. This is followed by some proposed definitions and models together with clarification of the key concepts in this area. The review will conclude with a discussion of the issues surrounding the measurement of graduate employability and some tentative suggestions for a way forward.

## 2.2 Historical Context

### *2.2.1 Employability*

According to McQuaid and Lindsay (2005) the concept of employability can be traced back to the early 20th century. They describe the work of Gazier (1998, 2001) who provides details of how the concept developed over the last century into current thinking on the subject. He proposes seven distinct accounts of employability. These include: Dichotomic employability, Socio-medical employability, Manpower policy employability, Flow employability, Labour market performance employability, Initiative employability and Interactive employability (Gazier, 1998, 2001, 2006).

The first account (*'dichotomic employability')* was a simplistic form of employability that emerged in the UK and US at the beginning of the 20th century and refers to the 'employable' (those who are willing and able to work) and the 'unemployable' (those unable to work and in need of support).

*'Socio-medical employability'* (the second phase of employability development) emerged in the US, UK, Germany, and elsewhere before the 1950s and refers to the employment abilities of people considered to be socially, physically or mentally disadvantaged and how these compare with employment requirements. *'Manpower policy employability'* is mostly applicable to the US and has emerged since the 1960s. It extends the socio-medical view to other disadvantaged groups.

*'Flow employability*' emerged in 1960s French sociology literature and concentrates on the expectations and probabilities of people who are looking for jobs actually finding them. *'Labour market performance employability'* has been in use

internationally since the late 1970s and refers to labour market outcomes for participants in employability-related programmes.

*'Initiative employability'* emerged in the US and European human resource development literature towards the end of the 1980s. It focuses on the individual and how it is necessary for people to take responsibility for the development of their own transferable skills in order to have the flexibility to move between jobs should this be necessary. Finally, *'interactive employability'* originally emerged in the US, but since the late 1980s has been accepted internationally. It keeps the focus on individual responsibility, but also acknowledges the effects of available opportunities, institutions, and rules that govern the labour market, on the employability of an individual (Gazier, 1998, 2001, cited in McQuaid & Lindsay, 2005, p. 200 – 201, Gazier, 2006). The concepts of initiative and interactive employability in particular, have influenced current thinking around employability. For example, there is reference to these ideas in the work of Hillage and Pollard (1998) discussed later in this review.

Van der Heijde and Van der Heijden (2006) suggest a slightly later beginning for the concept of employability, which they state came into use around 1955. But, they argue that it has only existed as an area of empirical study since the late 1990s. The concept of employability is also closely related to that of the 'boundaryless' career (Brown & Hesketh, 2004), which includes the notion that people are now less likely to be constrained by a traditional career, working their way up a corporate ladder and are more likely to move across many boundaries, including between organisations, between different departments, functions and teams (Arthur, 1994). As such, they will need the necessary marketable skills in order to cross these boundaries successfully. However,

there is no clear consensus about what these 'marketable skills' are with some key researchers in the field (e.g. Knight & Yorke, 2004) proposing strong arguments against the use of the term 'skills' at all. They strongly refute the idea that employability is assured by the possession of certain skills.

### *2.2.2 Graduate Employability*

The specific interest in graduate employability can be traced back several decades to the Robbins Report (Committee on Higher Education, 1963), which overtly made the link between Higher Education and the UK economy. The report details the importance of this link,

> *'We begin with instruction in skills suitable to play a part in the general division of labour'* (Committee on Higher Education, 1963, para 25, cited in Yorke, 2004, p. 409).

According to Yorke (2004), policy introduced by the Thatcher Government of the late 1980s was influenced by ideas consistent with Becker's human capital theory (Becker, 1975), which had recently emerged in the US. This theory proposes that the task of government is to ensure the growth in the stock of human capital, which is seen as fundamental to the success of knowledge-based economies in a global society. As such,

the Thatcher Government considered it desirable to develop 'enterprise' in graduates, and provided the funding for the Enterprise in Higher Education initiative.[1]

Some years later, the Dearing Report on Higher Education (NCIHE, 1997) also asserted that education and training were the keys to global competitiveness. The report focused on developing key skills and making work experience available to a greater number of students in the Higher Education (HE) sector.

The resultant government policies have seen a massive increase in the numbers of people opting for study within HE, from 1 in 20 in the late 1950s to more than 1 in 3 in 2008, with the accompanying increase in workforce skills. So far, however, there has been no discernible increase in productivity growth in the UK (Sutherland, 2008). There is also some doubt as to the validity of applying human capital theories to employability (Yorke & Knight, 2007).

Additionally, there is a recognition that the very nature of jobs and the skills required has been rapidly changing, with many new business sectors emerging. Little (2001) suggests that as a consequence of this, graduates not only have to develop the skills needed to do the job now, but, also, they must develop the personal qualities necessary for dealing intelligently with change and with future challenging situations in the workplace. In addition, employers want graduates who can adapt quickly to the culture of the workplace, use their skills and abilities to help an organisation grow and contribute to innovative teamwork (Harvey, Moon, Geal & Bower, 1997).

[1] Further discussion of the terminology surrounding employability and enterprise can be seen in Appendix A, but enterprise in this context would be considered similar to more recent understandings of employability – specifically the generic skills element.

Consequently Higher Education Institutions (HEIs) are being encouraged by the Government to place a much greater emphasis on the development of employability in UK graduates. According to the Department for Education and Skills (DfES)[2] one of the purposes of HE is to assist students with the development of their higher level competencies and skills in order to improve their long-term employability (DfES, 2002, cited in Lees, 2002).

A report from the UK Commission for Employment and Skills (2009) suggests that without employability skills, the UK economy will find it more difficult to achieve its productivity goals and that a number of important strands in UK employment and skills policy may be unattainable. It also argues that individuals will find it more difficult to obtain and progress in satisfying employment. This report looks at employability in the broader sense as being something that education practitioners at every level, including schools, colleges, universities and employment training providers need to engage with. However, employability as an HE strategy has resulted in some areas for disagreement and debate.

### 2.3 Employability – Disagreement and Debate

Probably the most contentious issue surrounding graduate employability is that concerning liberal education versus preparation for work. It has been suggested that this relates to a mismatch of ideologies between universities which actively promote academic excellence and employers who are more concerned with operational competence (Bennett, Dunne & Carré, 1999).

[2] Now replaced by the Department for Business, Innovation and Skills (BIS)

According to Richard Lambert, the Director-general of the Confederation of British Industry (2006 – 2011),

> *'Universities do not solely exist to prepare people for work but they do have a responsibility, and an increasing student demand, to provide opportunities to help develop their employability skills.'* (CBI, 2009, p. 2).

However some academics have voiced unease about the employability agenda being too driven by government policy and the demands of business, which they perceive will result in less time for pure academic study and specialist subject knowledge. Others strongly object to the notion that they should have any responsibility for employability issues. Cranmer (2006) quotes one academic from the History Department of a pre-1992 university as saying,

> *'I've got to say it concerns me because it's blurring the distinction between education and training ... good employers should be concerned with their own training.*' (p. 178)

This fits with the assertion that the skills provision, often equated with employability, is associated with a training model, as opposed to 'real' academic education (Washer, 2007). Harvey (2000) agrees that some academics may need to be convinced that having employability as a part of their teaching strategy is not an attack on academic freedom. He suggests that the content of what they teach may well remain the

same but they may have to consider *how* to teach it, probably using methods different from the usual lecture/seminar traditions. Washer (2007) also argues that the key skills elements of employability do not have to threaten the idea of a liberal education. He suggests that they can actually enhance the educational experience through encouraging innovative teaching practices and curriculum design.

A highly political view of how HE in the UK is changing has been put forward by Morley (2001). These ideas appear to contradict the views of Washer and Harvey. She suggests that too great an emphasis is being placed on the role of corporate interests. She asks,

> *'Has utilitarianism eclipsed intellectualism in UK universities? Do universities exist simply to meet the needs of modern capitalism and are students being constructed solely as future workers rather than fully rounded citizens?'* (p. 132)

There is also a hint at more sinister reasons for the employability debate with the suggestion that homogenising workers, (i.e. ensuring they all have the same list of skills), could make them more docile and therefore easier to govern (Morley, 2001).

Others have argued that the expectations of graduate recruiters for new graduates have become absurdly inflated and unrealistic. For example, Hinchliffe (2005) states that it is totally unrealistic to expect young men and women, with limited experience in the workplace, to possess the varied attributes of employability, including intellectual abilities, performance skills, social skills and the full array of relevant personal qualities.

He also questions how many of the employers themselves can claim to possess such a range of impressive attributes.

It would appear that studies in the 1990s indicated that many employers were beginning to doubt the efficacy of the undergraduate experience as preparation for the workplace (Harvey, 2005). In the past, many had been prepared to invest in graduate schemes to help newly employed graduates to settle into their businesses; but now they were unwilling or unable to afford this time for adjustment and needed their graduate intake to 'hit the ground running'. As Hinchliffe (2005) states, it is desirable for employers to have graduates with all the attributes of an expert but without them having to provide the investment needed in terms of the years it takes to develop them.

A valid point is raised by Atkins (1999) when he asks whether it is possible to know what employers want. Furthermore, can there be any certainty about the assumption that employers themselves really know what they want? It could be that many employers glibly respond to surveys saying that they need their graduate recruits to have, for example, well developed communication skills or problem solving abilities and that often no real thought is given to exactly what these mean. For example what specific behaviours are employers expecting to see from graduates with these skills and abilities? However, some research carried out by Bennett (2002) concluded that skills and attributes specified in a large number of job advertisements aimed at new graduates were determined in a formal, logical and systematic manner, that is, via job evaluation.

It could be argued that these two viewpoints, i.e. liberal education versus preparation for work, are not contradictory. Knight and Yorke (2004) suggest that generally, the things that employers suggest are necessary in graduate recruits, and the

things that graduates say they need for success in the workplace are often the same things that educators value. For example, this would include such things as showing initiative, working under pressure and having good time management. They also argue that the pedagogies for employability are very compatible with learning in most, if not all, disciplines.

Atkins (1999) adds:

> *'It is difficult to maintain that academic progress is not enhanced by high standards of literacy and numeracy… by the skill to work in groups or teams, and by an understanding of how to learn effectively'* (p. 269).

He also puts forward the argument for employability embracing both traditional academic attainment and the more recently proposed generic skills, attributes and capabilities. By accommodating both arguments, there is a way forward between those who are adamant that the only real purpose of HE is to train the mind, and those who insist that the traditional academic education provided by universities is so removed from the reality of the world of work that students graduating from this are fit for nothing but further academic study.

Support for this argument of embracing both sides is provided by Lees (2002) who points out that all students on degree courses have a right to experience good teaching and learning. This should include opportunities for them to develop understandings, skills, self theories and reflection. Development in these areas will also help to improve employability. Employability can be enhanced through improving

teaching and learning and does not have to be in opposition to this – it is also about how educators teach what they teach. Knight and Yorke (2004) are also of the view that there is a significant degree of overlap between providing support for good learning and enhancing graduate employability. They suggest that viewing these as being substantially oppositional is a misconception.

Increasingly, opinion is converging around the idea that HEIs need to provide students with much more than the disciplinary content offered in the past (Green, Hammer & Star, 2009). Whilst the opponents to the skills (or indeed employability) agenda may have some valid points to make, graduates competing for available jobs in the current market do not have the luxury of debating this matter (Washer, 2007). Whatever strong feelings people may have on this issue, graduates *are* having to show that they possess the knowledge, skills and attributes that employers say they want and value.

It would appear that students themselves are showing a heightened awareness of the difficult process of entering the graduate labour market and an understanding of the need to develop, demonstrate and maintain their employability throughout their future careers. They view their employability as a fundamental issue that has to be addressed (Tomlinson, 2007).

Other recent research suggests there could be further important reasons for universities to enhance the employability of their graduates. A Swedish study conducted with a general population sample by Berntson and Marklund (2007) found that perceived employability predicted both mental well-being and global health status when measured a year later. These researchers suggest that an individual can improve their health through

enhancing their employability and that a person who perceives themselves to have employability will be less likely to stay in negative working conditions, which could be detrimental to their mental or physical well-being, as they would be more confident in their ability to find more satisfying work elsewhere. This leaves employers concerned with enhancing employability in their workers with quite a difficult dilemma. Equipping their workforce with the skills and opportunities that enable them to identify and take advantage of career opportunities may result in increased staff turnover, which could be detrimental to the success of the organisation concerned (Nauta, Van Vianen, Van der Heijden, Van Dam & Willemsen, 2009). Although a recent longitudinal study found that perceived employability did not present a risk of turnover intention, except in situations where job control was low (De Cuyper, Mauno, Kinnunen & Mäkikangas, 2011). However this is not an issue that HEIs need to be concerned with as equipping graduates with such skills and knowledge of opportunities should only result in positive outcomes for both the individuals and the HEIs concerned.

A further issue that warrants a mention is the debate about whether it is better to 'embed' employability related provision into degree courses or offer this as 'stand alone' or 'bolt on' modules. It has been suggested that total embedding of employability skills into a programme can result in the students not being aware that they are developing the skills at all. However, 'bolt-on' provision can result in the learning of skills being isolated from mainstream academic study with a resultant lack of student motivation to study them (Cranmer, 2006). In reality, the most effective strategies probably use a combination of these two methods, with most disciplines being able to embed the teaching of presentation and communication skills without any difficulty (Bennett, et al.,

1999) but other skills, e.g. career development learning activities, such as CV writing, may need to be addressed with a separate bolt-on course.

### 2.4 Defining Employability

Many people would agree that employability is a difficult concept to define (e.g. Harvey 2005; Lees, 2002; Little, 2001). There are many different definitions of employability (see Table 1 overleaf), ranging from the succinct (e.g. Brown, Hesketh & Williams, 2003; Rothwell & Arnold, 2007) to the considerably wordier (e.g. CBI, 1999; HM Treasury, 1997). Some seek to clarify what employability is (e.g. Harvey, 1999; Hillage & Pollard, 1998; Rothwell, Herbert & Rothwell, 2008), whereas others seek to clarify what employability is not (e.g. Harvey, 2003; Lees, 2002; Morley, 2001; Yorke 2004). Others try to include both explanations of what it is and what it is not (e.g. Harvey, 2005; Yorke & Knight, 2007).

Table 1. Definitions of Employability

| Definition | Author(s) |
|---|---|
| *'The relative chances of acquiring and maintaining different kinds of employment.'* | Brown, Hesketh & Williams (2003, p. 110) |
| *'The ability to keep the job one has or to get the job one desires.'* | Rothwell & Arnold (2007, p. 25) |
| *'Employability is the possession by an individual of the qualities and competencies required to meet the changing needs of employers and customers and thereby help to realise his or her aspirations and potential in work.'* | CBI (1999, p. 1). |
| *'Employability means the development of skills and adaptable workforces in which all those capable of work are encouraged to develop the skills, knowledge, technology and adaptability to enable them to enter and remain in employment throughout their working lives.'* | HM Treasury (1997, p. 1) |

| Definition | Author(s) |
|---|---|
| *'Employability is about having the capability to gain initial employment, maintain employment and obtain new employment if required.'* | Hillage & Pollard (1998, p. 1) |
| *'Employability is the propensity of the graduate to exhibit attributes that employers anticipate will be necessary for the future effective functioning of their organisation.'* | Harvey (1999, cited in Harvey 2001, p. 100) |
| *'The perceived ability to attain sustainable employment appropriate to one's qualification level.'* | Rothwell, Herbert & Rothwell (2008, p. 2) |
| *'Employability is not just about students making deposits in a bank of skills.'* | Morley (2001, p. 133) |
| *'Employment and employability are not the same thing. Being employed means having a job, being employable means having the qualities needed to maintain employment and progress through the workplace.'* | Lees (2002, p. 3) |
| *'It is important to dispense with the notion that employability is a measure of institutional performance.'* | Harvey (2003, p. 1) |
| *'Note that employability is not to be confused with employment rates, since the latter are at the mercy of the vicissitudes of the labour market.'* | Yorke (2004, p. 410) |
| *'Employability is not just about getting a job; it is about developing attributes, techniques, or experience for life. It is about learning, and the emphasis is less on "employ" and more on "ability"…'* | Harvey (2005, p. 13) |
| *'We interpret 'employability' in terms of a graduate's (or other awardee's) suitability for appropriate employment. It is quite different from actually getting an appropriate job, which is dependent on factors such as the state of the economy and patterns of discrimination in the labour market.'* | Yorke & Knight (2007, p. 158) |

Therefore the literature would suggest that employability is more than just getting a job and more than accumulating skills. It should not be confused with employment rates or considered to be an appropriate measure of institutional success or otherwise. The following definition attempts to clarify the concept,

> *'Employability is having a set of skills, knowledge, understandings and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful.'* (Dacre Pool & Sewell, 2007, p. 280).

This definition incorporates the 'skills' element of employability but acknowledges the importance of knowledge and understanding, more associated with the degree subject itself and expected to be developed during more traditional academic activities. The significant part played by personal attributes is also recognised. A person who has developed their self-awareness through reflection is more likely to choose suitable occupations; engaging with career development learning activities will increase the person's chances of securing suitable occupations. The word 'occupations' is intentionally in the plural, to acknowledge the fact that for many graduates, staying in one job for life is not likely to be the case and that employability is not just something you engage with at the point of graduation. The issue concerned with how to define a graduate job is also recognised in this definition – if a graduate is in a role that brings them both satisfaction and success, then that *is* a graduate job. This concept has been further developed into the CareerEDGE model of graduate employability development (Dacre Pool & Sewell, 2007) which will be discussed fully in Chapter 3.

How to define a 'graduate job' is something that has been addressed in some detail by Purcell and Elias (2004). They suggest that graduate occupations can be divided into four categories. *Traditional graduate occupations* are those from which there has been a traditional route via an undergraduate degree, for example solicitors,

doctors, higher education and secondary education teachers, professional scientific and technical specialist occupations.

The second category proposed by Purcell and Elias (2004) is *modern graduate occupations*. Entry into these occupations required an undergraduate degree from around the 1960s and includes newer professions such as management, IT, primary school teachers, journalists and graduate-entry public and private sector administrative posts. *New graduate occupations* are jobs which have more recently begun to specify a degree as a requirement for entry, for example marketing, sales management, occupational therapists and welfare officers. The final category suggested is *niche graduate occupations*. In these areas of employment most workers do not have degrees but there are a growing number of specialist niches in which graduates are sought after, for example leisure and sports management, hotel management, nursing, acting and some senior educational administration posts.

**2.5 Models of Employability**

Hillage and Pollard (1998) suggest a framework for employability which comprises four main elements. The first of these they termed 'employability assets' which consist of knowledge, skills and attitudes. The second element, 'deployment' incorporates such things as career management skills, including job search skills. The third element, 'presentation', is concerned with the skills needed to 'get the job' such as CV writing, competent completion of application forms and successful interview techniques. Finally, the authors make the important point that for a person to be able to fully maximise their 'employability assets', a lot depends on their personal circumstances

and the context in which they are seeking employment, for example their family responsibilities and the current state of the labour market.

The Hillage and Pollard (1998) framework, although not specifically aimed at HE contains much that would be of relevance. For example, the first three elements, 'assets', 'deployment' and 'presentation', would need to be included in any model of graduate employability. But as Knight and Yorke (2004) point out, little can be said about the 'context' element as there is not much that either HE or students can do about demand for graduate labour.

McQuaid and Lindsay (2005), acknowledge the Hillage and Pollard (1998) framework as possibly being the most comprehensive to date, but suggest that there is too much of an emphasis on the individual factors (assets, deployment and presentation) whilst just about everything else that is outside of the person's immediate control is included in the one category of 'context factors'. McQuaid and Lindsay's (2005) model of employability attempts to broaden this focus and consists of 'individual factors', 'personal circumstances' and 'external factors'. The 'individual factors' includes aspects such as employability skills and attributes; demographic characteristics; health and well-being; job seeking; and adaptability and mobility. The 'personal circumstances' element includes household circumstances; work culture and access to resources. The 'external factors' element considers the demand factors together with enabling support factors. A detailed version of the framework with examples can be found in Appendix B.

As with the Hillage and Pollard (1998) framework, the McQuaid and Lindsay (2005) model is not aimed specifically at HE or graduate employability. Although a comprehensive and commendable model, it again includes many elements that may be

useful for employability researchers and government policy makers to consider (e.g. demand factors such as the labour market and macroeconomic stability) but would not be helpful to HE practitioners or students as these aspects of employability are beyond their control.

In the specific context of HE, Bennett et al. (1999) proposed a model of course provision which included five elements: disciplinary content knowledge, disciplinary skills, workplace awareness, workplace experience and generic skills. This model includes the provision of activities to increase workplace awareness and also acknowledges the importance of workplace experience; issues not really addressed in the models previously discussed. However the model is only concerned with the development of generic skills and does not address other important elements in the development of graduate employability, such as career development learning.

Harvey (2001) considers employability to be more complex than universities just providing employability-development opportunities that enable the graduate to develop 'employability' and as a result, gain employment. He refers to this simple version as the 'magic bullet' model, which can be seen in Figure 1 overleaf. According to Harvey (2001), HEIs are able to provide a range of employability development opportunities, which include the development of attributes and self presentation skills, the encouragement of a love of learning and the awareness and willingness to continue learning. He suggests that some of these are implicit in the students' programmes of study but others will be explicit and may be embedded into the academic modules or provided as separate 'bolt-on' modules.

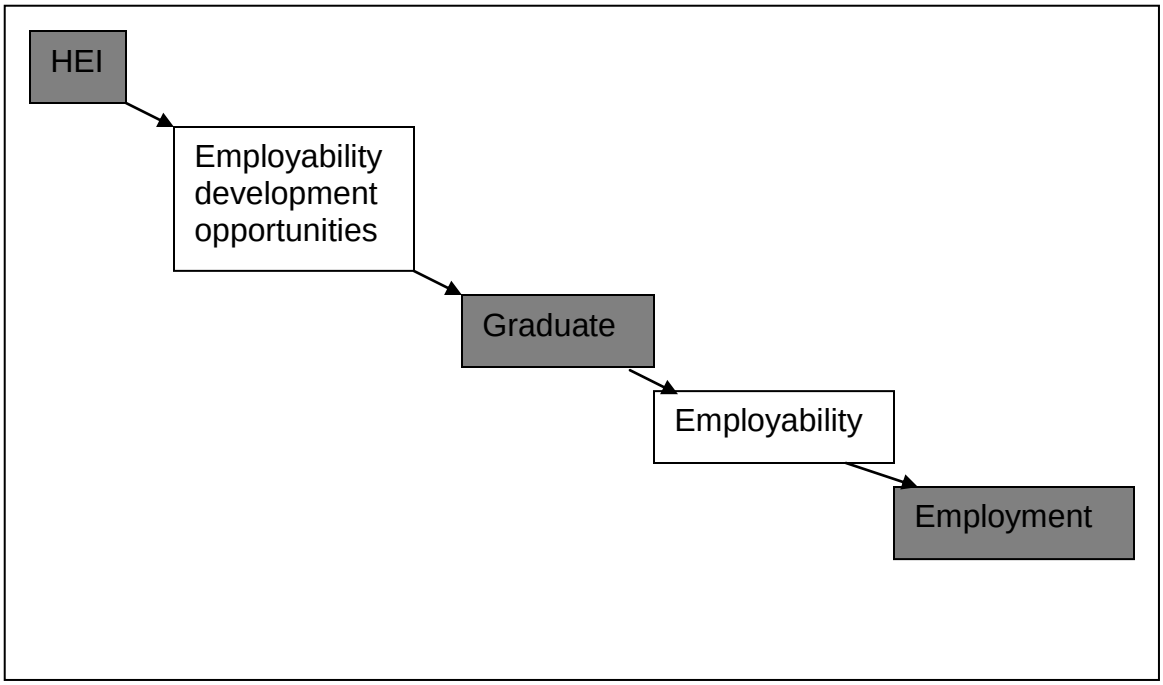


Figure 1. A 'Magic Bullet' Model of Employability Development (Harvey, 2001, p. 102)

Harvey (2001) suggests that the students may or may not decide to take advantage of all or some of this provision and that these decisions are likely to be influenced by a number of factors. These could include previous experience, extra-curricular activities, career intentions and networks and the quality and availability of employability provision in their university. There is also the role played by employers to take into account, who as Harvey (2001, p. 102) states 'convert the 'employability' of the graduate into employment'.

Harvey's more complex model of graduate employability takes all these factors into consideration and can be seen in Figure 2 overleaf.

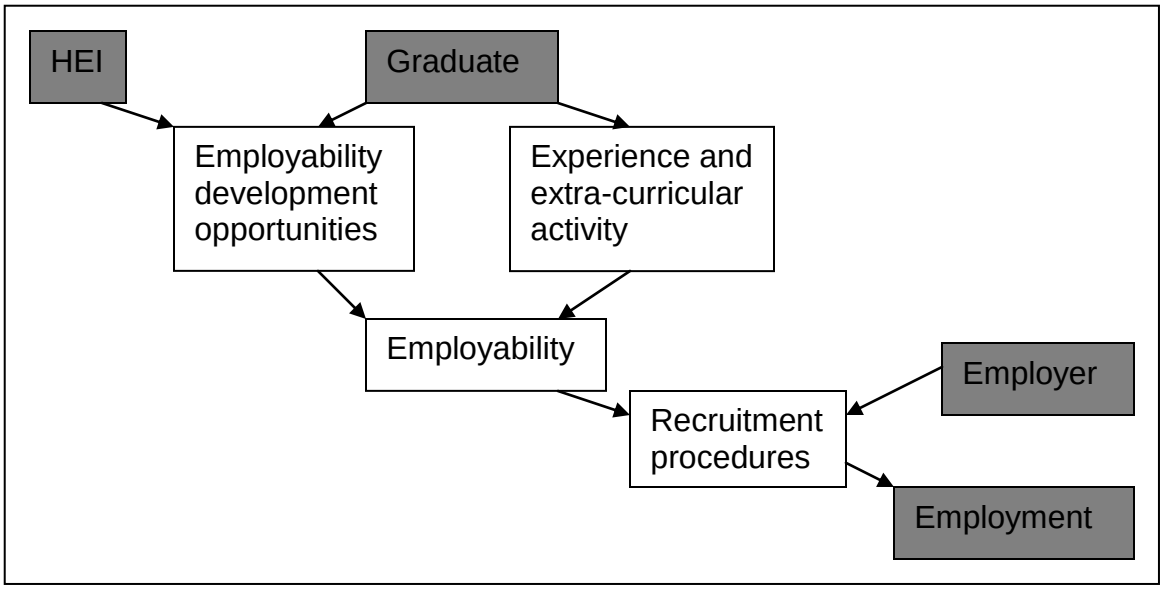


Figure 2. A Model of Employability-Development and Employment (Harvey, 2001, p. 102).

Harvey, Locke and Morey (2002) added more complexity with a further version of this model the following year (see Figure 3 overleaf). They suggest that HEIs in the UK have not only been engaged in developing the generic skills of students as part of the employability agenda, but have also actively linked employability to pedagogy. As with the previous model from Bennett et al. (1999) HEIs are seen as providing employability development opportunities for the students, but this model also acknowledges the opportunities that are provided through the students' own extra-curricular experiences. HEI provision also includes 'central support' which Harvey (2005) sees as including career services to help undergraduates and graduates in their search for work. Innovative work experience opportunities are also included, which could be provided either as part of or external to programmes of study. Importantly, this model also emphasises the importance of reflecting on and recording experiences, particularly in relation to work experience, something that had not received attention in previous conceptualisations.

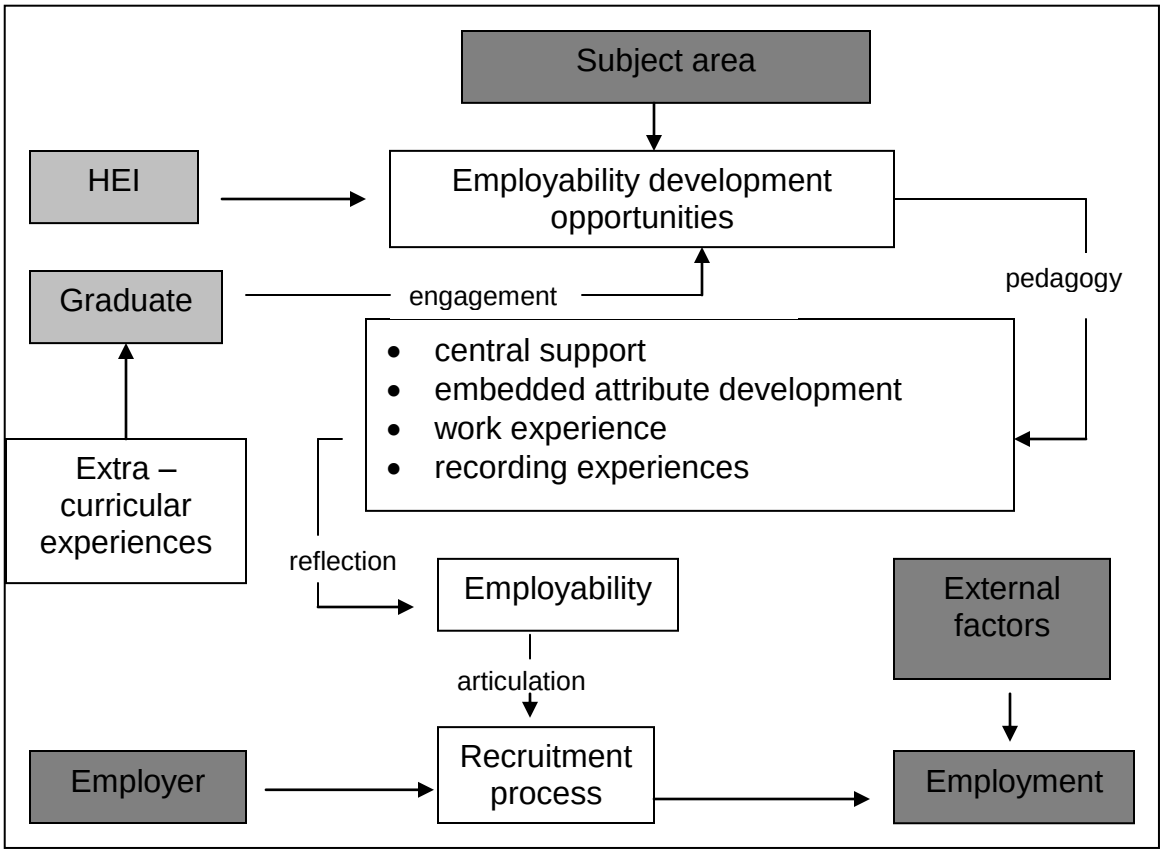


Figure 3. Model of Graduate Employability Development (Harvey, Locke & Morey, 2002, in Harvey, 2005)

Perhaps one of the most widely known and respected models of graduate employability has been termed the USEM model (Knight & Yorke, 2004). The authors suggest that behind this model is,

> *'... an attempt to put thinking about employability on a more scientific basis, partly because of the need to appeal to academic staff on their own terms by referring to research evidence and theory.'* (p. 37).

They suggest that employability is '*a mix of cognitive and non-cognitive achievements and representations*' (Knight & Yorke, 2004, p. 25) and propose their USEM model as a development of this view. USEM is an acronym for four interrelated components of employability: **U**nderstanding, **S**kilful practices, **E**fficacy beliefs and **M**etacognition (see Table 2 overleaf). This model is one of the first to be explicit about the inclusion of psychological aspects of graduate employability. The authors place great emphasis on their viewpoint that employability is not just concerned with practical skills but includes concepts such as efficacy and metacognition.

According to Yorke and Knight (2006), the USEM account suggests that students who participate in a curriculum that exploits the interrelatedness of these constructs have a greater chance of developing their employability. The authors propose that employability and good learning are highly correlated, and suggest that this is an important point to make, particularly as many academics have been unresponsive to the 'skills agenda' which they see as '*narrowly conceived, relatively mechanical and inimical to the purposes of higher education'* (p. 567).

Yorke and Knight (2006) state that the earlier concept of 'capability' (Stephenson, 1998) was influential in the development of the USEM model. This notion of capability would suggest that 'capable' people are confident in their ability to take effective and appropriate action, explain what they are seeking to achieve and live and work effectively with others. They are also able to continue to learn from their experience – both as individuals and together with others (Stephenson, 1998, cited in Yorke & Knight, 2006, p. 568).

Table 2. The USEM Account of Employability (Knight & Yorke, 2004)

| Element | Explanation | Comments |
|---|---|---|
| **U**<br>Understanding of subject matter | Propositional knowledge in the form of mastery of the subject matter of the degree | 'Understanding' is preferred to 'knowledge' because knowledge is often confused with retention of information. In some 50% of cases, employers are indifferent to the subject of the degree – they use subject-matter understanding, symbolised by good grades or degree classes, as a proxy for critical thinking, perseverance, information-handling, etc. They tend to use a threshold criterion such as an upper second class degree but, even where they specify a degree subject, they often use the other three elements (SEM) when choosing amongst short-listed applicants |
| **S**<br>Skilful practices | What are often called 'generic skills' as well as subject-specific skills. These can be characterised as procedural knowledge. | Although 'skills' is a widely used term, it may be invalid. The language encourages at least two fallacies: that one can 'have' skills and that they are transferable. What are often called 'skills' are better seen as practices, situated, not necessarily transferable, improved through repetition and assessed with difficulty. |
| **E**<br>Efficacy beliefs | Belief that one generally can make some impact on situations or events. This dispositional element can be loosely interpreted to refer to other aspects of personality. | Beliefs affect one's willingness to act. Dweck (2000) refers to self-theories, a class of beliefs that affect the ways in which people, even high achievers, respond to new and difficult problems. Associated with these self theories are other beliefs about what sorts of persons we are and what we can do and can be. |
| **M**<br>Metacognition | Awareness of what one knows and can do, and of how one learns more. | 'Reflection', which is a metacognitive process, is widely associated with superior performances. Metacognition is about being mindful and disposed to keep learning. |

When developing the USEM account, the authors drew upon a wide range of theoretical and empirical work. Table 2 (see previous page), which is reproduced from their 2004 book on the subject, gives more detail of this model. According to Yorke and Knight (2006), no justification is required for the inclusion of the 'U' of the USEM model, which refers to the development of understanding within a subject discipline. They also suggest that skilful practices developed within a subject discipline should also be taken as read, however many of these, the 'S' in the model, may be transferable to other contexts.

The 'E' in USEM owes something to the work of Dweck (2000) concerning the desirability of 'malleable' as opposed to 'fixed' self belief. Yorke and Knight (2006) also make connections to the work of Sternberg and colleagues (Sternberg, 1997; Sternberg & Grigorenko, 2000) who argued for the importance of practical intelligence in addition to academic intelligence. Bandura's (1997) work on self-efficacy was also influential for this element of the model. Yorke and Knight also drew upon the work of Rotter (1966) and his concept of 'locus of control' and Seligman's (1998) work on 'learned optimism'. The 'Efficacy Beliefs' factor also takes into account the affective elements of employability with the authors citing work by Boekaerts (2003), who argued for the importance of emotional state in the learning process. Emotional intelligence (Goleman, 1996; Salovey & Mayer, 1990) is also included because it is highly likely that this is required for successful interaction with others.

The final element of the USEM model, the 'M' for metacognition, includes aspects of reflection and self-regulation. Yorke and Knight (2006) cite the work of

Flavell (1979) as the origins of the concept but that the work of Boekearts and Niemivirta (2000) on adaptive learning and the various accounts of 'reflective practice' that have been inspired by the work of Schön (1983) have also influenced the inclusion of it here. An earlier pictorial version of the model can be seen in Figure 4 below:

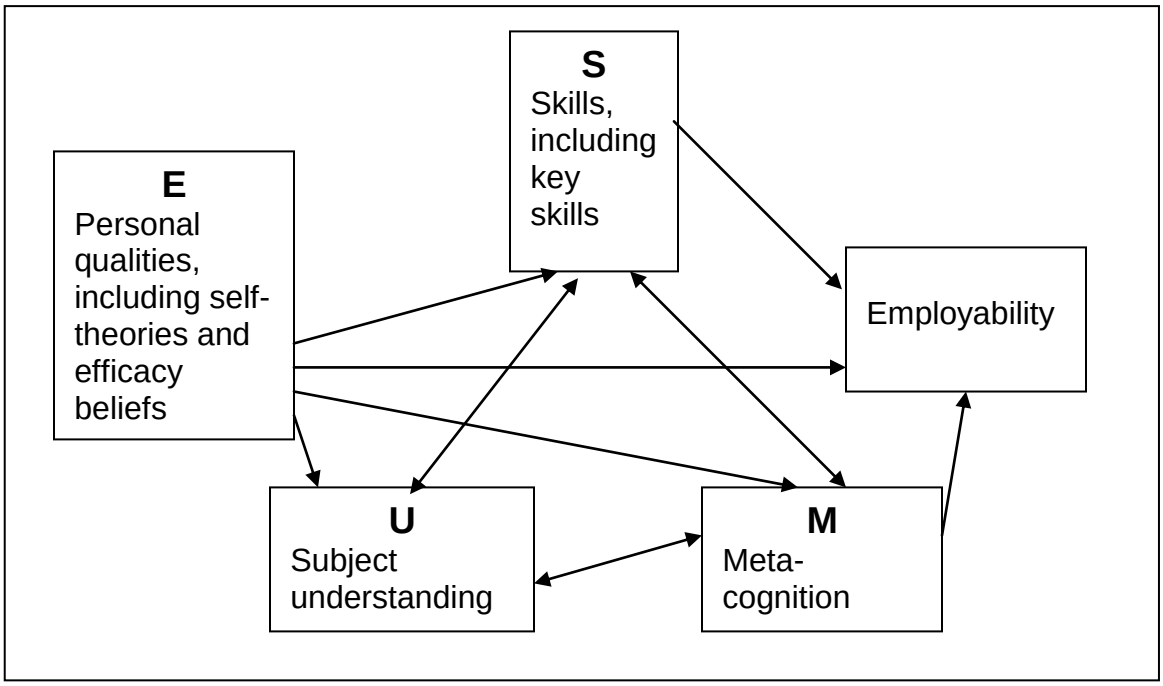


Figure 4. The USEM Model (Yorke & Knight, 2002, p. 6)

The authors suggest there are a number of advantages of the USEM account (Knight & Yorke, 2004, p. 42). These include it being economical (only having four headings); it is representative of employer views but also connects with research into learning and performance; it does not propose a 'skills and drills' version of employability; it should not contradict academic values, as many teachers in HE value much of what is in the model; and it could be used in other countries.

However, there are also a number of criticisms of the model, including some suggestion that it is too vague, with HEIs left to decide which achievements they consider

valuable to employers and worth incorporating into their programmes of study, and that the term 'meta-cognition' is jargon (Knight & Yorke, 2004). The model, although grounded in established theory and research, is a difficult one to explain to non-experts in the field and is therefore unlikely to be helpful to students or their parents (Dacre Pool & Sewell, 2007).

Fugate, Kinicki and Ashforth (2004) proposed a further model of employability, which they suggest is composed of three different dimensions: career identity, personal adaptability and social and human capital (see Figure 5 below). Their model proposes that employability can be represented as a synergistic combination of these three dimensions.

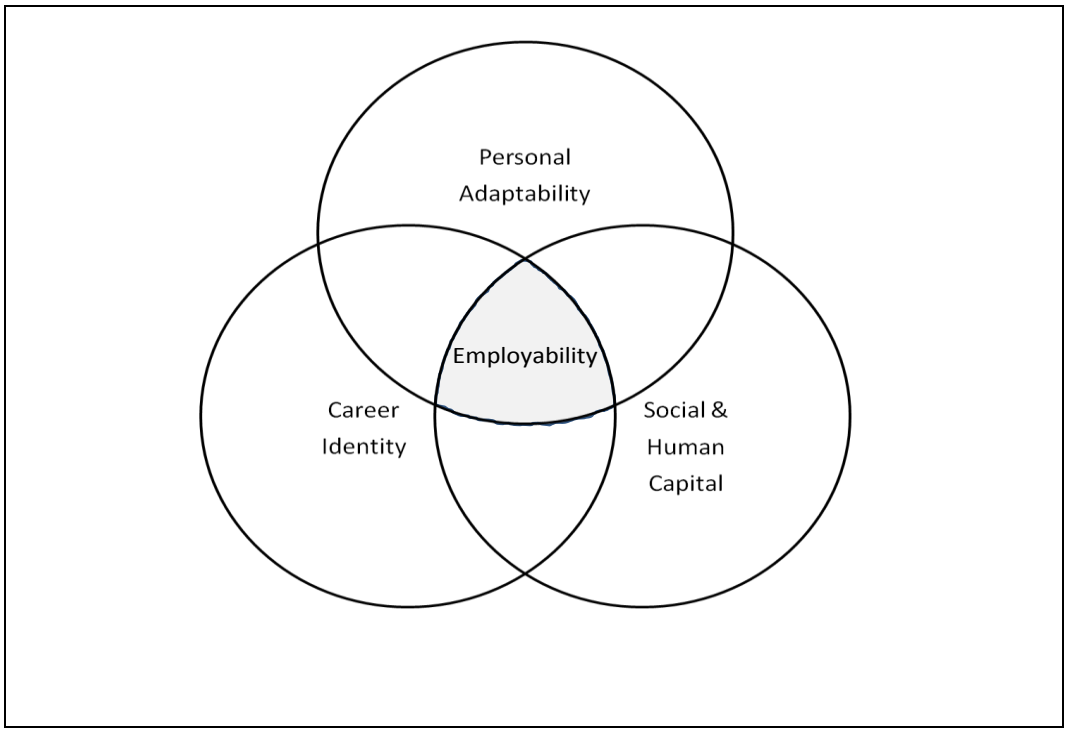


Figure 5. Model of Employability (Fugate, Kinicki & Ashforth, 2004, p. 19)

Career identity is composed of the different experiences and aspirations a person may have and according to Fugate et al. (2004) may include goals, hopes and fears; personality traits; values, beliefs, and norms; interaction styles; etc.. They suggest that career identity is concerned with making sense of the past and planning the future. There are some similarities here to the Self Awareness element of the DOTS model of Career Development Learning (Law & Watts, 1977).

Personal adaptability, the second component of the model, is concerned with a person's ability to adapt in order to meet the demands of a particular situation and Fugate et al. (2004) suggest five individual differences that they suggest are particularly relevant. These are optimism, propensity to learn, openness, internal locus of control and generalised self-efficacy. The final dimension to their model is social and human capital. Social capital refers to the social network a person has which can play an important role, particularly when searching for a job. Human capital refers to a number of factors that influence a person's career chances, such as age, education, work experience, emotional intelligence and cognitive ability. According to the authors, education and experience have been shown to be the strongest predictors of career progression.

Again, this model incorporates some important elements for consideration and includes a reference to emotional intelligence, another area that has not received a great deal of attention in previous articulations. However, as with the USEM model, it is a difficult model to use when attempting to convey the meaning behind the idea of employability to students and/or their parents. For example, Social and Human Capital are not likely to be general topics of discussion outside of their relevant academic disciplines. Additionally, although the visual representation of the model indicates a

degree of overlap between the dimensions, from the descriptions provided it is difficult to distinguish the Career identity dimension from the Personal adaptability dimension, with many elements interchangeable between the two.

A further model of employability, described as competence-based and multi-dimensional, was proposed by Van der Heijde and Van der Heijden (2006). Included as a key dimension in the model is 'occupational expertise' which relates to professional knowledge and skills in a particular professional domain. This key dimension is complemented by four others labelled 'anticipation and optimization'; 'personal flexibility'; 'corporate sense'; and 'balance'. The 'anticipation and optimization' dimension is concerned with being prepared for future work changes and as such is related to elements often found in models of career development learning (e.g. the DOTS model, Law & Watts, 1977). The 'personal flexibility' dimension is concerned with the issue of adaptability both within the current role and in order to secure future roles. The 'corporate sense' dimension is concerned with the degree to which somebody identifies with their organisation and actively plays a role in sharing knowledge, responsibilities and decision making processes. The final dimension 'balance' is concerned with issues such as work-life balance, but also with feelings of equity in terms of what a person is prepared to give to their organisation and their work colleagues and what they expect to receive in return.

The model presents a broad analysis of employability, including elements that go beyond simple skills development to include aspects such as 'balance'. The 'corporate sense' dimension is also helpful as the authors suggest this concept is built upon social skills and emotional intelligence. There would definitely be scope to include the model

in work with undergraduate students to help them consider elements of employability they might not have considered and explore their expectations, particularly in relation to what they might consider to be equitable in a workplace context. However, its use as a practical model of employability that can be used to help students to consider areas for development in order to secure satisfying occupations, is somewhat limited by its breadth and complexity.

A more recent model proposing skills important for enhancing employability in graduates, and which includes career management as an integral part, has been suggested by Bridgstock (2009). This model includes: Underpinning traits and dispositions; Discipline-specific skills; Generic skills; Self-management skills; and Career building skills. *Underpinning traits* refers to dispositions which the author states underlie the successful development and application of career management skills. She suggests that there is some evidence to link some of these traits, for example openness to experience, agreeableness, sociability, self-confidence and initiative, with good graduate outcomes and better career success.

*Discipline-specific skills* are the skills traditionally taught within HE programmes, for example a student studying for a degree in Social Work should be taught how to produce competent case study reports. *Generic skills* are the skills that should be transferable from one particular type of context to another, for example 'numeracy'. A further more detailed discussion of generic skills follows in Chapter 3.

*Self-management skills* are concerned with the way in which an individual perceives and appraises themselves in relation to their values, abilities, goals and interests and according to Bridgstock (2009) are closely related to the concept of career identity,

which also features in the Fugate et al. (2004) model. *Career building skills* comprises the skills a person needs in order to find out about the opportunities that are available to them and then choosing, securing and maintaining work, in addition to taking advantage of career opportunities in order to progress through a career or gain other desirable outcomes.

All the models so far discussed and critically analysed are concerned with the individual and/or environmental factors that contribute to employability; some are broad models relevant to the general population, whereas others are particularly relevant to HE. The following chapter describes a model of graduate employability that is specifically concerned with how students can try to develop all known aspects of employability whilst within HE to give them the best possible chance of choosing and securing jobs in which they can achieve satisfaction and success, not just upon graduation but throughout their working lives.

# CHAPTER 3

# THE CareerEDGE MODEL OF GRADUATE EMPLOYABILITY

## 3.1 Introduction

The CareerEDGE model of graduate employability (Dacre Pool & Sewell, 2007) was developed in order to provide a clear, practical model that would allow this multi-faceted concept to be explained easily and could be used as a framework for working with students to develop their employability. It is an attempt to bring together the earlier work of researchers in this field into one comprehensive, coherent model that could be used to explain the concept to academics, careers guidance professionals, students, their parents and employers without resorting to complicated theoretical discussions or academic jargon.

The design of the model (see Figure 6 overleaf) reflects an assertion that each component is essential to the development of graduate employability. The mnemonic CareerEDGE is used as an aid to remember the five components on the lower tier of the model: **Career** Development Learning; **E**xperience (work and life); **D**egree Subject Knowledge, Skills and Understanding; **G**eneric Skills; and **E**motional Intelligence. The authors suggest that whilst students are within HE, they should be provided with opportunities to access and develop everything on this lower tier and essentially, for reflecting on and evaluating these experiences. This should result in the development of higher levels of self-efficacy, self-confidence and self-esteem – the crucial links to employability. The pathways may not be as direct as depicted, with areas of overlap acknowledged. For example a period of work experience may also be a valuable part of

career development learning, but could also in some cases directly inform the subject knowledge of the academic course being studied.

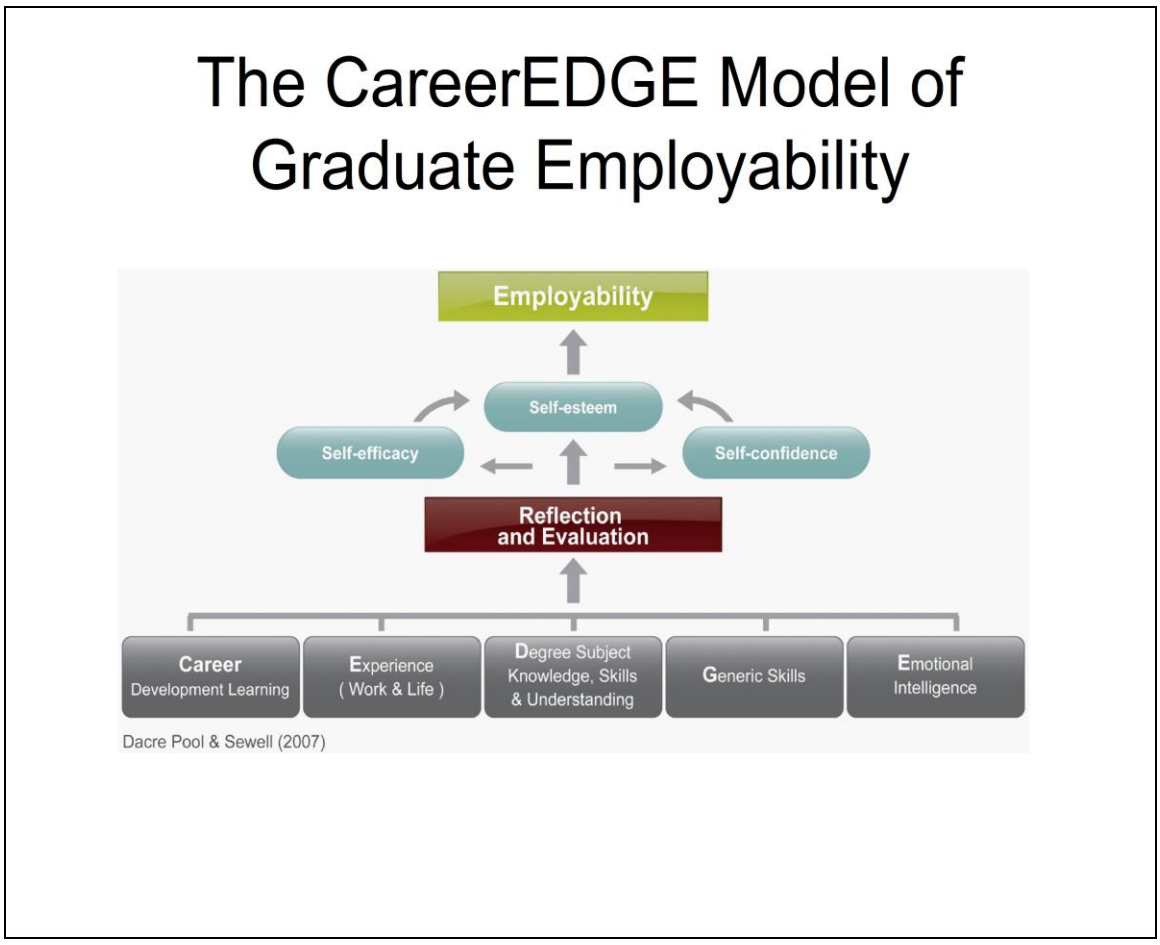


Figure 6. The CareerEDGE Model of Graduate Employability (Dacre Pool & Sewell, 2007, p. 280)

A more detailed explanation of the components of the model follows.

### 3.2 Degree Subject Knowledge, Understanding and Skills

This element is central to the model. For many students the main motivations for entering HE are generally perceived to be to study a specific subject in depth and to gain the degree qualification which should then lead to enhanced employment prospects. It is

still apparent that people with higher qualifications do have far greater employment opportunities (Johnes, 2006) and as McQuaid and Lindsay (2005) point out, gaining suitable qualifications may not ensure access to a good job but 'without them one is not in the game' (p. 116).

There are also some occupations, for example social work, nursing and computing, where expertise in that subject is incredibly important but others, such as retailing and general management where it appears to be a general 'graduateness' that employers value (Yorke & Knight, 2006). What is clear is that when considering graduate employability, the degree subject alone is not enough to ensure the graduate stands the best possible chance of gaining the employment they desire. Brown, et al. (2003) report one employer as saying that they view academic qualifications as something now taken for granted, that merely provide the first tick in the box for an applicant.

Richard Lambert, the Director-general of the Confederation of British Industry (2006–2011) agrees that from the employers' perspective, strong academic and technical knowledge, although required for many roles are not enough without the employability skills and positive attitude that will enable graduates to make a smooth transition to the workplace (CBI, 2009). According to Green et al. (2009), it seems that opinion is increasingly converging around the idea that HEIs must do more for students than simply provide teaching of disciplinary content. Thus, it seems that the degree subject knowledge, understanding and skills are a crucial element of the model but *alone* are unlikely to secure graduates occupations in which they can find satisfaction and success.

### 3.3 Generic Skills

There are issues concerning nomenclature where both the terms 'generic' and 'skills' are concerned. The term 'generic' has also been known as 'core', 'key', 'personal', 'transferable', 'common', 'work' or 'employment related'. Green et al. (2009) also add the terms 'enabling' and 'professional' to this list. Other possibilities include 'intellectual', 'cognitive', 'graduate', 'practical' and 'interpersonal' (Pedagogy for Employability Group, 2006). Additionally the term 'skills' is often used interchangeably with 'capabilities', 'competencies', 'attributes', 'levels' or 'learning outcomes' (Lees, 2002).

According to Bennett et al. (1999) the term 'core skills' is often seen by academics as the skills central to their particular discipline and it is therefore confusing to use it in this context, which requires a broader definition. They suggest the term 'generic skills' is used to represent the skills that can support study in any discipline and may be transferable to a range of contexts, both within HE and the workplace.

Another definition of generic employability skills is provided by Greatbatch and Lewis (2007) which they suggest comprises,

> *'... transferable' skills independent of the occupational sectors and organisations in which individuals work, and which contribute to an individual's overall employability by enhancing their capacity to adapt, learn and work independently. Put simply, generic employability skills are those that apply across a variety of jobs, organisations and sectors.'* (p. 13).

A large amount of literature has been published detailing the many generic skills employers look for in potential graduate employees. Murphy (2001) suggests that much of this work began with the Dearing Report (1997) which stressed the importance of four key [sic] skills which it considered to be *'key to the future success of graduates whatever they intend to do in later life'* (p. 133). These four are: communication skills, numeracy, the use of information technology and learning how to learn.

According to Murphy (2001) the QCA (Qualifications and Curriculum Authority, UK) had a widely recognised set of six key [sic] skills being: communication, application of number, information technology, working with others, problem solving and improving own learning and performance. He also suggests that several universities have used the Dearing and QCA lists to develop their own generic skills programmes.

Knight and Yorke (2004) are keen to point out that there is more to graduate employability than the possession of skills. However they include a list which is labelled 'aspects of employability' which they describe as a 'heuristic' to help academics analyse their programmes of study. The list was developed from a questionnaire prepared by Wolfenden (undated, cited in Knight & Yorke, 2004) and consists of a number of 'Personal qualities', 'Core skills' and 'Process skills'. The full list has been reproduced in Appendix C.

A variety of employability [sic] skills are covered by Hind and Moss (2005) in their book. These include what they describe as the traditional ones of communication, interpersonal and social skills together with learning and study, body language and numeracy skills. They also discuss what they term as 'higher order, complex employability skills' such as working with and leading other people, problem solving,

decision making, critical thinking, information gathering, consultancy and undertaking extended projects (p. 1).

The Pedagogy for Employability Group (2006), a group of leading authorities on graduate employability in the UK, proposed the following list which they suggest research over a quarter of a decade has established as the generic skills employers expect to find in graduate recruits: imagination/creativity; adaptability/flexibility; willingness to learn; independent working/autonomy; working in a team; ability to manage others; ability to work under pressure; good oral communication; communication in writing for varied purposes/audiences; numeracy; attention to detail; time management; assumption of responsibility and for making decisions; and planning, coordinating and organising ability

As part of their CareerEDGE model of graduate employability, Dacre Pool and Sewell (2007) added the skill 'ability to use new technologies' to this list and also suggest that many of the terms often referred to as 'enterprise skills', for example, initiative and responding to challenges, could also be included here. Commercial awareness is also something that many employers state is an essential attribute in potential graduate employees (e.g. CBI, 2009). Further discussion concerning 'enterprise skills' can be found in Appendix A.

Although there is general agreement on the importance of generic employability skills, Greatbatch and Lewis (2007) suggest there is no one definitive list. From the many developed in recent years in the UK, Europe, Australasia and the USA they compiled the following categories of generic employability skills:

- Fundamental skills – such as literacy, using numbers, technology skills.

- People-related skills – such as communication skills, interpersonal skills, influencing skills, negotiation skills, team working skills, customer service skills and leadership skills.
- Conceptualising/thinking skills – such as managing information, problem solving, planning and organising skills, learning skills, thinking innovatively and creatively, reflective skills.
- Personal skills and attributes – such as being enthusiastic, adaptable, motivated, reliable, responsible, honest, resourceful, committed, loyal, flexible, well presented, sensible, able to manage own time an deal with pressure.
- Skills related to the business world – such as innovation skills, enterprise skills, commercial awareness, business awareness.
- Skills related to the community – such as citizenship skills.

(Greatbatch & Lewis, 2007, p13)

The most recent articulation of general employability [sic] skills comes from the UK Commission for Employment and Skills (2009) and is shown in Figure 7 (overleaf). According to this publication, employability skills are defined as being the skills almost everybody needs to do almost any job. They suggest that in order for a person to use the more specific knowledge and technical skills that a particular role requires this needs to be underpinned firstly by a 'positive approach'. This could be described as being ready to take part, make suggestions, accept new ideas and constructive criticism and be prepared to take responsibility for outcomes.

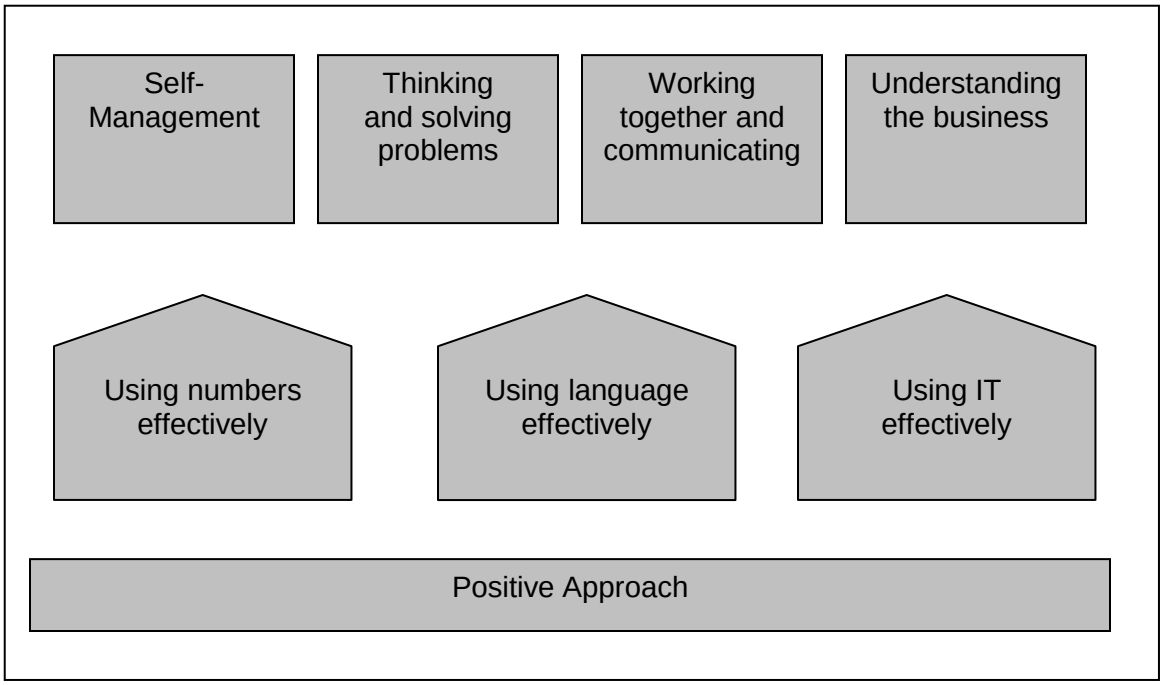


Figure 7. Employability Skills (UKCES, 2009, p. 11)

This foundation provides support for what they term as three 'functional skills'. These are using numbers, language and IT effectively. The functional skills are carried out in the context of four 'personal skills' being self-management, thinking and solving problems, working together and communicating and understanding the business. However 'positive approach', which is seen as the foundation for this model, could be viewed as quite context specific or as a personality trait and it is difficult to imagine how HEIs in the case of graduates, or more generally other educational establishments, are expected to provide opportunities for young people to develop this particular attribute.

This review has only been able to discuss a small number of the publications concerned with generic skills in the context of employability. Because of their prominence in the employability literature, there is a real danger of thinking that employability is just about the acquisition of various generic skills but it is clearly more

complex than this. Bridgstock (2009) states that although employer driven lists of skills may form an important subset of employability, they do not address the complete picture of what graduates facing the prospects of the labour market need to have developed. Knight and Yorke (2004) would concur and suggest there is a *'widespread belief that employability is assured by the possession of skills. It is not.'* (p. 24).

Therefore, although the CareerEDGE model acknowledges the importance of generic skills and sees them as a key element of graduate employability, it also stresses the importance of other contributing elements, for example Career Development Learning, to which attention now turns.

### 3.4 Career Development Learning

Career Development Learning (CDL) in the context of Higher Education has been described as being,

> *'…concerned with helping students to acquire knowledge, concepts, skills and attitudes which will equip them to manage their careers, i.e. their lifelong progression in learning and in work.'* (Watts, 2006, p. 2).

The term 'careers education' has previously been used to describe this type of activity and according to Watts (2006) was used commonly in UK schools in the early 1970s and began to be used in HE towards to the end of that decade. It is still in use in schools but is not heard that frequently now in relation to HE. The term 'career management' was often used in business in relation to the careers of middle and senior

management during the 1980s and began to be used quite extensively as 'career management skills' within HE during the 1990s. The term career develop learning (CDL) is the most recent articulation of the concept and is currently the preferred language within HE. It probably emerged as a reaction to dissatisfaction with the language of 'skills' and the skill-dominated views of employability (Watts, 2006, p. 9).

Bridgstock (2009) in a recent publication and still using the terminology 'career management' defines this as follows,

> *'In the broadest sense, career management involves creating realistic and personally meaningful career goals, identifying and engaging in strategic work decisions and learning opportunities, recognising work/life balance and appreciating the broader relationships between work, the economy and society. In the most proximal and immediate sense, it also includes the processes involved in obtaining and maintaining work.'* (p. 36)

She suggests that career management may not have been given the prominence it deserves within the graduate employability agenda and argues for careful integration into courses from an undergraduate's first year at university.

The most widely recognised model of CDL is known as the DOTS model (Law & Watts, 1977). This acronym describes planned experiences to help develop:

- **S**elf awareness – in terms of interests, values, motivations, abilities etc.
- **O**pportunity awareness – knowing what work opportunities exist and what requirements they have.

- **D**ecision learning – decision making skills.
- **T**ransition learning – including job search and self-presentation skills, such as application form completion, curriculum vitae preparation and interview techniques. (Watts, 2006). [3]

CDL appears in the Hillage and Pollard (1998) conceptualisation of employability, under their 'deployment' and 'presentation' elements. They suggest that,

> *'Merely being in possession of employer-relevant knowledge, skills and attitudes is not enough for an individual to 'move self sufficiently' in the modern labour market or 'realise their potential'. People also need the capability to exploit their assets, to market them and sell them.'* (p. 2).

Knight and Yorke (2004, p. 25) also include 'skilful career planning and interview technique' as one of the 'seven meanings of employability' that have the greatest appeal to them. Although Watts (2006) points out, that their specification of 'interview technique' results in a narrowing of focus, as does the 'notes' section which adds that 'employability is in part about knowing the rules of the job-seeking game'. There is considerably more to CDL than this would suggest. However, in support of the inclusion of CDL within an understanding of employability, they also state that most of the

[3] The letters 'DOTS' are arranged in this order to aid recall of the four stages. However these are presented here in their more logical order. For example, a person needs to have self-awareness, in terms of their interests, motivations, etc. and some idea of the opportunities available to them, before they can make an informed decision about which careers might suit them.

unemployed graduates interviewed as part of their *Skills Plus* project (Knight & Yorke, 2002) had experienced difficulties here. The lack of CDL was obviously a notable problem for them, which had reduced their overall employability.

Harvey (2005) includes career management [sic] as part of his model of employability (see Figure 3, p. 28), particularly in relation to 'central support' which refers to provision offered by careers services within HE. These are now often involved with a diverse range of activities in addition to the traditional one-to-one careers advice sessions, and would include activities such as helping students to prepare for interviews, mock interviews and workshops to help with CV preparation or completion of application forms. Careers staff in many HE institutions also collaborate with academic staff to develop skills programmes and sometime share delivery of these (Harvey, 2005, p. 19).

As with all the elements of the CareerEDGE model, CDL is essential. A student may gain an excellent degree classification and develop many of the required generic skills, but if they are unable to decide what type of occupation they would find satisfying or be unaware of how to articulate their knowledge and skills to a prospective employer, they are unlikely to achieve their full career potential.

### 3.5 Experience – Work and Life

Another element from the lower tier of the CareerEDGE model is that of 'experience'. The work experience component of this is crucial, but it is important for students to realise that they often have a lot of other life experiences that can be drawn upon in order to enhance their levels of employability. This is particularly likely to be the case for mature students.

Harvey (2005) contends that in particular, the younger, full-time students who have not had significant work experience as part of their programmes of study, often leave university with very little idea of the nature and culture of the workplace and consequently can find it difficult to adjust. He suggests that this period of adjustment is a cost that many graduate employers are no longer prepared to accept and therefore HE is increasingly expected to take on this preparation for work role.

According to the Pedagogy for Employability Group (2006), researchers are in agreement that students with work experience are more likely to gain employment upon graduation than those without. The Dearing Report (NCIHE 1997) had a key recommendation for work experience to be a student entitlement. Harvey (2005) also points to an increasing trend for employers to recruit from graduates who have undertaken work placements with companies.

Merely having experience of the workplace is not enough to enhance a student's employability; it is the learning from the experience that really matters. According to Harvey (2005) learning from work experience is effective if it has meaning and relevance to future career development and has been planned and intentional from the outset. Work experience should also be assessed or accredited and integrated into undergraduate programmes with the quality being monitored and all those involved, i.e. the employers, academics and students, committed to it. A process to enable the student to reflect on and articulate their learning is also a necessity.

However these suggestions are in the main related to structured work experience provided by the HEI, for example sandwich placements. Students may also be able to enhance their employability through a range of work related experiences, for example,

summer placements, short job tasters, gap year work, summer internships, short term project placements, part-time casual work – e.g. bar work or temping, work shadowing, voluntary work, or student union roles.

Harvey's models of employability development (2001; 2002, see Figures 2, p. 27 and 3, p. 28) both include work experience  He suggests that in order to help students develop their employability, HEIs need to make available a range of work experience opportunities either within or external to programmes of study and provide opportunities for students to reflect on and record these experiences (Harvey 2005).

It is not just employers and academic staff who appreciate the role work experience has to play in enhancing graduate employability.  Yorke (2004) refers to interviews carried out with recently-recruited graduates which found that the majority (81 of 93 valid responses) acknowledged the importance of work experience, even lower level casual employment, as being an important factor in their development of a range of 'pragmatic work-related capabilities' (p. 414).  In a survey of 2,500 finalist students and recent graduates conducted in May 2004, 89% said that the most effective way to gain awareness of and develop employability skills was through direct work experience (doctorjob.com, 2004).

It is often suggested that part-time working during term time is likely to interfere with academic work (Harvey, 2005) and students do have to get the balance right. However, most universities now actively support students, often providing 'job shops' advertising part-time work available to them.  This is likely to be partly due to the recognition that students can learn significantly from their experiences in the workplace but also because,

*'...of pragmatic acceptance of students' need to work while studying because state support is no longer sufficient. Rather than ignore it or regard it negatively, academics are trying to get students to think positively about what they learn from their part-time work'* (Harvey, 2005, p. 21)

Work experience, therefore, is important in the development of graduate employability. Two key findings of the Work Experience Group (2002) appointed by the government to investigate work experience opportunities in HE summarise this succinctly:

- *'With guidance, students of all ages can learn from their experiences in the world of work to develop their key competences and skills and enhance their employability.*
- *Employers value people who have undertaken work experience, been able to reflect upon that experience and then go on to articulate and apply what they have learnt.'* (p. 4)

**3.6 Emotional Intelligence**

A detailed review of EI is included in Chapter 5 of this thesis. However, given its prominence as a key element of the CareerEDGE model of graduate employability, it is necessary to provide a brief discussion of EI within this context.

Goleman (1998, p. 4) states that:

*'In a time with no guarantees of job security, when the very concept of a 'job' is rapidly being replaced by 'portable skills', these are the prime qualities that make and keep us employable. Talked about loosely for decades under a variety of names, from 'character' and 'personality' to 'soft skills' and 'competence' there is at last a more precise understanding of these human talents, and a new name for them: emotional intelligence.'*

This relates to Goleman's (1996; 1998) rather broad conceptualisation of EI and many would argue that this 'variety of names' does not exactly equate to EI. Despite this, there is good evidence to support the notion that even if these things are not the same as EI, they are likely to be influenced by it.

Mayer, et al. (2004) define EI in the following way:

*'…the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth.'* (p. 197).

This definition is derived from their four-branch model of EI which is an ability model as opposed to a trait model which some researchers support (e.g. Petrides & Furnham, 2001). The ability viewpoint sees EI as something that develops in early

childhood and then throughout life. As an ability, it is something that is possible to change, unlike a personality trait, which after a certain age is regarded as relatively stable (e.g. Pervin & John, 1997).

There is good empirical research evidence available to suggest that EI, as defined by the ability model and when measured validly, can predict significant outcomes such as better social relationships (Lopes, Brackett, Nezlek, Schutz, Sellin & Salovey, 2004), workplace performance (Côté & Miners, 2006), psychological well-being (Bastian, Burns & Nettelbeck, 2005), academic achievement (Qualter, Gardner, et al., in press) and leadership (Daus & Ashkanasy, 2005). These outcomes are all likely to be important contributors to the overall employability of a graduate. The ability to form better social relationships will, for example, result in more harmonious working relationships with managers and peers. It will also help graduates to develop their 'social capital', described as the 'goodwill inherent in social networks' (Fugate, et al., 2004). Improved psychological well-being could help to protect the graduate from some of the negative aspects of organisational stress and a graduate's potential for leadership is often considered important by employers. Additionally, a recent study by Nelis et al., (2011) concluded that EI might be a key element in securing a job, particularly in relation to the way people behave in interview situations.

A number of previous models and theories of employability have either mentioned or alluded to the area of EI. The Dearing Report (NCIHE, 1997) has 'communication' as one of the four key skills crucial for graduates to develop in order to enjoy future success. The Stephenson (1998) account that influenced the USEM model (Knight & Yorke, 2004) suggests that capable people have confidence in their ability to

live and work with others. In addition, Yorke (2004) discusses how interviews carried out with the senior colleagues of recently-recruited graduates as part of the Skills Plus Project, found that personal qualities were mentioned 550 times by the 117 respondents involved in the study. He points out that where criticism was directed at degree programmes, this tended to be in relation to perceived weaknesses in the development of personal characteristics together with other capabilities particularly relevant to the workplace, such as communication and interpersonal skills.

Yorke and Knight (2006) state that studies of what employers are looking for in graduate recruits tend to agree that it is the 'soft' 'generic' abilities and personal qualities that are important. When discussing their USEM model (Yorke & Knight, 2006, p. 578) they suggest that under the 'E' section, emotional intelligence is of significance for successful interactions with other people. A further publication (Yorke & Knight, 2007) states that,

> *'Personal qualities pervade employability: an appropriate personal manner, for example is an asset in any situation involving interpersonal contact….Our general claim is that discussions of employability are transformed by the inclusion of personal qualities…'* (p. 160).

The employability framework proposed by McQuaid & Lindsay (2005, full details in Appendix B) includes a number of different elements under the 'Individual factors' component that are related to the development of EI. These include such things as basic social skills, understanding of actions and consequences, positive attitude to

work, self motivation, judgement, assertiveness, interpersonal and communication skills, emotional and aesthetic customer service skills, team working and psychological well-being. The model proposed by Fugate et al. (2004) also includes a mention of EI within the 'human capital' dimension as something that influences employability. Additionally, 'corporate sense', one of the dimensions of employability included in the Van der Heijde and Van der Heijden (2006) model, is described as being built upon social networks, social skills and EI.

EI also appears in one guise or another in other models or discussions of employability. For example, Warn and Tranter (2001) list seven key competences identified in Australia by the Mayer Committee (1992) as being necessary in order for students to successfully assimilate into the workforce; amongst these was 'working with others and in teams.' (p. 192). Greatbatch and Lewis (2007) also allude to EI in their list of generic employability skills, in particular their 'people-related skills' section which includes aspects such as communication skills, interpersonal skills, influencing skills, negotiation skills, team working skills, customer service skills and leadership skills.

Morley (2001) is quite explicit about what she views as the omission of EI in much that has been written about graduate employability. She states that,

> *'An area that has been excluded from the discussion relates to the affective domain. In the employability discourse, the world of work is represented in a highly sanitised and rational way. Graduates are hardly thought to require emotional intelligence, political skills or self-care in the face of occupational stress.'* (p. 135)

According to Little (2001) there is evidence from graduate surveys, both in the UK and across Europe, that suggests personality is the most important criterion in gaining that first graduate role after university. This was rated over the 'field of study' which was in second place. She suggests, however, that it seems to be debatable whether these desirable personal qualities are being enhanced through employability initiatives undertaken in HE or whether it is, in fact, possible for HE to actually make a difference here. Personality traits are generally considered to be relatively stable and as such, difficult to change. However, if some of the personal qualities referred to are actually EI abilities, it may be possible for HE to successfully teach these (Dacre Pool & Sewell, 2007).

Jaeger (2003) has demonstrated that EI can be improved through teaching and learning in a higher educational setting and is positively correlated to academic achievement. She states that,

> *'Enhancing emotional intelligence is a desirable outcome for students, employees and employers'* (p. 634).

This particular study was partly based on Goleman's (1998) book and used the EQ-i (Bar-On, 1997) measure, both of which embrace a broad, trait based approach to EI. However, Jaeger (2003) states that in order to add scientific support to the concept of EI, it would be useful for future research to utilise more precise and accurate measurement tools, such as ability based instruments. The tentative results of a pilot study which used

such a measurement tool, the Mayer-Salovey-Caruso Emotional Intelligence Test or MSCEIT (Mayer, Salovey & Caruso, 2002), suggest that it is, indeed, possible for universities to provide opportunities for students to learn more about and develop their own EI (Dacre Pool, 2009). The research by Nelis, et al. (2009, 2011) also supports this assertion and provides empirical evidence that lasting improvements in levels of EI can be achieved through HE teaching interventions (see Chapter 5, p. 133).

The inclusion of EI in the CareerEDGE model of graduate employability would appear to make a lot of sense. Not only is it an important element in its own right, but it is likely to underpin a number of important factors in the other elements, particularly in relation to the 'generic skills' element. Taking the generic skill 'communication' into consideration, if a person finds it difficult to perceive emotion in others, the first of Mayer and Salovey's four factors, then how will they know how to react appropriately during an interaction? If a person is unable to manage their emotions effectively, there could be potentially serious consequences for team working, another generic skill cited as important by most employers.

Therefore, there appears to be some very good arguments for raising the profile of EI from something that is alluded to or mentioned as one of many personal qualities employers may be looking for, to an essential element in the development of graduate employability.

### 3.7 Reflection and Evaluation

Providing students with the opportunities to gain the necessary skills, knowledge, understanding and personal attributes through employability related activities is

obviously of great importance. However, without opportunities to reflect on these activities and evaluate them, it is unlikely that this experience will transfer into learning and much may be wasted. Lees (2002) states that all students engaged in HE should be entitled to '*messages and encounters that develop understandings, skills, self-theories and reflection.*' (p. 6).

Warn and Tranter (2001) define reflective thinking as:

> *'…the capacity to develop critical consideration of one's own world-view and the relationship to the world view of others. It is the ability to transcend preconceptions, prejudices and frames of reference … it underlies the capacity to learn from others and from experience…'* (p. 193)

Within the context of employability initiatives, reflection often involves students identifying situations from which they can learn something. They describe and analyse the experience, trying to identify exactly what can be learnt from it and how they can use this learning in future. This type of reflective learning often takes the form of written learning logs or reflective journals.

Reflection is incorporated in the USEM model (Knight & Yorke, 2004) under the M for Metacognition. They describe reflection as a metacognitive process which is widely associated with superior performance. Harvey (2005) suggests that in an attempt to provide an integrated approach to employability, the most recent developments within HE have involved the structuring and encouragement of reflection. Reflection plays an

important role in the Harvey et al. (2002) model of employability (see Figure 3, p. 28). In their view one of the crucial aspects of making learning from work experience effective, is providing a process for articulation and reflection.

Reflection can be seen as a key contributor to employability, both in its own right and in the way it underpins other employability achievements (Moon, 2004). It is suggested that reflection is a way of purposefully re-evaluating situations in order to change them. There would also appear to be strong links here with EI, as being able to reflect on feelings and behaviours is crucial for a person to be able to manage emotion appropriately (e.g. Goleman, 1996; Mayer et al., 2004).

Reflection can help a student to gain employment, by providing a means by which they can become aware of and articulate their abilities. But additionally it is an ability that will help them in their employment and as a contributor to lifelong learning skills; as such it is an essential element both in relation to HE learning and in the employment context (Moon, 2004).

### 3.8 Self-Efficacy, Self-Confidence, Self-Esteem

Each of these three closely-linked elements of the CareerEDGE model has a huge literature of its own. The intention of this literature review is to focus on those aspects that are of most relevance to employability. For example, one meta-analytic review found a strong positive relationship between self-efficacy and work-related performance (Stajkovic & Luthans, 1998a) and another found self-efficacy and self-esteem to be significant predictors of job satisfaction and job performance (Judge & Bono, 2001).

*3.8.1 Self-Efficacy*

Perceived self-efficacy refers to a person's beliefs concerning their ability to successfully perform a particular behaviour (Bandura, 1977, 1995). Studies have demonstrated the impact of children's beliefs in their ability to control their learning and academic achievements on their actual academic achievement (e.g. Bandura, Caprara & Pastorelli, 1996). The importance of self-efficacy for employability was demonstrated by a longitudinal study which measured academic self-efficacy in adolescents (age 12 to 15) and then their job satisfaction (age 21). This found that higher self-efficacy beliefs were related to a lower risk of unemployment and greater job satisfaction (Pinquart, Juang & Silbereisen, 2003).

Self-efficacy may have a vital role to play within graduate employability as people who have greater efficacy in their ability to meet educational requirements for particular occupational roles, tend to give more consideration to and show greater interest in a wider range of career options. They also tend to prepare themselves better educationally for these roles and show greater persistence when faced with challenging career pursuits (Bandura, Barbaranelli, Caprara & Pastorelli, 2001). It is highly likely therefore that this attribute will help a graduate to choose and secure occupations that will give them satisfaction and success.

Efficacy beliefs influence the way people think, feel, motivate themselves and behave and these develop through a number of different sources (Bandura, 1995). The ones particularly pertinent to graduate employability are mastery experiences, vicarious experiences provided by social models, and social persuasion (Dacre Pool & Sewell, 2007).

Mastery experiences occur when people are given the opportunity to try a particular task for themselves. Work-related learning experiences would be a good example of the type of mastery experiences incorporated into employability activities. It makes perfect sense that if a student is given the opportunity to spend some time in a 'real' workplace and does this with a degree of success, they are likely to feel more efficacious about their chances of success in a job after graduation. Bandura (1995) suggests that mastery experiences are the most effective way of creating a strong sense of self-efficacy, and so play a vital role within employability.

Vicarious experiences provided by social models could occur when students are able to see others who have achieved the success they desire. The closer the others are in similarity to themselves, the more effective the experiences are. An example of this type of experience would be when successful recent graduates return to the university to give talks or meet with current students to discuss how they achieved their goals.

Social persuasion occurs when people are persuaded that they possess the capabilities needed to master a particular activity. This encourages them to put in more effort and stay motivated in order to successfully achieve their goals. There is an important role for tutors to play here, particularly in the way they provide feedback to their students. Bandura (1995) states that:

> *'A major goal of formal education should be to equip students with the intellectual tools, efficacy beliefs, and intrinsic interests to educate themselves throughout their lifetime.'* (p. 17).

Therefore by providing the opportunities for mastery experiences, vicarious experiences and social persuasion, then encouraging reflection on and evaluation of these experiences, self-efficacy can be increased (e.g. Schunk & Hanson, 1985).

The USEM model (Knight & Yorke, 2004) also emphasises the role of 'efficacy beliefs' (E) in graduate employability which they describe as a belief that one generally can make some impact on situations and events. Furthermore, a study by Saks and Ashforth (1999) demonstrated that graduates' self-efficacy in relation to job-searching was positively correlated with employment outcome. This could be because having this belief that your actions can result in the outcome you are hoping for, results in an increased motivation to carry out the necessary tasks to achieve the outcome. A lack of self-efficacy could result in a person viewing the task as not worth the effort, thereby almost ensuring failure.

### *3.8.2 Self-Confidence*

If self-efficacy is seen as a belief that one can make some impact on situations and events, as defined above, then self-confidence could be seen as the way this is projected to the outside world (Dacre Pool & Sewell, 2007). Self-confidence appears to be something that can be observed and identified from a person's manner and behaviour. According to Goleman (1998, p. 68), people with self-confidence are able to present themselves with self-assurance and have 'presence'.

It has been suggested that self-confidence can be viewed as either trait or state specific. Norman and Hyland (2003) intimate that if self-confidence is a trait, which personality theorists suggest are relatively stable over time, then those who lack self-

confidence would be unlikely to develop it through educational activity. If, however, it is viewed as a situation specific concept, then it would be possible for students to increase their levels of self-confidence for any given situation. This would appear to make a lot of sense and most people will be aware of examples whereby people demonstrate self-confidence in specific domains (e.g. sporting ability) but not in others (e.g. a job interview situation). However, with preparation, support and practice, it is possible for people to show increased levels of self-confidence within a specific domain (Norman & Hyland, 2003). For example, a student who successfully gives their first ever oral presentation in front of peers and receives positive feedback, is very likely to experience increased self-efficacy for that particular task. The next time they give a presentation, it is quite possible that this will be with a much greater feeling of self-efficacy and display of self-confidence. An increase in self-efficacy would hopefully translate into an increase in demonstrated self-confidence.

### *3.8.3 Self-Esteem*

People with global self-esteem have self-respect and a feeling of worthiness, but are realistic in their evaluations of themselves (Owens, 1993). Without this realism, a person is unlikely to reflect on areas for improvement, which is crucial to the process of lifelong learning. Dweck (2000) does not see self-esteem as an internal quality that increases with successes and decreases with failures. Nor does she think it is something we can give to people by praising them for their high intelligence. Instead, she considers it to be a positive way of experiencing yourself when you are using your abilities well in order to achieve something you consider of value. It is something people can be helped

to get for themselves by teaching them to value learning and effort and use errors as a way of mastering new challenges. In terms of graduate employability, by giving students the opportunities to develop a range of skills and knowledge, then teaching them how to reflect on these experiences and learn from them, this should also be an effective way to help them develop their self-esteem.

Lawrence (1996, p xi) provides support for the inclusion of self-esteem in any model of graduate employability when he states that:

> *'One of the most exciting discoveries in educational psychology in recent times has been the finding that people's levels of achievement are influenced by how they feel about themselves. A vast body of research evidence has accumulated showing a positive correlation between self-esteem and achievement…'*

Respondents sampled from Foundation degree programmes in the study conducted by Mason, Williams, Cranmer and Guile (2003, cited in Yorke, 2004) which explored how much HE enhances the employability of graduates, reported the benefits they felt they had gained. Confidence, self-esteem and belief in their capacity to undertake degree-level study (self-efficacy) were all in the top five most prominently mentioned.

The three concepts of self-efficacy, self-confidence and self-esteem are difficult to distinguish and are often used interchangeably. A detailed analysis would go far beyond the scope of this brief review but Stajkovic and Luthans (1998b) provide some conceptual clarification. According to Yorke (2004) *'Self-esteem and a belief in self-*

*efficacy contribute to personal effectiveness.'* (p. 424). As such there would appear to be good evidence for including these aspects of graduate employability within any model with the suggestion that undergraduates need opportunities and support to encourage development of these important elements.

### 3.9 CareerEDGE Model - An Individual Account of Employability Development

The CareerEDGE model approaches employability from the same perspective as Yorke (2006) who describes it as a multi-faceted characteristic of the individual. All of the components of the CareerEDGE model are important and necessary in order for a graduate to reach their full employability potential. Of course it is essential to point out that having employability does not *guarantee* a graduate a satisfying occupation, and Clarke (2008) draws attention to the fact that '… *even the most seemingly employable person may experience difficulty finding a suitable job in an unsympathetic labour market.'* (p. 269). It is clear though, as Fugate et al. (2004) point out, that having employability will enhance an individual's likelihood of gaining employment.

The CareerEDGE model is an individual account of employability development for specific use within HE. It differs from the Hillage and Pollard (1998) framework, which is a more general model and includes the context in which a person is seeking employment (e.g. the current state of the labour market). CareerEDGE is also different to the McQuaid and Lindsay (2005) framework, which places an even greater emphasis on the importance of personal circumstances and external factors (see Appendix B). Rothwell and Arnold (2007) also state that employability is not just about individual attributes but that there are a number of factors, both internal and external to the

organisation, to take into consideration, particularly in relation to labour markets. It is difficult to argue with such assertions and students do need to be aware of these external factors. However, even though these other factors can be acknowledged as important considerations, in terms of providing help and support to undergraduates to develop their employability, they are not something that universities can have any influence on. Knight and Yorke (2004) agree when they explain that their USEM account does not say much about the context element because '*neither higher education nor students can do much about the demand for graduate labour*.' (p. 34). As De Cuyper et al. (2011) point out, the word 'employability' is derived from the words 'employment' and 'ability'. Universities may be able to influence the 'ability' element which refers to the person's skills and competences but have no control over the 'employment' aspects which are dependent on a number of issues, particularly labour market demand.

One possible criticism of the CareerEDGE model could be that in striving to be a practical and useable model, it is, in fact, too simplistic in its approach. However, beneath each element there is a wealth of theory and research that the user can investigate and explore if necessary. The model is as straightforward or as complex as the user wants it to be, making it accessible to any audience. A further criticism of the CareerEDGE model, and indeed all other employability models, is that it is purely theoretical and as yet empirically untested. There is a need for research to test the model and this thesis aims to begin this process by examining one specific element, the proposed relationship between emotional competence and graduate employability.

In conclusion, the CareerEDGE model of graduate employability is a straightforward, practical framework for use within HE that allows the concept to be

explained to all the relevant stakeholders and the necessary strategies implemented. It has been described as '*coherent, elegant and a useful contribution to the conceptual literature*' (A.G. Watts, personal communication, July 8, 2007). The model has been specifically developed to focus upon and be applied to the elements of graduate employability that students and HEIs are in a position to influence in order to ensure that graduates are in a better position to successfully make the transition from university to the world of work. Importantly the skills, knowledge, understanding and personal attributes developed should also ensure that graduates are equipped for further change and transition in the years to follow.

# CHAPTER 4

# MEASURING GRADUATE EMPLOYABILITY

## 4.1 Introduction

How to, and indeed whether we should even attempt to, measure graduate employability is another highly contentious issue. At the moment, the measure mostly associated with graduate employability is a survey which looks at the number who secure full-time jobs within six months of graduating. The data for this survey, the Destinations of Leavers from Higher Education (DLHE) are compiled by the Higher Education Statistics Agency (HESA) and the information used to construct league tables that purport to indicate the success of universities in relation to graduate employability. Quite simply, getting a job within six months of graduating is equated with graduate employability, reducing the concept to its simplest measure, that of obtaining employment. Using graduate employment rates may be a quick and convenient way of measuring employability, but is quite clearly a method lacking in validity.

One of the issues with these data being used as a measure of graduate employability is that for many graduates, it takes longer than six months for them to secure the 'graduate job' they desire (Purcell & Elias, 2004). This could be for any number of reasons, including their choice, after graduation, to travel, do voluntary work to gain valuable experience, undertake further study or take on any job just to pay the bills and start to pay off some of their debts. In fact, Purcell and Elias (2004) found that immediately after graduation in July 1995, 43% of the participants in their study were working in 'non-graduate jobs'; seven years later, in December 2002, this had fallen to

11%. They suggest that this provides further evidence of the non reliability of initial graduate under-employment as an indicator of longer-term labour market outcomes.

Harvey (2001) is probably the most vociferous critic of this method of measurement. He relates this to his 'magic bullet' model of employability (see Figure 1, p. 26) and suggests that this method implies that HEIs provide employability-development opportunities; the student develops employability and then gains employment. In reality there is a great deal more complexity than this would suggest.

HEIs should be providing many employability development opportunities to undergraduates in a variety of ways; however there is no guarantee that every student will take advantage of these opportunities. Students also bring with them into HE many different experiences, both educational and extra-curricular and some may already have a good deal of work experience. The institution will only be able to play a part in their employability development and the extent of this part will vary from student to student. Harvey (2001) identifies a further complication in as much as ultimately, it is employers who convert 'graduate employability' into employment. Even if their approach to recruitment is a 'rational' one, there are a number of other factors that mediate the employment process. He lists these as follows:

1. **Type of higher education institution**. For many graduate recruiters they see the 'best students' as attending certain institutions and will only select from this limited range. Obviously these institutions are likely to have better graduate employment rates.

2. **Mode of study**. Many part-time students continue to be employed on a full-time basis whilst continuing with their studies and after graduation. This continued employment may or may not be related to any development of employability during their time within HE.

3. **Student location and mobility**. Many graduates, particularly those with family commitments are not mobile and therefore whether or not they secure employment depends very much on the state of the local labour market.

4. **Subject of study.** There is variation between graduates from different disciplines in terms of employment rates, time it takes to secure employment and type of job that is seen as desirable. Many graduates from some disciplines, e.g. those from art and design, choose to be self-employed. This could be viewed by these graduates as their dream occupation but may not be reflected as a 'graduate job' in first destinations surveys. As Harvey (2001, p. 103) points out, some institutions specialise in areas such as pharmacy, optometry and computer science, which have good rates for employment anyway. Their graduate employment rates will obviously reflect this too.

5. **Previous work experience**. Work experience is an increasingly important factor taken into account by most graduate recruiters. This may be gained as part of the university's employability provision but may not.

6. **Age**. Graduate recruiters discriminate against graduates on the basis of their age (Harvey, et al., 1997; Purcell, Pitcher & Simm, 1999). More recent research by Purcell and Elias (2004) also found that those who graduated over the age of 30

were more likely to have experienced difficulty in gaining the employment that their degrees had equipped them for.

7. **Ethnicity**. Harvey (2001, p. 103) suggests that although discrimination of this nature has probably reduced in recent years, it is still likely to be a relevant factor.

8. **Gender**. Women are still underrepresented at senior management, particularly board level, within organisations.

9. **Social Class**. As Harvey (2001, p. 103) points out, this affects employment opportunities in many ways because it is completely entangled in access to educational opportunities – both academic and extra curricular. The importance of social networks is another factor that should not be underestimated. Research from Smith, McKnight & Naylor (2000, cited in Lees, 2002) suggests that graduates from poorer backgrounds have less of a chance of securing 'graduate jobs' after completion of their degree studies.

Harvey (2001) also raises the issue of the questionable rationality of some employers' recruitment strategies and cites examples of the Civil Service trying very hard to recruit science graduates because politicians have suggested this is a good idea and a multinational food manufacturer who admits they only go to eight universities because it is a safer, more efficient option for them. He also cites some other rather bizarre prejudices such as the law firm that does not think linguists make good lawyers but that maths graduates do because '*they think in an analytical factual way that lawyers need to think, whereas a linguist will not'* (p. 104).

Harvey (2001, p 105) sums up this area well when he says:

> *'Given the range of independent factors that impinge on the recruitment process and the tenuous link between employment and employability-development opportunities offered by institutions, it is rather surprising that intelligent people have rushed to use employment rates of graduates as measures of the employability-development impact of institutions. In part, in the UK, there has been political pressure to produce an 'employability performance indicator' and the clear preference is a simple quantitative measure based on outcomes, irrespective of whether it actually measures anything that the institutions can directly affect.'*

There is widespread agreement between scholars in this field that measuring employability in this way is completely inappropriate. Knight (2001) agrees with Harvey (2001) when he suggests that the UK government's insistence of viewing graduate employment rates as a useful indicator of the contribution a university makes to graduate employability is implausible, unsound and unfair.

It may be tentatively concluded that as with many of the achievements valued by society, graduate employability is something that resists reliable and valid measurement in this value added way (Yorke & Knight, 2006) and that attempting to measure it in this fashion is a somewhat pointless exercise. However, developing tools to enable students and graduates to engage with the idea of employability and reflect on their strengths and

weaknesses would appear to be a useful endeavour. Self-evaluation is likely to be the most useful way of approaching this task.

### 4.2 Employability Measures

Warn and Tranter (2001) developed a questionnaire that looked to measure graduates' self-assessment of their achievement of particular generic employability competencies, for example, communicating ideas and information and problem solving. They suggest that research has supported the use of self-assessment as valid for skill measurement and cite a study by Boyatzis, Baker, Leonard, Rhee and Thomson (1995) as evidence that students self-evaluations of changes in abilities correspond with those made by independent raters.

There have been some recent developments with regard to the measurement of employability amongst people in the workplace. Van der Heijde and Van der Heijden (2006) designed a competence based measurement with five dimensions: occupational expertise; anticipation and optimisation; personal flexibility; corporate sense; and balance. The sample for this validation study consisted of employees of a Dutch building materials firm, with the mean number of years worked being twenty. Graduates (BA and above) made up 17.5% of the sample and, although the measure appears to have promising psychometric properties, some of the items in their English translation are a little awkward. For example, item 4 under the 'balance' section:

> *'My work efforts are in proportion to what I get back in return (e.g. through primary and secondary conditions of employment, pleasure in work).*

Berntson and Marklund (2007) devised a brief five-item measure of self-perceived employability. The five items relate to the respondents' perceived skills, experience, networks, personal traits and knowledge of the labour market and are presented in Appendix D. Individuals respond to these five items using a 5-point Likert scale with '1' indicating 'no agreement at all' and '5' indicating 'entire agreement'. Although a brief measure, the questionnaire does capture elements of employability that go beyond generic skills. In the Berntson and Marklund (2007) Swedish study, which involved a random sample of people between the ages of 25 and 50, principal axis factoring showed all five items with factor loadings above .74 and 68% of the variance explained ($N$ = 1918). In this study the alpha internal reliability coefficient was .88, mean score was 3.02 and the standard deviation 1.03.

A further brief, three-item, measure of perceived employability was utilised by De Vos and Soens (2008) in their study of career attitudes. Respondents indicate on a 5-point Likert scale the extent to which they agree with the following items:

1. *I believe I could easily obtain a comparable job with another employer* (this item adopted from Eby, Butts & Lockwood, 2003).
2. *I believe I could easily obtain another job that is in line with my level of education and experience.*
3. *I believe I could easily obtain another job that would give me a high level of satisfaction.*

In this study, the alpha internal reliability coefficient was .91, mean score was 4.10 and the standard deviation 0.71 ($N$ = 289).

Although the measure only consists of three items it captures a good deal of what is understood to be graduate employability (Dacre Pool & Sewell, 2007), particularly in relation to success in securing occupations that the person perceives as being appropriate to their level of education and experience (or put another way 'graduate jobs'). There is also an acknowledgement of the importance of personal satisfaction in relation to the workplace. However, this measure was designed to be used alongside various measures of career attitude and there are no items designed to capture the level of a person's career development learning, other than their confidence about actually securing a suitable job. Self awareness which should result in a person being in a better position to choose an appropriate position, opportunity awareness and decision making have been overlooked. Additionally, no consideration has been given to a person's assessment of their generic skills.

Rothwell and Arnold (2007) also developed a scale of self-perceived employability for individuals in the workplace. The sample for their validation study consisted of Human Resource professionals who were all members of the UK's Chartered Institute of Personnel and Development. More than half were qualified to degree level or above. The brief 11 item scale (full details in Appendix E) includes items reflecting an individual's 'internal' employability, i.e. their perceived value within their organisation; and 'external' employability, i.e. their perceived value outside of their organisation. It includes items that cover elements of career development learning, particularly in relation to opportunity awareness and transition skills. Some of the items also capture confidence

concerning job relevant knowledge and skills, experience, and generic skills. Respondents indicate on a 5-point Likert scale the extent to which they agree with the statements, with '1' indicating low and '5' indicating high levels of agreement.

In the Rothwell and Arnold (2007) study, principal components analysis of the 11 items suggested a two component solution, of internal and external employability. The alpha internal reliability coefficient for overall employability was .83, mean score was 3.51 and standard deviation 0.57 ($N$ = 200). For internal employability (four items) the alpha internal reliability coefficient was .72, mean score was 3.67 and the standard deviation 0.70. The alpha for external employability (six items) was .79, mean score 3.30 and the standard deviation 0.67. Further evidence of the validity of the measure was demonstrated by the authors' success in distinguishing employability from measures of professional commitment and career success.

The measure was designed to be used with individuals already in the workplace, so would only be appropriate to use with graduates who have been in employment for some time. It demonstrates good psychometric properties (Rothwell & Arnold, 2007) the items are clearly stated and understandable, and the measure is likely to be a useful addition to the literature.

Rothwell, Herbert and Rothwell (2008) have published a self-perceived employability scale specifically for use with undergraduate students. This 16 item scale (full details in Appendix F) contains a new dimension of employability, which the authors describe as, '*the impact that the reputation (brand image) of the university attended might have on a student's perception'* (p. 2). This is measured with items such as:

*'The status of this university is a significant asset to me in job seeking.'*

Interestingly, in this study the sample were drawn from three universities of differing 'status' (one pre-1992 university, one post-1992 former polytechnic and one post-1992 former college of higher education) and it was found that the individuals from the 'strongest' university brand (pre-1992) were the least confident about their employability. The authors suggest that this could be because these students had higher expectations in terms of the level of job or status of employer they desired and recognised the challenges they faced. They also offer the explanation that the students at the lower status universities may see attending university as an achievement in itself, may put their desire for a 'graduate job' second and/or may have less realistic expectations. A further explanation could be the employability strategies in place in the institutions concerned. A 'strong' university, confident in its status with employers, may pay less attention to the development of employability in its undergraduates, with these students not having developed an awareness of all the skills, knowledge, understanding and attributes they are developing alongside their chosen degree subject studies.

Commenting upon the issue of measurement of employability in students, Yorke and Knight (2007) suggest that inherent within employability are people, environments, experiences and affects. Furthermore, employability is relational in as much as students are only actually employable to the degree that there is demand from employers for what the students have to offer. As such it is almost impossible to construct a measurement tool that would adequately describe a person's total employability. Although they do

suggest that it is feasible to design questionnaires that enable students to think about their employability, reflect on ways to enhance it and consider how to articulate their achievements to potential employers. With this in mind, the authors developed the Employability Experience Questionnaire (EEQ) based on their USEM account of employability. This questionnaire consists of 23 items (see Appendix G for full details), which could be shortened to 15 items if necessary. Respondents indicate on a 4-point Likert scale the extent to which they agree with the statements, with '1' indicating strong disagreement and '4' indicating strong agreement.

As with the Rothwell, Herbert and Rothwell (2008) measure, this questionnaire was designed for specific use with undergraduate students. It also includes items that capture most elements of the CareerEDGE model of graduate employability (Dacre Pool & Sewell, 2007) and would be useful for encouraging students to think about various aspects of their employability. Principal components analysis of the items suggested a five-factor solution which the authors labelled: Valuing workplace experience; Academic awareness; General awareness; Employment orientation; and Critical independence, which accounted for 49% of the variance. The authors confirm this to be lower than desirable. The alpha internal reliability coefficients for the five factors were all good (.68 to .77) other than Critical independence (.55).

However, some of the items appear to be a little over-complicated. For example:

> *'I have not been encouraged to consider how the things I do outside the formal academic programme can provide evidence in support of graduate-level employment.'*

And

> *'The work experience I have had has made me think about what I need to do in my studies to develop a graduate-level career.'* (p. 165)

The authors suggest that the questionnaire was constructed as a diagnostic tool and was not designed as a measure of employability, something they view as complex and resistant to measurement.

As is apparent from the review of existing scales, many are reliant upon self-report measures. One exception to this was used in a recent study conducted with undergraduate students. Nelis et al., (2011) designed a study using interviews in which they asked each participant to answer a set of two questions. These questions related to hypothetical life and work problems (how to deal with a messy roommate and how to resolve a conflict situation in a team project). The participants were video-taped giving their answers to the interviewer and these recordings were evaluated by human resource professionals who were asked whether or not (on a scale of 1 to 7) they would employ the person. This research design is innovative and avoids self-report methodology but it only gives an indication of how well the participant is able to answer potential interview questions. Although this is likely to be an important contributory factor in successfully gaining employment, this demonstrates only one small element of a person's employability potential. For example, there is no account taken of all the aspects of employability a person would need to engage with before they even reached a job interview situation. It does not capture their subject knowledge, their range of generic

skills, their work experience or other aspects of career development learning, such as where to look for opportunities or how to complete an application form.

Having reviewed the literature concerning graduate employability in relation to its history, theoretical models and measurement, the next chapter reviews literature in relation to one theoretical element of graduate employability; emotional intelligence.

# CHAPTER 5

# EMOTIONAL INTELLIGENCE

## 5.1 Introduction

Research into Emotional Intelligence (EI) is relatively new, but the field is one that is expanding at a rapid rate. To demonstrate this, a recent PsycINFO keyword search using '*emotional intelligence*' revealed over 900 peer-reviewed journal articles (Joseph & Newman, 2010). The subject has not only caught the interest of academics, but also management and human resource professionals, who are keen to recruit and select employees on the basis of evidence that EI is related to better work performance (Joseph & Newman, 2010). Indeed, empirical evidence would suggest that, as a construct, it is something that should be considered valuable in terms of predicting performance (O'Boyle Jr. et al., 2010; Van Rooy & Viswesvaran, 2004).

The aim of this review is to detail the various conceptualisations of EI and consider the important issue of measurement. An overview of the empirical evidence supporting the role of EI in various life outcomes, including those of specific relevance to employability, is provided. The issue of teaching EI is explored; finally, Emotional Self-Efficacy is discussed, and consideration is given to its association with EI.

## 5.2 What is Emotional Intelligence?

Emotional Intelligence, as the name would suggest, is closely related to both the concepts of intelligence and emotion (Mayer, Roberts & Barsade, 2008). EI brings together the concepts of emotion and intelligence and views the two as working together

to guide decision making and behaviour. This conceptualisation of EI proposes it as a type of standard intelligence that can add to our knowledge of human abilities (Mayer, Salovey, Caruso & Sitarenios, 2001).

There have been numerous academic studies (see Schulte, Ree & Carretta, 2004, p. 1060) over the past century, which have explored the associations between general intelligence (*g*) and academic, training and occupational performance. These have indicated that it is the best single predictor of performance in all of these contexts, compared to aspects of personality for example (Schulte et al, 2004). However, valuing the logical and rational as opposed to the more subjective aspects of the human experience goes back considerably further in history.

In Ancient Greece, the Stoics considered logic and rational arguments to be far superior to feelings as these could be agreed on whereas feelings often could not (Mayer, et al., 2008a). In the first century BC, Publilius Syrus was of the same opinion when he wrote *'Rule your feelings, lest your feelings rule you'* (Salovey & Mayer, 1990). In folk theory, it was often thought that intelligence and emotion should be seen as contradictory (Oatley, 2004) with the 'heart not being allowed to rule the head' and emotion being seen as something that would negatively impact on cognitive activity. Emotion has been viewed as a disruptive and generally interfering element on attempts to function rationally (Mayer, DiPaolo & Salovey, 1990).

Emotion, particularly in the workplace, has often been perceived in this way with the stereotypical view of 'emotional women' often heard even in these enlightened times. However, the emergence of EI has offered a different way of engaging with these concepts: one that considers the importance of both emotion and intelligence and indeed

how these two vital areas of human ability may interact with the resulting impact on the way people make decisions and live their lives. Recent theory and empirical studies have revealed the symbiotic nature of cognition and emotion and provide evidence to suggest they are complementary ways of perceiving and understanding the world (Planalp & Fitness, 1999).

According to Mayer, Salovey and Caruso (2008) '*A truly healthy individual has neither thought alone, nor emotion alone, but a functional integration among his or her major psychological processes.*' (p. 513).

At this stage, it is pertinent to define the two separate concepts involved. Mayer, et al. (2008a) define emotion as,

> *'an integrated feeling state involving physiological changes, motor-preparedness, cognitions about actions, and inner experiences that emerges from an appraisal of the self or situation.'* (p. 508)

And intelligence as,

> *'a mental ability (or set of mental abilities) that permit the recognition, learning, memory for, and capacity to reason about a particular form of information, such as verbal information.'* (p. 509)

This definition of intelligence is particularly important when considering the proposition that EI is in fact a form of intelligence, equivalent to other more established

forms such as verbal-comprehension and perceptual-organisational (Mayer et al., 2008a). This idea will be discussed in more detail later in this review.

Emotion and intelligence have traditionally been researched by separate groups of psychologists. For example during the late 19th and early 20th centuries, the concept of intelligence as something that could be measured was explored by pioneers in the field such as Francis Galton and Charles Spearman. Emotion research was focused on debate around what came first, the felt emotion or the physiological reaction (Mayer, 2006). Darwin had argued that emotions evolved across different species which led to Ekman's work on universal facial recognition (e.g. Ekman, Friesen & Ancoli, 1980). However Kaufman and Kaufman (2001) suggest that EI has its roots in the work of IQ pioneers, Binet and Wechsler. They argue that Binet (1886) believed that mental images were fluid and dynamic and could only be understood within an experiential context. They also suggest that Wechsler (1950) too would have considered EI (as articulated by Salovey & Mayer, 1990) as an aspect of general intelligence.

Developments during the 1980s introduced by Gardner (1983) proposed the idea of multiple intelligences, including interpersonal and intrapersonal intelligence. This opened up the debate about whether traditional conceptualisations of cognitive intelligence were too narrow. Mayer and Salovey (1993) in an early paper on EI state that their view of EI overlaps with Gardner's concept of intrapersonal intelligence. It could be that this overlap occurs in areas of EI that relate to understanding emotions, as Gardner's emphasis was on cognition, that is the *understanding* of ourselves and others, and not specifically on emotion (Kassem, 2002).

Mayer (2000) traces the emergence of the study of EI from research carried out in the areas of cognition and affect. He cites papers by Isen, Shalker, Clark and Karp (1978) which proposed the existence of a 'cognitive loop' which linked mood to judgement; Zajonc (1980) who argued that attitudes were more determined by feelings than cognition; and Bower (1981) who proposed that mood had a powerful effect on memory. These studies would suggest emotion related elements to various aspects of cognition, e.g. judgement, attitudes and memory; as a result of this, ideas started to develop that emotion and intelligence could work together as a basis for successful information processing (Mayer, et al., 1990; Salovey & Mayer, 1990).

Although the term 'emotional intelligence' had been used in relation to psychotherapy (Leuner, 1966) and personal and social growth (Beasley, 1987; Payne, 1986) the first scientific article to use the term in its current context was by Salovey and Mayer (1990). In this seminal article the authors proposed that emotional intelligence was,

> *'The ability to monitor one's own and others' feelings, to discriminate among them, and to use this information to guide one's thinking and action.'* (Salovey & Mayer, 1990, p. 189).

The tentative proposal at this time was that some people were better than others at reasoning about and using emotions to enhance thinking (Mayer et al., 2008b). At this stage Mayer, et al. (1990) suggested that qualities such as empathy seem to involve skills rather than simply attitudes and that people who experience difficulties with interpersonal

relationships may not suffer from an attitude problem but have skills deficits that could be assessed and improved. In their words,

> *'Such work may enable the emotionally unintelligent person – for example, the boor and the bore – to become more emotionally pleasing to those around them, with a resultant higher level of satisfaction with life for all those involved.'* (p. 779)

These were early developments that have led to the view of EI as an ability that can be improved as opposed to a relatively stable personality trait.

The topic was brought to the attention of a much wider audience with the best selling book by Goleman (1996). The cover of this book, in addition to its title of 'Emotional Intelligence' also stated '*why it can matter more than IQ'* which grabbed the attention of psychologists and public alike and interest in EI grew dramatically. The Goleman book was published shortly after a highly controversial work called The Bell Curve (Herrnstein & Murray, 1994). This book was interpreted as suggesting that intelligence as measured by IQ, was the most important predictor of just about everything important in life, such as health, earning capacity and even successful relationships. As a large part of the population by definition has below average IQ and it is viewed as something very difficult to change, this was interpreted as an extremely pessimistic message (Grewal & Salovey, 2005). This would help to explain why Goleman's writing was so well received by many, with its optimistic message that there was something called Emotional Intelligence that mattered even more than IQ.

Goleman's claims have received some scathing criticism from academic researchers particularly with concern to a lack of empirical evidence to support them (e.g. Waterhouse, 2006; Zeidner, Matthews & Roberts, 2004). He later wrote that people had not understood his book if it had led them to believe that EI predicted huge proportions of success (Goleman, 2005). Whilst with hindsight it is apparent that Goleman may have overstated the importance of EI in his earlier writing, he should be credited with bringing the issue of EI to a much wider audience than might have been achieved otherwise.

Unfortunately, EI has since been used as a term encompassing much more than Salovey and Mayer intended. It has been applied to a mix of traits and competencies, such as achievement motivation and flexibility, which may not be concerned with either emotion or intelligence (Mayer et al, 2008a). This has resulted in considerable criticism of the field with its existence as a valid area for academic research questioned, (e.g. Landy, 2005; Locke, 2005; Zeidner, Roberts & Matthews, 2004). Mayer et al. have consistently attempted to restrict the term 'Emotional Intelligence' to a concept for which there is scientific research providing empirical support for its existence (e.g. 2008a, 2008b). In Figure 8 below, they provide a diagrammatical representation of the scope of EI as they view it and how this relates to the scientific concepts of both intelligence and emotion. They propose that EI is closely related to emotion and intelligence and should be viewed as the ability to both reason about emotions and use emotions to assist reasoning. Mayer et al. (2008a) provide a helpful overview of what they see as three theoretical approaches to EI and use the diagram (Figure 8 overleaf) to clarify this.

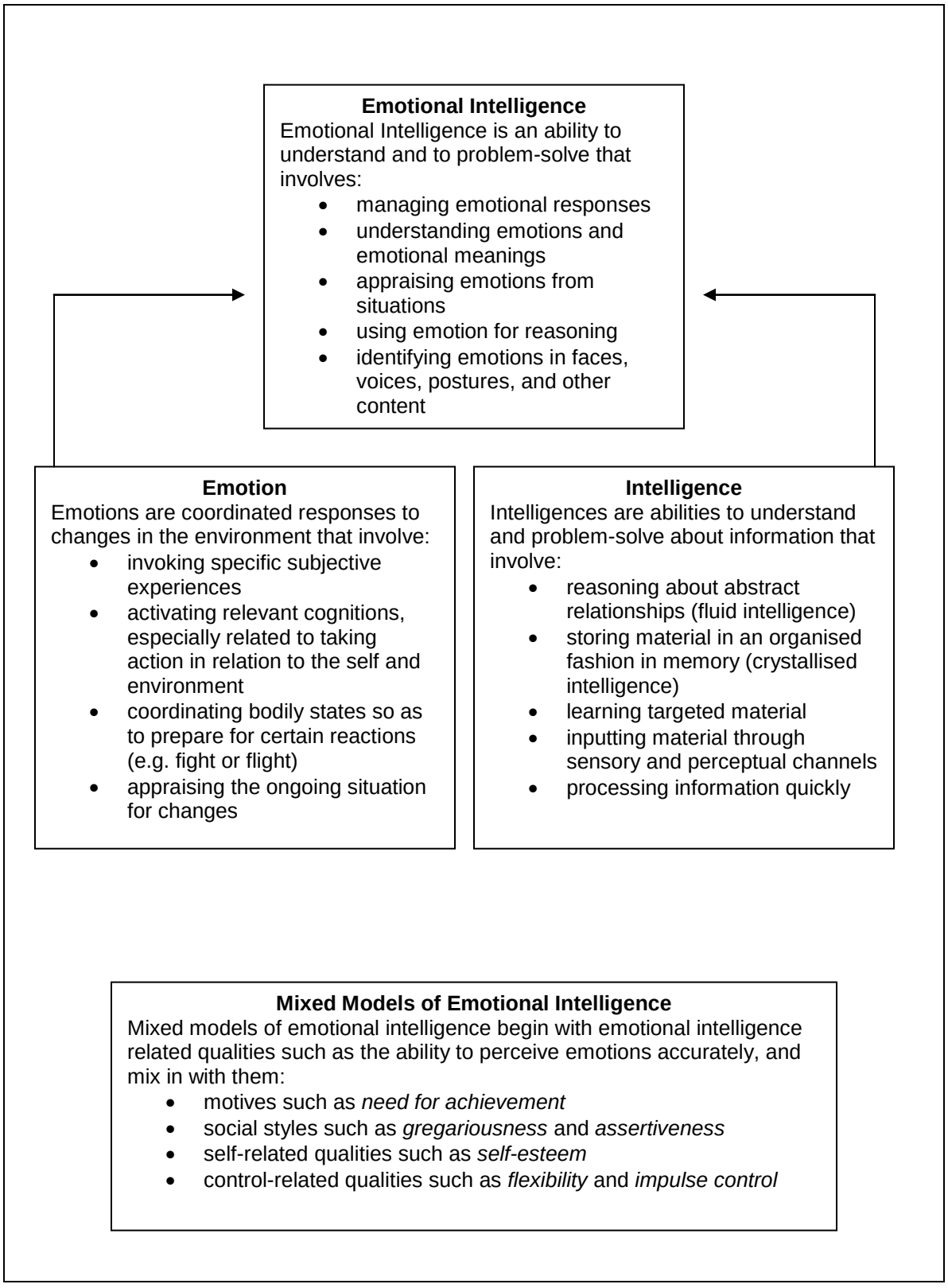


Figure 8. The Scope of Emotional Intelligence (Mayer et al., 2008a, p c-1)

The first approach they refer to as 'Specific Ability', which focuses on particular skills that are essential to EI. These are represented by the individual bullet points in the box headed 'Emotional Intelligence' and include the ability to accurately perceive emotion in other people through the interpretation of facial expression, body language and tone of voice (e.g. Nowicki & Duke, 1994). A further ability for inclusion in this theoretical approach is the ability to use emotional information to facilitate thinking. Mayer et al. (2008a) cite the work of Lyubomirsky, King and Diener (2005) as demonstrating that emotion may allow people to be more effective decision makers. A further group of abilities is concerned with reasoning about and understanding emotions and emotional appraisal is a key element here. Finally, emotion management is included in this approach which emerged from clinical findings that people could reframe their perceptions of events to achieve a more positive outcome (Mayer et al., 2008a). These individual abilities can be considered important to the concept of EI.

The 'Integrative Model' approach is their second category, which is viewed as a way of including a number of the specific individual theories suggested above in one overarching model of EI as an ability, demonstrated by the overall content of the box titled 'Emotional Intelligence'. They cite Izard's (2001) Emotional Knowledge Approach as one such model as this includes a focus on both emotional perception and understanding. However the most frequently used integrative model of ability EI is the four-branch model (Salovey & Mayer, 1990; Mayer & Salovey, 1997), which will now be described in some detail. This model has been acknowledged as offering a clearly articulated and narrowly defined conceptualisation of EI (e.g. Gohm, et al., 2005).

The first of the four branches is the ability to 'perceive and express emotion'. Emotion is perceived and identified in others through cues such as facial expression, body language and voice tone. The ability to perceive and identify one's own emotions is also crucial. This branch also includes the ability to perceive emotion in music and art, including abstract designs. 'Perceiving emotion' is a fundamental part of the four-branch model as without this, the effective processing of emotional information required in the other three branches would be difficult (Salovey & Grewal, 2005).

Following on from 'Perceiving emotion' is the branch 'Using emotions to facilitate thought'. Mayer (2000) discusses how a visual artist may want to create the emotion 'regret' in a painting or photograph and could try to use their own experiences of this emotion to recreate the feeling to help with the task. Different types of emotion have also been shown to enhance certain tasks. For example, upbeat more positive moods can help in creative activities and sadder moods may be more helpful for tasks that require deep concentration and focus (Salovey & Grewal, 2005). A good level of EI will enable a person to make the most of their changing moods to maximise their performance on particular tasks. Mayer (2000) also discusses how we can use emotion to help with decision making and gives the example of how we often make lists of pros and cons for a particular decision but still remain unsure of which is the better alternative. He suggests that in such a case if might be helpful to check how one feels about the different alternatives and use this to help with the decision making process.

The third branch of the model is 'Understanding emotion', which Mayer (2000) suggests is the closest branch to our understanding of a traditional intelligence. Included within this branch is the ability to label feelings, understand how they can blend together

to form more complex emotions and how different feelings may evolve over time. This involves having a well developed knowledge of emotion.

The last branch of the model is concerned with 'Managing emotion'. In order to manage emotion it is necessary to be open to emotion. Emotions give people information about the world around them, particularly about relationships, and being open to emotion is likely to increase emotional knowledge (Mayer & Salovey, 1997). According to Mayer (2000), a person open to emotion must also use the knowledge gained from the first three branches of the model in order to manage emotion effectively. This does not mean suppressing or venting emotion, but dealing with it appropriately to achieve the best outcome. Mayer (2000) gives the example of bereavement and how good emotional management involves allowing the grief reaction to the loss and not trying to cover it up all the time. However it is not just the more negatively viewed emotions such as grief and anger that require emotional management. There are times when positive emotions require management too. For example, happiness when celebrating an achievement can be overdone resulting in the 'happy' individual being perceived as self promoting and boastful.

People will differ in their abilities on each of the four branches, for instance, some people are more adept than others at reading expressions from faces and body language whereas others may be more skilled in managing their emotion effectively; others are more able to understand that feelings can be complex, such as the possibility of experiencing happiness and sadness at the same time.

Figure 9 overleaf provides a detailed diagram of the four-branch model. The four branches are arranged so that the more basic abilities of perceiving and expressing

emotion are at a lower level than the more sophisticated abilities of understanding and managing emotion (Mayer & Salovey, 1997).

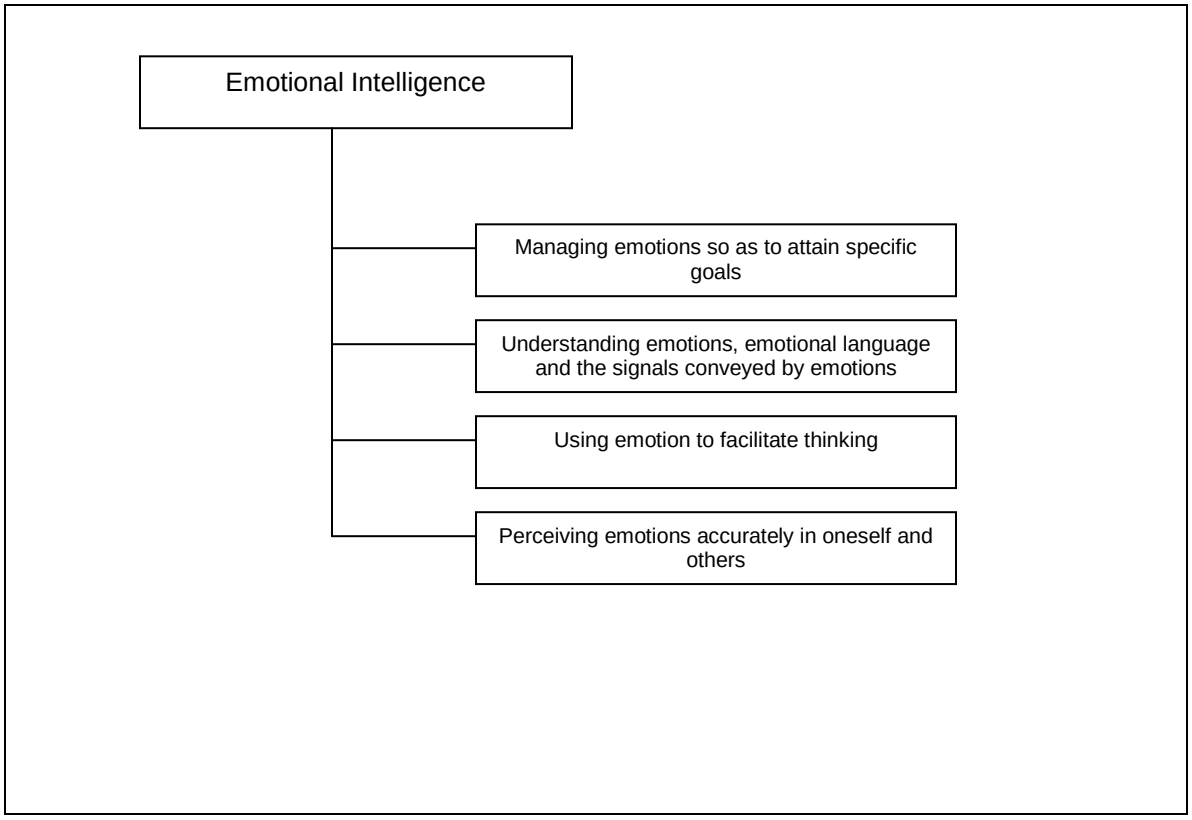


Figure 9. The Four-Branch Model of Emotional Intelligence (Mayer & Salovey, 1997, reproduced in Mayer, et al., 2008b, p. 507).

Here, the term 'Emotional Intelligence' is used to describe a type of standard intelligence that can add to our knowledge of human abilities. It is argued that this conceptualisation of EI meets several standard criteria that firmly define EI as a type of intelligence (Mayer, Caruso & Salovey, 1999; Mayer et al., 2008b). These standard criteria state that an intelligence must reflect mental performance, which in this case would be a set of emotion related abilities. Second, an intelligence should show moderate positive relationships with other closely related abilities, such as other existing

intelligences and finally, as has been found with already established intelligences, it should increase with age and experience. According to Daus and Ashkanasy (2005), the ability model of EI, as measured by performance-ability measures, exhibits the psychometric evidence one would expect of an intelligence in terms of convergent and discriminant validity. Further evidence to support this argument will be provided throughout this review.

Therefore, the integrative ability model views EI as a type of intelligence with an emphasis on the cognitive elements of the emotional experience. It can be defined as follows,

> *'the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought' (Mayer et al., 2008a, .p 511).*

The third category shown in Figure 8 (p. 88) is described as a 'Mixed Model' approach. This presents a much broader conceptualisation of EI as a mix of various traits, qualities and characteristics. Mayer et al. (2008a) include definitions of EI such as 'non-cognitive capability, competency or skill' (Bar-On, 1997) and 'dispositions from the personality domain' (Petrides & Furnham, 2003) in this category, which they suggest lack a primary focus on EI. Mixed Model approaches to EI have been criticised widely because they appear to define EI as every positive characteristic that does not involve cognitive ability and they are often so closely related to personality traits that it is

difficult to justify a separate construct (Joseph and Newman, 2010). According to Daus and Ashkanasy (2003);

> *'These models have done more harm than good regarding establishing emotional intelligence as a legitimate, empirical construct with incremental validity potential'* (p. 69).

It would appear that some researchers in the field have confused what Mayer et al. (2008b) describe as 'expressions of EI', such as being a pleasant person, with the ability itself. They suggest that these Mixed Model approaches are no more than a large number of personality traits, mixed in with a few socio-emotional abilities and then labelled EI or trait EI (which they suggest is particularly confusing). They argue that there is often no reason for including some traits and not others, or certain emotional abilities and not others, except for the possibility that they may predict success.

A further model of EI has recently been proposed by Joseph and Newman (2010) in their study examining the possible effects of EI on job performance. The model attempts to integrate elements of the four-branch model with some personality traits and cognitive ability. The 'Cascading Model' of EI (Joseph & Newman, 2010, see Figure 10 overleaf) utilises only three of the four branches in the Mayer and Salovey (1997) model. They suggest that the branch 'Emotion facilitation' (or 'Using emotion to facilitate thought') is problematic because of its conceptual redundancy with the 'Managing emotion' branch and a lack of empirical support. Studies by Gignac (2005); Palmer, Gignac, Manocha and Stough (2005); and Rossen, Kranzler and Algina (2008) have

concluded that EI factor analytic models without this dimension provide a better fit to the data than those that include it. The theoretical four-branch model of EI may be called into question as a result of structural validity issues with the MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test, 2002), currently the only available comprehensive measurement tool (Austin, 2010).

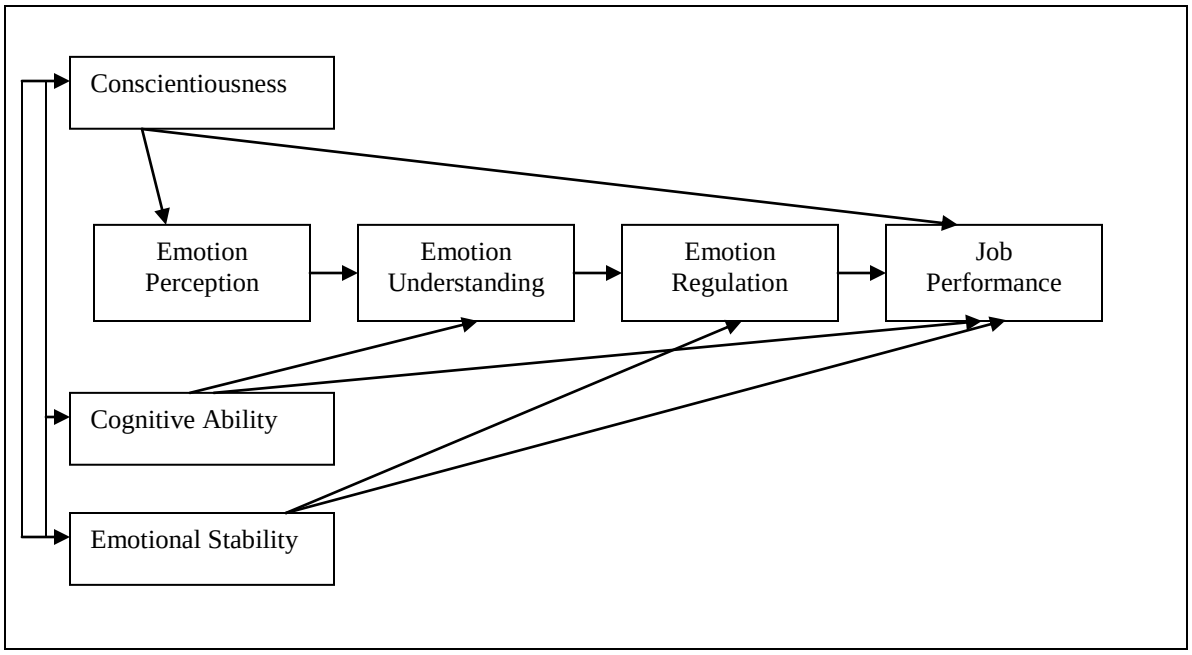


Figure 10. Cascading Model of Emotional Intelligence (Joseph & Newman, 2010 p. 56)

It could be that there is a good deal of overlap between the 'Using emotion' and 'Managing emotion' branches. To illustrate, one example of 'managing emotion' often quoted in the literature (e.g. Salovey & Mayer, 1990) is how an emotionally intelligent orator can elicit strong emotions in their audience. However, arguments could be made for this also being a good example of a person 'using' a negative emotion, such as anger, to effectively facilitate a desired outcome. Although some overlap between the four branches would be expected, the boundaries between these two seem particularly blurred

which could explain the difficulties with finding statistical support for them as discrete factors.

The 'Cascading' model was empirically confirmed using meta-analytic data, with the exception of the relationship between ability EI and job performance which was inconsistent (Joseph & Newman, 2010). However a more comprehensive meta-analytic study reached a somewhat different conclusion and found ability EI to be an important, significant predictor of job performance (O'Boyle Jr. et al., 2010).

As discussed there are a number of different ways to conceptualise EI. The choice of approach to EI determines the method of measurement, which will be discussed in the following section.

### 5.3 Measuring Emotional Intelligence

How to measure EI is the subject of much debate and the choice of theoretical approach (i.e., ability versus mixed/trait) will determine the methods used. Indeed, some researchers have questioned the benefits of attempting to measure emotion or EI at all. Fineman (2004) suggests that using psychometrics to try and capture emotional experience with a 'number' bears no resemblance to the complexities of our affective lives; doing this results in an impoverished understanding and appreciation of emotion. Such ideological arguments aside, valid measures of EI should ideally exhibit moderate correlations with other theoretically relevant variables (show convergent validity) but should not correlate with variables considered to be theoretically irrelevant (show discriminant validity).

There are numerous publications concerned with the measurement of EI. The recent meta-analysis by Joseph and Newman (2010) provides a helpful way of categorising the three main types of measurement currently available.

Self-report mixed EI is consistent with what Mayer et al. (2008a) describe as the Mixed Model broad approach to EI previously discussed. Measurement usually includes aspects of EI identified in the four-branch ability model but will also include items referring to personality and/or behavioural preferences. Often these are referred to as 'trait' approaches to EI, which are measured using a self-report and/or peer report approach.

Self-report ability EI is also based on the Mayer and Salovey four-branch ability conceptualisation of EI, but with measurement carried out using self-report and/or peer report measures.

Performance-based ability EI refers mostly to the four-branch ability model of EI proposed by Mayer and Salovey (1997) and measurement is carried out principally with the MSCEIT (Mayer, et al., 2002). This test purports to operate in much the same way as traditional intelligence tests with a person's level of EI ability being assessed. EI as conceptualised here is seen as a type of intelligence and as such should overlap to some degree with cognitive ability.

The following discussion will start with an evaluation of self-report mixed or trait approaches to EI measurement and the relevant tests, followed by self-report ability approaches, finishing with performance-ability EI approaches. Issues of discriminant, convergent and incremental validity will also be addressed.

*5.3.1 Self-report mixed EI measurement*

A list of the most frequently used self-report mixed EI measures is provided by Kerr et al. (2006) as follows: Goleman's Emotional Competency Index, (ECI, Sala, 2002), Emotional Quotient Inventory (EQ-i, Bar-On, 1997), Emotional Intelligence Questionnaire (EIQ, Dulewicz & Higgs, 1999), Emotional Quotient Map (EQ-MAP, Cooper & Sawaf, 1997). It would also be pertinent to include here the Trait Emotional Intelligence Questionnaire (TEIQue, Petrides & Furnham, 2003) and the Multidimensional Emotional Intelligence Assessment (MEIA, Tett, Wang & Fox, 2006). According to Ashkanasy and Daus (2005), Reuven Bar-On who had recently completed his doctoral dissertation on psychological well being, read Goleman's (1996) best selling book, quickly recognised the potential of the measure he had recently developed for his dissertation and renamed his scales as the EQ-i. It would not be surprising to find, therefore, that this scale is measuring something quite different to that being measured by a tool such as the MSCEIT (Mayer & Salovey, 2002). According to Mayer et al. (2008a) these instruments lack validity for measuring EI as they do not focus on either intelligent reasoning about or with emotion, nor do they focus on the use of emotional knowledge to improve intelligence. Indeed, Joseph and Newman's meta-analysis (2010) found the correlation between self-report mixed EI measures and performance-based ability EI measures to be low enough to suggest two distinct constructs, which would support evidence from other meta-analyses indicating the same (O'Boyle Jr. et al., 2010; Van Rooy, Viswesvaran & Pluta, 2005).

Correlations between self-report mixed EI measures and the Big Five personality traits are frequently reported as medium to large. For example, the Joseph and Newman (2010) meta-analysis of 118 studies, found correlations of .43 with Agreeableness, .38 with Conscientiousness, .53 with Emotional Stability, .46 with Extraversion and .29 with Openness. The correlation with cognitive ability was small at .11. O'Boyle Jr. et al. (2010) report similar findings with correlations of .32 with Agreeableness, .32 with Conscientiousness, .47 with Emotional Stability, .42 with Extraversion and .33 with Openness. Again the correlation with cognitive ability was small at .05.

A further problem with self-report mixed EI measures is the issue of socially desirable responding or 'faking'. Day and Carroll (2008) define this as making a conscious attempt to portray oneself in a positive light by playing down faults and inflating virtues. They found that participants in a simulated 'job applicant' condition were able to significantly increase their EQ-i scores when motivated to do so without any training being provided. This was not the case for the performance-ability measure the MSCEIT.

As tests purporting to measure intelligence, instruments that use self-judgement scales would not appear to be conceptually valid (Mayer et al. 2008a). Zeidner, et al. (2008) argue that this is akin to asking a person to rate how good they are at geography by using a seven-point scale, instead of asking questions such as 'What is the capital city of Greenland?' There is also some evidence to suggest that in relation to IQ, men tend to overestimate their abilities, whereas women tend to underestimate (Reilly & Mulhern, 1995). As EI is considered a type of intelligence (Mayer et al., 1999; Mayer et al., 2008b) this finding would indicate that similar patterns of over or underestimating are

possible. It could also be argued that evidence of both convergent and discriminant validity for self-report mixed EI measurements is quite weak.

*5.3.2 Self-report ability EI measurement*

There are a number of self-report ability EI measures published. These include the Self-Rated Emotional Intelligence Scale (SREIS, Brackett, Rivers, Shiffman, Lerner & Salovey, 2006), the Wong Law Emotional Intelligence Scale (WLEIS, Wong & Law, 2002) and the Assessing Emotions Scale (AES, Schutte et al., 1998). These measures are based on the Mayer and Salovey (1997) four-branch model of EI. As such, we would expect strong correlations with the MSCEIT. Given the basis for these measurements it is perhaps surprising that this is often not the case, raising questions regarding their convergent validity.

A commonly used measure, the Assessing Emotions Scale (Schutte et al, 1998) was designed using the authors' interpretation of the Salovey and Mayer (1990) model of EI. Factor analysis of the measure produced a 33 item single factor with good internal and test-retest reliability. Despite this, the measure has been strongly criticised by Petrides and Furnham (2000) who questioned its psychometric properties and suggested that the scale was not uni-dimensional, nor did it accurately map onto the Salovey and Mayer (1990) model of EI. Instead they proposed a four-factor solution (optimism and mood regulation, appraisal of emotions, social skills, and utilisation of emotions), but a later study (Brackett & Mayer, 2003) was unable to replicate their findings. The Brackett and Mayer study also concluded that in view of the substantial overlap between the AES

and other well established personality and well-being scales, they probably cover the same concepts.

Joseph and Newman (2010) investigated the convergent validity of self-report ability EI and performance-ability EI measurements and found the correlation to be weak at r = .12. They suggest that this would indicate that the two types of measurement are not assessing a singular ability construct. However, low correlations between self-report ability EI and performance-ability EI would be expected if the concept of EI is viewed as a type of intelligence. Most people generally inaccurately report their own levels of intelligence with correlations between cognitive ability and self-report measures of cognitive ability generally low (r = .00 to .35: Brackett & Mayer, 2003; Paulhus, Lysy & Yik, 1998).

There is also concern that self-report ability measurements share the problems of self-report mixed EI measurements, in as much as they seem to share large amounts of variance with existing measures of personality, showing moderate to high correlations with the Big Five personality traits. The correlations reported in the Joseph and Newman (2010) meta-analysis were as follows: .31 with Agreeableness, .38 with Conscientiousness, .40 with Emotional Stability, .32 with Extraversion and .29 with Openness. However there was a zero correlation with general cognitive ability. The natural conclusion here is that this brings into question the idea that such measurements can be called 'ability-based' measurements of EI.

Zeidner, Shani-Zinovich, Matthews and Roberts (2005) further question this idea when they report a negative correlation between the AES and verbal ability which they

suggest *'may be considered a violation of a near lawful principle defining the domain of human cognitive abilities, the existence of positive manifold'* (p 384).

As with self-report mixed EI, this would suggest that convergent and discriminant validity for self-report ability EI measurements is generally poor (Zeidner, et al., 2008). Although, such instruments may be useful for investigating confidence in emotional capabilities (Zeidner et al., 2005), something that is explored later in this thesis under the term Emotional Self-Efficacy.

### *5.3.3 Performance-ability EI measurement*

The Multifactor Emotional Intelligence Test or MEIS (Mayer et al., 1999) was the first performance-ability EI measurement available and the forerunner to the MSCEIT (Mayer et al., 2002). It is composed of 12 tasks and 402 items believed to assess ability EI based on the four-branch model (Mayer & Salovey, 1997). It uses a consensus scoring method, whereby a person's item score is based on the proportion of the people in the standardisation sample who agreed with the answer for that item. According to Mayer (2000), factor analyses of the MEIS indicate that it can be utilised as a single general factor of EI or as three or four inter-correlated factors that correspond with the four-branch model. 'Using emotion' was identified as the weakest of these factors, a result that has been found in a number of other later studies, (e.g. Gignac, 2005; Palmer, et al., 2005; and Rossen, et al., 2008).

The MSCEIT was designed to measure the four abilities that comprise the Mayer and Salovey (1997) four-branch model with items to measure perception of emotion, emotion facilitation (or 'using' emotion), understanding emotion and managing emotion.

It is considerably shorter than the MEIS and consists of 141 items that measure the ability of people to perform tasks in relation to the four-branch model. It can be completed online or as a pen and paper task and usually takes approximately 40 minutes to complete. There are two sets of tasks for each branch of the model. Perceiving emotions (Branch 1) is measured through a task which requires test takers to correctly identify emotion in faces (Faces task). There is also a second type of task whereby participants identify emotions in pictures, including landscapes and abstract designs (Pictures task). Using emotions (Branch 2) is measured with a task in which test takers compare emotions to other sensory stimuli, such as light, colour and temperature (Sensations task) and a further task in which they are required to identify which emotions best facilitate a certain type of thinking or behaving (Facilitation task). Understanding emotions (Branch 3) is measured by a task designed to test a person's ability to recognise how different emotions increase in intensity or change over time (Changes task). A second task measures a person's ability to understand how more complex emotions develop (Blends task). Managing emotions (Branch 4) has tasks that measure how well a person is able to maintain or change their emotions to achieve the best outcome (Emotion management task) and how well they can manage the emotions of others in social situations (Social management task). The MSCEIT also provides two Area scores; Experiential EI which represents a combination of the 'Perceiving' and 'Using' branch scores and Strategic EI which represents the 'Understanding' and 'Managing' branches.

Mayer, Salovey and Caruso (2008b) argue that the approach they use for scoring the MSCEIT is similar to that used for certain parts of classic intelligence tests such as the Wechsler Adult Intelligence Scale (WAIS: Wechsler, 1997). Answers on the

MSCEIT are scored according to how well they concur with the answers provided by a normative sample (general consensus) or a group of experienced emotion researchers (expert). The two methods of scoring have been found to correlate highly, between .96 and .98 (Mayer, Salovey, Caruso & Sitarenios, 2003; Palmer, et al., 2005). It is usual to measure intelligence by asking the test taker a set of questions for which there are answers with a criterion of correctness. The authors argue that the MSCEIT does, in fact, do this and is a far more valid way of measuring EI as an intelligence than relying on people's self-judgement of their ability. However, it has been suggested that general consensus scoring may simply reflect socio-cultural beliefs and may not be accurate (e.g. Zeidner et al, 2005). This may be true, but could be interpreted as evidence in favour of the MSCEIT. For example, the skills of the emotionally intelligent person only exist within the social context in which they operate and it is essential that a person knows what is socially acceptable within their culture and can demonstrate this in terms of their behaviour (Lopes, Salovey & Straus, 2003; Salovey & Grewal, 2005). Other critics have suggested that the expert scoring method is seriously flawed because of the high correlation found with consensus scores, which they claim seriously challenges the logic behind the scoring method (Fiori & Antonakis, 2011). They question if emotion experts really exist if they respond to items on the MSCEIT in the same way as the majority of people and cast doubt on whether the test successfully discriminates between people with high and low emotional capabilities.

Factor analysis of the MSCEIT has found that a four factor model fits the data well (e.g. Day & Carroll, 2004; Mayer, et al., 2003; Roberts, Zeidner & Matthews, 2001). However, other researchers have found different solutions provide a better fit (e.g. Fan,

Jackson, Yang, Tang & Zhang, 2010; Gardner & Qualter, 2011; Palmer, et al., 2005; Roberts, Schulze, O'Brien, Reid, MacCann & Maul, 2006; Rossen, et al., 2008). A common problem appears to be with the 'Using' branch which has been found to be strongly associated with or indistinguishable from the other branches (Maul, 2011).

Another psychometric standard that tests should meet is reliability. This is concerned with the consistency with which the test measures. One way of measuring reliability is by checking participants' responses to see if they are consistent across items and is referred to as the internal consistency of the scale (Cronbach, 1951). The heterogeneity of the MSCEIT items necessitates the use of split half estimates of reliability and these have been found to be r = .91 and .93 (Mayer et al., 2003). Palmer, et al. (2005) reported similar reliability coefficients for the overall MSCEIT, Area and Branch scores. Test-retest is another reliability measurement that looks at the consistency of the items over time. The figures for the MSCEIT have been reported as r = .86 (Brackett & Mayer, 2003). These would be considered adequate for research purposes and for the reliable assessment of an individual (Mayer et al., 2008a).

Whilst the scale appears to show acceptable levels of reliability, the evidence for validity of the scale is less decisive. Convergent validity evidence for the MSCEIT is possibly one of its weaker areas. However, this is often the case with other ability tests of non-verbal expression perception (Mayer et al., 2008a). The Japanese and Caucasian Brief Affect Recognition Test or JACBART (Matsumoto, Le Roux, Wilson-Cohn, Raroque & Kooken, 2000) and the MSCEIT emotional perception scales had an almost zero correlation, although there were more promising results with the other scales of the MSCEIT and MSCEIT total EI, ranging from r = .20 to .26 (Roberts, et al., 2006). The

MSCEIT was also found to intercorrelate with the Levels of Emotional Awareness Scale or LEAS (Lane, Quinlan, Schwartz, Walker & Zeitlin, 1990) at the r = .15 to .20 level (Ciarrochi, Caputi & Mayer, 2003). Mayer et al. (2008a) confirm that they find low levels of correlation across tests purporting to measure similar concepts unsettling, and call for more studies to be carried out using the scales to enable further understanding of the divergence issues.

As mentioned earlier, if ability EI is conceptualised as a type of intelligence, there should be modest correlations between ability EI measures and other measures of cognitive ability. Mayer et al. (2008a) report the overall correlations between the MSCEIT and MEIS scales with verbal intelligence and verbal SAT as r = .36. Other cognitive ability measures such as perceptual-organisational intelligence scales have lower correlations, reported as between r = .10 and .20. The MSCEIT 'Understanding' scale has a stronger correlation with verbal/crystallised intelligence measures, reportedly an average of r = .38 over seven studies (Roberts, Schulze & MacCann, 2007). Interestingly, Mayer (2000) suggested that the 'Understanding' branch of the four-branch model was the most closely aligned with traditional ideas of intelligence. A more recent meta-analysis reported a correlation between performance-ability EI and cognitive ability of r = .25, providing further evidence for convergent and discriminant validity in relation to cognitive ability (Joseph & Newman, 2010).

As a type of intelligence, ability EI as measured by the MSCEIT, should be related to age and develop with experience (Mayer, et al., 2002; Mayer, et al., 2004). A study of adults from the community with a range of life experiences found some support for this with older, more educated participants scoring higher on MSCEIT total score,

'Understanding' and 'Managing' subscales (Goldenberg, Matheson & Mantler, 2006). This was not the case for the results of the 'Perceiving' and 'Using' subscales. More recent research found similar results with older adults scoring significantly higher than younger adults in respect of the 'Understanding' and 'Managing' subscales of the MSCEIT (Gardner & Qualter, 2011). One possible explanation for this is the conceptual closeness of the 'Understanding' and 'Managing' branches to crystallised intelligence which increases with age. The MSCEIT emotion perception component is more closely aligned with fluid intelligence which does not increase with age (Gardner & Qualter, 2011).

In terms of discriminant validity evidence, the Joseph and Newman (2010) meta-analysis reports performance-ability EI as showing weak correlations with personality, as would be expected. These are reported as: .29 with Agreeableness, .13 with Conscientiousness, .20 with Emotional Stability, .18 with Extraversion and .21 with Openness. The trait 'Openness' correlates with many intelligences and 'Agreeableness' is sometimes viewed as reflecting compassion and cooperation (Mayer et al., 2008a). This validity evidence would appear to be considerably better than that for the Self-Report EI measures and would provide some promising evidence of the discriminant validity of the performance-ability EI measures in relation to personality.

An additional benefit of the MSCEIT is that unlike self-report mixed EI measures, it is not possible to respond to the items in a socially desirable manner. Day and Carroll (2008) found that participants were able to significantly increase their scores on the EQ-i (Bar-On, 1997) when motivated to do so. However, they were unable to increase their MSCEIT scores even when there was an advantage to them doing so.

A further issue concerning the MSCEIT is that although it may measure a person's EI ability, it cannot predict whether this ability will be demonstrated through observable behaviours. As Gohm (2004) states, knowing what is the appropriate thing to say or the appropriate way to behave, does not mean a person will actually act accordingly when in that situation. Salovey and Grewal (2005) agree that there is currently a lack of understanding of the motivational underpinnings of EI ability, which they propose could be related to individual differences in temperament. The 'Cascading Model' proposed by Joseph and Newman (2010) incorporates roles for two relevant personality traits, Conscientiousness and Emotional Stability in addition to the ability EI elements. A study by Rode et al. (2007) found that EI together with Conscientiousness may be useful predictors of employee performance in the workplace. It is also likely that self-efficacy beliefs may impact on motivation in relation to EI ability (Bandura, 1995) and this is discussed later in this chapter.

In summary, the MSCEIT as a measure of performance-ability EI, would appear to have stronger evidence of convergent and discriminant validity than other types of EI measurement. Mayer et al. (2008b) suggest that although there is still room for improvement, ability scales offer the best benchmark for EI at this stage.

There have been some recent developments in relation to ability EI testing with the introduction of the Situational Test of Emotional Understanding (STEU) and the Situational Test of Emotion Management (STEM) (MacCann & Roberts, 2008). As the names would suggest, these measurement tools are designed to measure the 'Understanding' and 'Managing' branches of the four-branch model. The STEU contains 42 items and the STEM 44 items and uses expert scoring. The authors suggest that their

initial study provides reasonable evidence for the validity of the two measures in terms of incremental, discriminant and convergent validity. However, examination of the individual items provided in the article may be a cause for concern. One item asks,

> *'an irritating neighbour of Eve's moves to another state. Eve is most likely to feel? (a) regret, (b) hope, (c) joy, (d) sadness, (e) relief'.* (p. 542)

The answer required as correct is (e) relief, but arguments could be made for any of the other answers to be correct also. A test taker could argue that a considered answer to this question could only be made with a reasonable amount of information being provided about the history of this situation and the people involved. Judging a person's level of EI ability based on this type of item could be viewed as somewhat questionable. Although the MSCEIT uses similar vignettes, the high level of correlation found between answers provided by a normative sample and emotions experts (between .96 and .98, Mayer et al., 2003) does allow for some confidence in these items. Research by Austin (2010) found some evidence for the validity of the STEM and STEU, but internal reliabilities for the scales were disappointing (.67 and .48), suggesting further development work on these new scales is required.

Daus and Ashkanasy (2003) suggest that the following criteria are used when considering which approach to adopt in relation to EI: (a) it should use a skill-based or behavioural, preferably non self-report method of measurement; (b) there should be a narrow and specific focus on emotional skills and abilities only; (c) there is clear construct distinctiveness; and (d) it demonstrates good psychometric properties. The

evidence currently available would suggest that the integrative ability approach and its measurement tool the MSCEIT, meet these criteria.

This does not mean that the MSCEIT is without criticism and there are a number of concerns about validity issues. For example, Brody (2004) argues that the MSCEIT uses items to measure EI that are fundamentally different from items used to measure cognitive intelligence and that there is little evidence that the MSCEIT provides incremental predictive validity over and above measures of cognitive ability and personality. However, Mayer, et al. (2004) go some way towards refuting these arguments. In addition, Gardner (2008) found the MSCEIT to be a good predictor of several social and mental health outcomes whilst controlling for the effects of personality and cognitive ability. Still further, a recent meta-analysis found that in respect of job performance, ability EI adds incremental predictability above both cognitive ability and the Big Five personality factors (O'Boyle, Jr. et al., 2010).

A further study reported that EI as measured by the MSCEIT can largely be predicted from general cognitive ability (g), the Big Five personality dimension 'Agreeableness' and gender (Schulte, et al., 2004). But this study was conducted with a small sample of students and did not consider the four branches of EI (Antonakis, Ashkanasy & Dasborough, 2009). However, concerns about the MSCEIT appear to be growing. A recent study examining the relationship between subjective well-being and ability EI produced non-significant results which the authors suggest may be a result of the psychometric limitations of the MSCEIT (Zeidner & Olnick-Shemesh, 2010). Fiori and Antonakis (2011) highlighted some major limitations with the measure and recommended that researchers use single branch scores rather than a global EI score

when using the MSCEIT and Maul (2011) only found partial support for a four factor structure. Whether or not the MSCEIT is able to fully assess all elements of EI has also been called into question (Austin, 2010).

A number of researchers have called for modifications to be made to the MSCEIT (e.g. Fiori & Antonakis, 2011; Keele & Bell, 2008). Despite the concerns about the measure, which are acknowledged by the authors themselves (Mayer et al., 2008b) it is currently the only performance-ability EI tool available with a reasonable amount of empirical research evidence to support its use. As Gohm (2004) argued, although EI theory still needs more empirical support, research shows that the four-branch ability model (integrative approach) of EI has the potential to explain and predict important outcomes. Therefore the focus of the next section is concerned with incremental validity issues relating to ability EI.

### 5.4 What does Emotional Intelligence Predict?

In order for a type of intelligence to offer anything useful to our understanding of human abilities, it needs to explain variance over and above that explained by already existing more established measures, for example specific personality traits and cognitive ability.[4]

There have been considerable developments in the field since Davies, Stankov and Roberts (1998) concluded that '*little remains of emotional intelligence that is unique and psychometrically sound*' (p. 1013). EI has been found to predict a number of important outcomes both in respect of broader aspects of a person's life and more

[4] Some, but not all of the studies included in this section controlled for personality and cognitive ability.

specifically in the workplace. This is explained by the argument that people higher in EI are better able to recognise and reason about emotions, in themselves and others. They are also able to consider the emotional consequences of their actions (Mayer, et al., 2008b).

The earlier chapters of this thesis detailed the work on graduate employability and suggested a role for EI. This was based on theoretical ideas concerning employability which either explicitly state a role for EI or allude to it (e.g. Dacre Pool & Sewell, 2007; Knight & Yorke, 2004; Van der Heijde & Van der Heijden, 2006). A number of variables previously investigated in empirical EI research are likely to have an impact upon graduate employability, such as social success, psychological well-being, physical health, academic achievement and outcomes specifically concerning the workplace. There are a number of theoretical reasons for possible relationships between EI and these variables. For example, a person who is able to perceive emotions in friends and colleagues is more likely to respond appropriately in social interactions, thereby increasing the chances of their social success. This is likely to be helpful in terms of developing effective networks, which can be important to graduates. The ability to manage emotion effectively could have a positive impact on psychological well-being, particularly in relation to stress management, which is an essential ability in the workplace. Having low ability in relation to managing emotion could result in the use of maladaptive coping strategies, such as drug and alcohol abuse, which will have a detrimental effect on physical health and is likely to have a negative effect on employability. It is also possible that an ability to understand and manage emotion effectively could result in undergraduate students having greater academic success. This

could be because they are better able to motivate themselves to engage with their studies and resist distractions. Graduates are judged by employers on the results of their degree studies and this will impact on their employability.

There is a good theoretical basis for relationships between EI and a number of workplace related variables. For example, somebody who is able to understand and manage their emotions effectively is more likely to perform better in the workplace. This could be as a result of them not having to spend time dealing with the consequences of angry outbursts and being able to call on other members of the organisation to help them out when necessary. It could also be the case that having good EI ability will enable a person to adapt a more successful leadership style and many employers say that they are looking for graduates with leadership potential.

The research evidence to support these theoretical assumptions is detailed in the following sections. Discussion is restricted to studies that have utilised performance-based ability measures of EI.

### *5.4.1 Emotional Intelligence - social success*

People demonstrating higher levels of EI are more socially competent, enjoy better quality relationships, and are viewed as more sensitive to others than those lower in EI (Mayer et al., 2008b). Research consistently indicates that children with higher levels of EI enjoy more positive social relationships (Mayer et al. 2008a). A study which involved observation of children in a natural environment (playground) found that EI was related to more positive interaction and talking during social exchanges and less passivity (Qualter, Henzi & Barrett, 2009).

A study by Izard, Fine, Schultz, Mostow, Ackerman and Youngstrom (2001) found that after controlling for verbal ability and temperament, emotional knowledge scores for children aged 5, positively predicted social skills at age 9. These included assertiveness, cooperation and self-control (as rated by teachers). Emotional knowledge also negatively predicted hyperactivity and internalising behaviours. It seems that being able to perceive and label emotion cues facilitates positive social interaction and that deficits in this area contribute to problems both with behaviour and learning.

In adolescence, higher MSCEIT scores ('Understanding' and 'Managing' subscales) indicate better social relationships with peers (Mestre, Guil, Lopes, Salovey & Gil-Olarte, 2006). In a study with undergraduates, MSCEIT scores ('Managing' subscale) were related to attributes such as sensitivity to others' feelings and a willingness to help others (using self-report and peer nominations). The scores correlated r = .28 to .29 and were significant after controlling for verbal intelligence and personality traits (Lopes, Salovey, Côté & Beers, 2005).

Two further studies by Lopes, et al. (2004) found that higher MSCEIT scores ('Managing' subscale) were associated with higher quality relationships with friends as perceived by self and peers. The second study found that the quality of self-perceived daily social interactions was positively related with MSCEIT scores (the 'Using' subscale for all interactions and 'Managing' subscale for interactions with the opposite sex). Strategic emotion regulation ability, as measured by the 'Managing' subscale of the MSCEIT is also related to less experience of conflict with others and more positive social relationships, which remains after controlling for age, gender and the Big Five personality traits (Lopes et al., 2011).

Brackett et al. (2006) found that interpersonal competence was related to EI, but only for men. Men with higher EI reported using more effective strategies in emotional situations with a friend and were judged to be more socially competent in a laboratory-based social interaction with a stranger. The authors suggest that these findings, in conjunction with other similar findings (e.g. Lopes, et al., 2003), could suggest that EI has an important part to play in helping to understand social adaptation, particularly among men. One hypothesis in terms of mechanisms at work in this area could be that young men who are better able to accurately perceive emotions in others are more likely to formulate appropriate responses. For example, a young man who is able to identify sadness in a friend, is more likely to respond appropriately and as such is more likely to be judged as socially competent than another young man without this ability. The reasons why these results were found only for men are unknown and require further investigation.

Research studying the negative connotations of lower EI has found that social deviance, as measured by the propensity to become involved in fights or property vandalism, is negatively correlated ($r = -.20$) with total MSCEIT scores, after personality and verbal ability are held constant (Brackett & Mayer, 2003). A significant negative correlation has also been found between EI and anti-sociality (as measured by academic misconduct, uncooperative group behaviour and antisocial behaviour) in both men and women (Visser, Bay, Cook & Myburgh, 2010). It might be the case that people who are more likely to misread emotions in others, for example, mistake anxiety for anger, may react inappropriately, possibly with violence. It is also possible that a failure to manage emotion could result in angry outbursts with possible violent consequences.

In terms of intimate relationships, the MEIS (general EI) predicted more positive relationships after controlling for general intelligence and personality (Ciarrochi, Chan & Caputi, 2000). Brackett, Warner and Bosco (2005) found that couples where both partners had low MSCEIT scores reported poorer quality relationships and more conflict. However, couples with high scores for both partners did not consistently show more positive relationship outcomes than couples where only one of the partners was a high scorer. The authors suggest that this may be the result of a threshold effect, whereby it could be sufficient to have one person high in EI for the couple to report success in terms of managing conflict. This could be because one high EI person can recognise when a situation is likely to escalate into conflict and take action to stop this occurring. Alternatively, it could be that that one partner with high EI teaches the other positive emotional behaviours, possibly through a process of modelling (e.g. Bandura, 1995).

Brackett et al. (2005) also indicate that it is possible that a couple both high in EI may have 'too much' emotional perception and management taking place. It could be that very high levels of emotion perception and management in both parties could result in over-analysis of events which may not be conducive to better quality relationships. However, the research was carried out with undergraduate students and the criterion for participation was being in an intimate relationship for a minimum of three months. The mean age was 19.7 years for females and 20.9 years for males, with only 16 of the 86 couples involved having been together for more than 2 years. The results therefore could be interpreted as preliminary evidence of the impact of EI on intimate relationships until further work involving people in longer term committed relationships is carried out.

*5.4.2 Emotional Intelligence - psychological well-being*

It would be expected that ability EI should correlate with measures of subjective well-being, but research with Israeli high-school students failed to demonstrate any support for this assumption (Zeidner & Olnick-Shemesh, 2010). However, more recent research with Spanish undergraduate students found EI to be significantly related to measures of hedonic and eudaimonic well-being (Extremera, Ruiz-Aranda, Pineda-Galán & Salguero, 2011). Hedonic well-being is the experience of more pleasant than unpleasant emotions and greater satisfaction with life. Eudaimonic well-being is experienced when a person feels a sense of fulfilment and meaning in life (Extremera et al., 2011). Although Zeidner & Olnick-Shemesh (2010) suggest their findings may be due to methodological shortcomings with the MSCEIT, the Extremera et al. (2011) results using the same measure suggest another possible explanation. The high-school students in the earlier study had a mean age of 16, whereas the undergraduate sample in the second study had a mean age of 22. It is possible that the benefits of higher EI for subjective well-being become more apparent with maturity. There are various possible explanations why this may be the case. For example, higher EI may help people to better deal with stressful situations by using positive coping strategies, such as expression of feelings and seeking support rather than rumination and avoidance. This is likely to reduce negative affect and increase well-being (Extramera et al., 2011). It is possible that this will have a cumulative effect on well-being over time, increasing with experience and maturity.

Research would suggest that EI has a role to play in mental health. Brackett and Mayer (2003) report a moderate correlation of r = .28 between total MSCEIT and a

measure of psychological well-being. Mayer et al. (1999) found positive correlations between EI and self-reported parental warmth and empathy and to a lesser extent with life satisfaction. This could suggest that being raised by warm parents who are prepared to listen affects EI in adulthood and future life satisfaction. This is possibly because being listened to and encouraged to discuss issues in a safe, warm family environment is likely to be conducive to the development of vital EI skills. Ability EI has also been found to be positively related to self-esteem and life satisfaction (Ciarrochi et al., 2000). However these associations are found in cross-sectional studies; longitudinal investigations would be necessary in order to explore this issue further and determine the causal relationships involved.

Ability EI has been found to correlate negatively with anxiety as measured by the Anxious Thoughts Inventory (Wells, 1994) and positively, but moderately, with life satisfaction (Bastian, et al., 2005). Lower EI has been found to relate to more frequent use of the internet and linked to difficulties in social functioning (Engelberg & Sjöberg, 2004).

Research has been carried out to investigate whether ability EI could help to protect people with a vulnerability to depression from suffering future episodes (Amitay & Mongrain, 2007). This study found that participants with higher levels of EI were more likely to report having partners who were less critical, less rejecting, and more supportive than participants with lower levels of EI. The partners with the more favourable support styles were more likely to offer support when it was needed, which would potentially mitigate the vulnerability of their partners to further periods of depression.

We might expect that people with higher levels of EI would be more tolerant of stressful situations and environments as a result of their ability to manage negative emotions and thoughts more successfully than their lower EI counterparts. Matthews, et al. (2006) were able to demonstrate the incremental validity of EI with respect to personality in this area when they found that higher EI individuals experienced less distress and worry before attempting a challenging task and less worry and avoidance coping afterwards.

Gohm et al. (2005) found that the relationship between ability EI and stress was not straightforward with EI helping some individuals but not others. For participants who were high in meta-emotion traits 'attention' (how much attention is paid to emotion), 'clarity' (understanding of own emotions) and 'intensity' (experiential level of emotion), EI was associated with lower stress in terms of feelings of ability to control life events. This was also the case for those low in these meta-emotion traits. But, participants who were average on 'attention', high on 'clarity' but low on 'intensity' (these people have mild reactions to life events and report understanding their reactions), had low stress levels and there was no relationship between EI and stress. The authors suggest that for this type of person, maybe EI is unnecessary. However for another group who were also average on 'attention' but high in 'intensity' and low in 'clarity', there was still a lack of relationship between EI and stress. It appears that this group of people (intense, confused and feeling stressed) should potentially find EI very useful to them, but the more emotionally intelligent participants did not report lower stress. This could be attributed to a possible lack of self-efficacy in their ability to use EI to moderate stressful situations and a tendency therefore not to use it (Gohm et al., 2005).

A recent comprehensive meta-analysis of studies involving EI and health found a significant association in respect of ability EI (and trait EI) and mental health and concluded that the results were encouraging in terms of EI as a possible health predictor (Martins, Ramalho & Morin, 2010).

### *5.4.3 Emotional Intelligence – physical health*

There is some evidence of a relationship between EI and physical health behaviours. Male college-aged students who scored lower on EI also reported more recreational drug use and drinking more alcohol (Brackett, Mayer & Warner, 2004). Higher EI has also been shown to be related to higher levels of attending to physical health matters (Brackett & Mayer, 2003). Trinidad and Johnson (2002) found that higher total EI (as measured by an adolescent version of the MEIS) was negatively related to tobacco and alcohol use. The authors suggest that a lower ability to manage emotions resulting from peer pressures could make it more likely that the individuals will decide to smoke and drink alcohol. However, as Brody (2004) points out, although this study uses grades as a control for intelligence it did not control for the Big Five personality traits. However, more recent studies have established that ability EI and personality are weakly correlated (e.g. Joseph & Newman, 2010, O'Boyle, Jr. et al., 2010) which suggests this criticism is no longer valid.

Evidence is also emerging that 'emotional eating' is not simply about eating more food when feeling negative but is a result of maladaptive emotion regulation (Evers, Stok & de Ridder, 2010). People who use strategies such as suppressing negative emotion,

tend to eat more that those who have more effective emotion management strategies, such as cognitive reappraisal.

*5.4.4 Emotional Intelligence – academic achievement*

There is some research evidence to suggest that EI also predicts academic achievement (Mayer et al., 2008a). The Izard et al. (2001) study mentioned previously found that children's emotional knowledge scores at age 5 positively predicted academic competence at age 9. Mestre et al. (2006) found that teacher rated academic success for 14 to 17 year-old students was correlated with the MSCEIT ('Understanding' and 'Managing' subscales), taken in the same year. However, after controlling for general intelligence and personality, this only remained significant for boys.

Gifted students have been found to score more highly on the MSCEIT than non-gifted students, in particular on the 'Understanding' and 'Managing' subscales (Zeidner et al., 2005). Connor and Little (2003) found that the 'Understanding' scale of the MSCEIT showed a significant relationship with Grade Point Average scores for undergraduate students. As previously mentioned, the 'Understanding' subscale is the one most frequently associated with general intelligence. According to Mayer, et al., (2001) this element of the four-branch model is the 'most cognitively saturated' and is most closely allied with abstract reasoning and emotional information processing which could explain these findings.

Ashkanasy and Dasborough (2003) incorporated EI into an undergraduate leadership course. As part of the course, the students were asked to complete the MSCEIT online and in their own time. Interestingly, the students who had higher levels

of EI as measured by the MSCEIT performed better in the exam and gained higher course percentage marks.

A study with Italian high school students aged between 16 and 20 years examined the role of fluid intelligence, personality traits, self-report and ability EI on scholastic success (Di Fabio & Palazzeschi, 2009). They found that EI, as measured using the MSCEIT, accounted for the highest percentage of incremental variance, with the 'Managing' subscale the best predictor of academic success.

Ability EI may also have a role in moderating the effects of cognitive ability in relation to academic performance (Qualter, Gardner, et al., in press). A longitudinal study with secondary school pupils over a five year period (UK Year 7 to Year 11) found that ability EI predicted academic performance over and above personality and cognitive ability. There were some differences in respect of low cognitive ability pupils, with higher levels of EI only appearing to be advantageous to boys and not girls. The authors propose that boys low on IQ, but high on EI, are better able to manage their moods and are less tempted by unhelpful barriers to learning. It is unclear why this would not also be the case for girls; however, this gender difference is consistent with the findings of Mestre et al. (2006).

A recent study provides evidence for one proposed mechanism by which EI works to predict academic success. This work found a significant relationship between EI (all four branches) and academic success, as measured by Grade Point Average, with the strongest correlation ($r = .44$) reported for the 'Managing' subscale (MacCann, et al., 2011). Further investigation revealed that this relationship was mediated by problem-focused coping, suggesting that individuals who are more able to manage their emotion

tend to use problem-focused coping (as opposed to emotion-focused or avoidant coping) which is then associated with higher academic grades. A further mechanism could be that EI indirectly positively affects academic success as it acts as a defence against impediments to learning such as substance misuse, mental distress and violence (Zeidner et al., 2008).

### *5.4.5 Emotional Intelligence - the workplace*

Emotions are a fundamental and inseparable part of everyday life in organisations (Ashforth & Humphrey, 1995). Although some authors have suggested that EI is a major contributing factor to workplace success (e.g. Goleman, 1998), some of these claims have not been supported by empirical evidence or have relied on self-report measures of EI (e.g. Law, Wong & Song, 2004). However, there is now considerable evidence to support the claims that ability EI predicts specific work related outcomes. A recent meta-analysis found that ability EI is important when predicting job performance and accounts for 6.4% of the explained variance (O'Boyle, Jr. et al., 2010).

One theory proposes the 'Managing emotion' branch in particular is theoretically related to work performance as it allows an individual to induce and sustain a positive affective state, which then encourages helping behaviour and motivation which ultimately leads to improved job performance. Employees with a greater ability to manage their emotions are also less likely to suppress them, a strategy often associated with negative outcomes (Joseph & Newman, 2010).

A study by Lopes, Grewal, Kadis, Gall and Salovey (2006) found that insurance company staff with higher levels of EI received greater pay increases and were more

likely to be promoted than their lower EI colleagues. EI was related to interpersonal sensitivity, sociability, mood and contribution to a positive work environment, as rated by peers. Supervisor ratings indicated relationships between EI and sociability, liking, contribution to a positive work environment and stress-tolerance. It appears that higher levels of EI give rise to enhanced performance in the workplace and the resultant increases in salary and status. With their improved social relationships, such individuals should be able to work more effectively in teams and persuade others to assist them with tasks where necessary. Their stress-tolerance would also allow them to perform when under pressure and deal effectively with the amount of change inherent in workplaces of the 21st Century. The sample size in the study was quite small ($N$ = 44), but the results provide some evidence that ability EI is associated with outcomes specific to the workplace.

Organisational citizenship behaviours refer to the activities that employees carry out that would be considered over and above what is normally expected of them. These behaviours are of value to organisations as success would be very difficult to achieve if this type of commitment was not demonstrated by their staff (Organ & Ryan, 1995). Day and Carroll (2004) found that although the MSCEIT was not related to individual citizenship behaviours, it was related on a group level. Higher EI scorers rated their group members more positively, perceiving them as more active participants in the task and showing greater concern for the group. It is possible that this positivity results in happier, more creative and effective groups, which should benefit the organisation. Whilst this is an interesting study, the findings need to be interpreted with care as the

participants were students placed into work groups and were not actual employees. As such, the results may not generalise to a standard working population.

The ability to successfully negotiate in the workplace may also be influenced by a person's EI capabilities. Mueller and Curhan (2006) carried out a negotiation simulation which involved multiple issues to be negotiated in pairs. The participants were all business graduates who took the role of either the President of a company being acquired or Vice President of the acquiring company. Higher EI ('Understanding' subscale) was found to positively predict the outcome satisfaction of the negotiating partner. It was found that participants who were high in ability to understand emotions tended to be better liked by their counterparts who also stated the desire to negotiate with them again in the future. The authors suggest that people high in EI 'Understanding' are better able to induce positive affect in their counterparts during the negotiation. As Mayer et al. (2008a) point out, the ability of people high in EI to engender positive affect in other people may be particularly important because it could help to create a more positive working environment through an emotional contagion effect.

EI is likely to be of particular importance to sales professionals, something that until recently has been largely ignored by marketing literature (Kidwell, et al., 2011). The ability to perceive emotion in their customers will allow them to adapt their approach accordingly, for example recognising when a customer is looking bored or confused. Being able to manage their emotion effectively, for example controlling negative emotions such as frustration or annoyance with customers, will enable them to build rapport. There is some research suggesting that empathy (an EI related concept) is related to better performance for sales personnel (Pilling & Eroglu, 1994). This study

showed an increased likelihood for those judged by their customers as higher in empathy to be given the order and invited back to give future presentations. Using a domain-specific (marketing) ability EI measure, developed in accordance with four-branch model theory, Kidwell et al. (2011) found that sales professionals higher in EI were able to positively influence sales revenue and retain more customers, thereby improving profitability.

Public speaking is a common element of many working lives, particularly in relation to managerial roles and is likely to be a desirable ability for employees looking to work at this level. A study by Rode et al. (2007) found that EI explained direct incremental variance on a measure of public speaking effectiveness. They also reported a significant interaction between EI and conscientiousness for the task, suggesting that EI may have more of an indirect effect on performance. They propose that EI in combination with conscientiousness could be used for screening potential employees which may result in an increase in overall organisational performance.

Successful project management, which is often reliant on effective interpersonal skills, is another work-related area that is likely to be influenced by EI. A study involving 67 UK based project managers found that after controlling for personality and cognitive ability, EI was found to positively correlate with the essential project manager competence of managing conflict. The 'Using' branch also demonstrated a significant correlation with team-working skills, together with two transformational leadership dimensions, 'idealised influence' and 'individual consideration' (Clarke, 2010).

Research by Byron (2007) investigated managers' ability to perceive emotions and the relationship with supervisor performance ratings and subordinates' satisfaction

ratings. The study utilised another performance-based test of emotion perception, the Diagnostic Analysis of Non-verbal Accuracy or DANVA2 (Nowicki, 2000). In general, the results indicated that managers who were more accurate in their perception of non-verbal expressions were rated as more supportive and persuasive and their subordinates reported more satisfaction. However, further analyses revealed gender differences with supportiveness a significant mediator of the relationship between expression perception and subordinate satisfaction for women managers; persuasiveness was a significant mediator for male managers. Interestingly, female managers appear to have their job performance judged by their supervisors based on this ability; this is not the case for male managers. The author suggests these results are consistent with research into stereotypes of male and female managers with female managers expected to be kind, understanding, supportive, sensitive and aware of others' feelings but male managers expected to be analytical, logical and good at reasoning.

One area where EI may have a strong influence is that of leadership. Leaders who can utilise their emotions and their emotional knowledge constructively are likely to have certain advantages over others who can not (Mayer & Caruso, 2002). Leadership emergence is concerned with the extent to which a person who is not in a position of authority is able to influence other members of a group (Côté, et al., 2010). Even one of the most vociferous critics of EI has suggested that leader emergence is a logical choice for a dependant variable for EI research as empathic candidates are likely to be more popular than unfeeling ones (Landy, 2005). This idea was supported by a recent study which found that overall EI was associated with leadership emergence, with the 'Understanding' branch the most consistent predictor (Côté et al., 2010). It is now

generally accepted that emotion has a large role to play in the leadership process and that a leader who can perceive and understand emotion in others and is effective in managing their own emotions, will be more successful in the workplace (Antonakis, Ashkanasy & Dasborough, 2009). Effective leaders also need to recognise emotions in their followers and be able to evoke and then manage emotions effectively both in their followers and in themselves (Kerr, et al., 2006).

A qualitative study conducted with organisational leaders and their staff found that management of emotions is a crucial skill practiced by effective leaders (Dasborough, 2006). By positively influencing the emotions of their staff, such leaders are able to gain their admiration and trust and ultimately achieve their organisational goals.

Some research using performance-ability measures (MSCEIT) has found that higher EI scores are associated with more effective leadership (Rosete & Ciarrochi, 2005). Results from another study also indicate that an individual's level of EI may be a key predictor of leadership success (Kerr et al., 2006). Further analysis of these data suggested that overall EI was a significant predictor of leadership effectiveness, as were the 'Perceiving' and 'Using' subscales. However, surprisingly, this was not the case for the 'Understanding' and 'Managing' subscales. This study was carried out in an organisational setting using subordinate ratings of leadership effectiveness for 38 supervisory staff and the 9 items that measured leadership effectiveness were designed by a consultancy company employed by the organisation to deploy a number of attitude surveys. Further research to test these findings, possibly using alternative published measures of leadership effectiveness, would be a helpful addition to the literature.

Teamworking is another area in which EI may have an important role to play. Vitello-Cicciu (2001) carried out in-depth interviews with nurse managers who had scored more than one standard deviation above the mean score of 100 on the MSCEIT. She found that these nurse managers demonstrated an understanding of how to encourage cooperative teamwork within their workplaces together with the ability to recognise and respect the feelings of others. EI has also been found to relate to nursing performance in nursing students, with the 'Understanding' branch demonstrating the strongest association (Beauvais, Brady, O'Shea & Quinn Griffin, 2011). For some roles, of which nursing is one, employees need to frequently alter their emotional expressions so they are appropriate to the situation (for example, try not to show disgust or panic when faced with a serious wound) this is known as emotional labour. For some employees this may be stressful and the ability to regulate emotions may help them to cope more effectively (O'Boyle Jr. et al., 2010).

It is a common belief that organisations that are able to select and retain people of high cognitive ability will have a competitive advantage. However, a particularly interesting result in relation to EI and the workplace was found by Côté and Miners (2006). They found that as cognitive intelligence decreases, EI becomes a stronger predictor of both job performance and organisational citizenship behaviours directed towards the organisation. In line with Qualter, Gardner et al., (in press) higher levels of EI may help compensate for lower cognitive ability by enabling people to manage their emotions more effectively, maintain a positive mood and remain focused on the task in question. This would suggest, therefore, that organisations can also achieve competitive

advantage by attracting and retaining people who have higher levels of EI, which may compensate for lower levels of ability in other areas.

The study by Rosete and Ciarrochi (2005) suggested that senior managers may need a high level of cognitive ability to reach executive level but once this has been achieved cognitive ability does not discriminate between high or low performers. As their findings suggest that executives with higher levels of EI are more likely to achieve desirable business outcomes and are considered to be better leaders by their staff and by their direct managers, there appears to be some evidence to suggest that EI makes a real difference in the workplace.

According to Cherniss (2000) there is now a considerable amount of research which suggests that EI, as conceptualised by the four-branch model, provides the basis for a number of social and emotional competencies that are critical for success in almost any job and that as the pace of organisational change increases, this set of abilities is likely to increase in importance.

### 5.5 Teaching Emotional Intelligence

If, as research would suggest, ability EI has important implications for a number of outcomes, including a number likely to impact on employability, there is a convincing argument for teaching the relevant skills in our schools, colleges and universities and for designing theoretically based training interventions for adults. A recent meta-analysis of 213 U.S. based studies found that teaching interventions for social and emotional learning for children (age 5 to 18 years) can be effective in terms of improved social and emotional skills, attitudes, behaviour and academic performance (Durlak, Wiessberg,

Dymnicki, Taylor, & Schellinger, 2011). Evaluation of the Social and Emotional Aspects of Learning (SEAL) programme in UK secondary schools did not support these findings; instead there was little impact of the SEAL programme on outcomes such as pupils' social and emotional skills, general mental health and behaviour (Humphrey, Lendrum & Wigelsworth, 2010). This may reflect the design of this particular programme and inconsistencies in its implementation and delivery.

In a one-year longitudinal study, Salguero, Palomera and Fernández-Berrocal (2011) found EI to be a predictor of psychological adjustment in adolescents (13 to 17 years old). They suggest that raising awareness of emotions and teaching strategies to improve negative moods and prolong positive ones, may be important in preventing emotional disturbance in adolescents. Vandervoort (2006) puts forward an eloquent argument for the importance of EI in Higher Education and discusses some of the potential benefits both for students and academic staff, including a reduction in emotional and behavioural problems, with better personal and social adaptation in general. She suggests that the self-knowledge associated with higher levels of EI will help students to make wise career choices. Improving social competence will also enhance the probability of success in any career that involves relating to other people. Di Fabio and Palazzeschi (2009) suggest that their study indicating the importance of ability EI for academic performance raises the possibility of developing EI interventions for young people.

Three studies involving undergraduates found that 30% ($n$ = 250, 83, 236) were assigned to an 'overwhelmed' category in relation to emotional experience (Gohm, 2003). This would suggest that a possible third of this population experience intense

emotions, but are confused by them and as such feel and behave differently to most of the people around them. As this could have negative consequences for the individual's self-concept and their interpersonal relationships, this could lend further support to the call for teaching EI knowledge and skills (e.g. Brackett & Katulak, 2007; Mayer, 2006; Mayer and Salovey, 1993, 1997).

It has been suggested that by integrating EI theory and exercises into a business curriculum, universities can help students to develop into more well-rounded graduates (Tucker, Sojka, Barone & McCarthy, 2000). Myers and Tucker (2005) suggest that business schools need to consider improving students' EI in addition to their cognitive skills and technical ability and provide a practical example of how EI can be incorporated into a business curriculum.

Ciarrochi and Mayer (2007) detail four EI interventions designed to help improve EI skills, with two specifically developed around the four-branch ability model (Brackett & Katulak, 2007; Kornacki & Caruso, 2007). The question is raised as to whether scores on a performance-ability measure of EI such as the MSCEIT would increase after such an intervention. The authors say that they cannot say for certain they would, but insist that EI skills training can and should be conducted as it is likely to have other positive outcomes such as improved relationships and more frequent pro-social behaviours (Kornacki & Caruso, 2007, p 58). The value of teaching EI is supported by evidence from Gohm et al. (2005) who were able to demonstrate a direct relationship between EI and low stress for some of the participants in their study.

If we conceptualise EI as an ability or skill and concede that most skills can be improved through education, this is likely to be the case for at least some of the skills

related to EI (Mayer & Salovey, 1997). It is also possible that some of this development can take place without specific EI interventions. Children and young people are exposed to many experiences within their standard curricula that have scope for them to learn about emotions. Teachers discuss real and fictional events with their classes and emotion is an almost impossible element to exclude. Children learn to label the emotions of different characters in stories and reflect on what the causes of the emotions could be. As children progress through the educational system, stories become more complex which will result in more complex emotional learning. Literature is a particularly rich resource for emotional learning but there is also much to be learnt from other areas of the curriculum, in particular art, music, history, citizenship and religious education. Mayer and Cobb (2000) would agree with these assertions and suggest that when a student discusses what a particular character in a story may be feeling or what emotions a piece of art or music conveys, they are actively using and perhaps developing emotional perception and understanding.

There may indeed be a need for specific EI education programmes, but it is imperative that these are designed around a clear theoretically sound model of EI and not 'cobbled together' from pre-existing courses that may be related to EI but are not equivalent (Gohm, 2004). In relation to specific EI interventions, there is a concern that at present very few EI training programmes have been systematically designed, implemented and evaluated (Humphrey, Curran, Morris, Farrell & Woods, 2007; Zeidner et al., 2008). A search of the EI literature reveals very few examples of ability EI interventions aimed at increasing EI through education that have a solid theoretical

underpinning. This suggests there is a large omission in the academic literature with further studies required.

One-day workshops or seminars can be useful in raising awareness of EI, but in themselves are unlikely to lead to the kind of change that would be required for a person to successfully improve their EI (Zeidner et al., 2008). However, if EI is to be included in educational curricula or training interventions, it needs to be empirically based and its potential impact evaluated (e.g. Qualter et al., 2007; Salovey & Grewal, 2005; Zeidner, Roberts & Matthews, 2002). There is also an argument for it to be ability based with an emphasis on emotional knowledge and reasoning, which Cobb and Mayer (2000) argue will reach more students.

To answer the call for theoretically based EI interventions, Nelis, et al. (2009) designed a teaching intervention for use with young adults. The EI intervention consisted of four classes of two and a half hours each, taught each week, and was developed to include activities based around the Mayer and Salovey four-branch model. The participants were assessed using a mixture of trait and ability type measures including the TEIQue (Petrides, 2009); the Emotion Regulation Profile Questionnaire (Mikolajczak, Nelis, Hansenne & Quoidbach, 2008; Emotional Management Abilities test (Freudenthaler & Neubauer, 2005), Dimensions of Openness to Emotional experiences – trait version (Reicherts, 1999), the Toronto Alexithymia Scale (Bagby, Parker & Taylor, 1994) and the Situational Test of Emotional Understanding or STEU (MacCann & Roberts, 2008). The researchers found a significant improvement in 'Perceiving' and 'Managing' emotion but 'Understanding' emotion remained unchanged. The 'Using' emotion element of the four-branch model was not assessed. An important finding from

this study however indicated that all the positive changes remained significant six months later. A control group showed no changes either at the end of the intervention or six months later. The sample size for the study was quite small (Intervention group, $N = 19$. Control group, $N = 18$) and was predominantly comprised of female students studying Psychology. Additionally, the reliability of the instrument used to measure emotion understanding (STEU, French translation) was low, demonstrating internal consistency of $\alpha = .33$. However, the study provides some promising evidence that carefully designed interventions, based on theory, can help to improve EI ability in young adults.

Nelis et al. (2011) have since carried out further replications of their earlier study. In their first replication they found significant improvements for trait EI, emotion understanding and regulation. Again these effects remained stable six months after the teaching intervention. In the second replication they found significant improvements in trait EI, emotion regulation and a number of other measures including happiness, life satisfaction and social functioning. Importantly, they also found that post-intervention, the EI students were viewed as being more 'employable' than at pre-intervention, as judged by a panel of human resource professionals who were able to observe them dealing with interview questions.

Jaeger (2003) designed an EI programme for graduate students on a general management course in the United States. She found that post-course EI scores on the EQ-i were significantly higher than pre-course. Although it is important to note that the course was designed around a mixed model approach to EI and evaluated using a self-report mixed EI measurement. The author herself calls for future research using more

precise and accurate EI measurement and suggests the ability based instruments of Mayer, Salovey and Caruso.

A training intervention for managers was designed by Slaski and Cartwright (2003) to investigate whether EI could be developed through training and if so, whether the increase in EI would have benefits for health, well-being and performance. The training was designed with much of the four-branch ability model of EI in mind, with techniques designed to help recognise emotion in others, understand the impact of own behaviour on the emotion of others, and regulate emotions. The results were evaluated using a mixed model measurement tool, the EQ-i and participants did self-report significant increases in EI. Control group scores on the EQ-i decreased slightly but not significantly. Importantly however the researchers also collected pre and post data on measures of health and well-being and found significant effects for all of these measures, which included psychological distress, morale and quality of working life. This study would suggest potential for the effectiveness of EI training in relation to workplace outcomes.

It could be suggested that increasing knowledge and understanding of emotions within educational programmes may help many people to lead more socially connected lives (Mayer, 2006). In particular, training individuals to evaluate and manage emotionally challenging situations can result in more effective interactions with others and prevent unnecessary conflict (Lopes et al., 2011). Additionally, and as discussed earlier in this chapter, increasing EI may result in better family and intimate relationships, physical and psychological health, work performance and academic achievement (e.g. Mayer, et al., 2008a). According to Mayer et al. (2002), lower levels of ability EI could

be increased through teaching emotional knowledge and there is good evidence to support the suggestion that this is possible to do.

### 5.6 Emotional Self-Efficacy

An important consideration concerning EI is not just whether a person possesses this ability to a reasonable level but also whether they *believe* they have these skills and an ability to use them or in other words, consider themselves self-efficacious in this domain. The concept of self-efficacy is most often associated with the work of Bandura (1986, 1995, 1997). He defines self-efficacy as '*beliefs in one's capabilities to organize and execute the courses of action required to produce a given attainment'* (p. 3) and suggests that a person's efficacy beliefs will influence their thoughts, feelings, motivations and behaviours (Bandura, 1997).

Some employability theorists have made a specific connection between self-efficacy and employability. Self-efficacy is included in the USEM model of employability (Knight & Yorke, 2004), which is discussed fully in Chapter 2. The 'E' in USEM refers to 'efficacy beliefs', and the 'affective elements' of employability are included in this component of the model. Fugate et al., (2004) also include 'generalised self-efficacy' in the 'personal adaptability' component of their model of employability.

As Mayer et al. (1999) state, people often act on what they believe about their abilities as opposed to their actual abilities. The literature concerning individual differences in capability and skills does not provide a full explanation as to why some people demonstrate better performance in a given area than others. It could be that self-efficacy is even more important than actual task related abilities and skills in explaining

these individual differences in performance (Gundlach, Martinko & Douglas, 2003). According to Zimmerman (2000) research clearly shows that in relation to students' motivation and learning, self-efficacy is a valid predictor of success.

Self-efficacy is concerned with a person's confidence about their ability to activate the motivation, cognitive resources and actions necessary to successfully carry out a specific task within a particular context (Stajkovic & Luthans, 1998b). One meta-analytical study found a positive correlation of .38 between self-efficacy and performance in the workplace. The authors of the study suggest that this could point to self-efficacy being a better predictor of workplace performance than many of the personality traits often used in this area of research (Stajkovic & Luthans, 1998a). This would imply that self-efficacy is a crucial factor in terms of actual performance. If this argument is transferred to a different behavioural realm, that of emotional functioning, it is possible to predict that a person with higher self-efficacy in this area is more likely to use the ability they have (Kirk, Schutte & Hine, 2008).

Kirk et al. (2008) explain this further by using cognitive intelligence as an analogy. They argue that memory and word fluency are functions that are abilities, they can be measured using performance tests and are generally observable in day to day experience. However, people may not be motivated to (or feel able to) use them effectively. In the case of EI, a person may have the ability to read emotions well in other people and or manage their own emotions but decide not to use either of these abilities, perhaps because they are not motivated to do so or possibly because they lack efficacy in these abilities. Bandura, et al. (2003) propose that it is one thing to have the ability to self-regulate (emotion), but another to actually use this ability in challenging

situations; this is more likely to happen if the person has a strong sense of efficacy. They also argue that people who believe they have some control over their emotional lives are more successful in regulating their emotions than those with limited self-efficacy who believe that their emotions control them. It is also possible that this could work in a positive cyclical manner, with perceived self-efficacy leading to successful emotional management which in turn will result in a further increase in self-efficacy. The reverse of this argument could also be possible.

The Gohm et al. (2005) study discussed earlier in this chapter also suggests that confidence or efficacy around EI ability could be an important issue. They found that a group of participants they classed as 'overwhelmed' had strong reactions to life events and were confused about their emotions but did not seem to use their EI ability which would surely have been helpful to them. They suggest that the results indicated that despite having the ability, they did not have confidence in their emotional knowledge or that their emotional reactions were appropriate. They also suggest that through teaching, it might be possible to increase feelings of self-efficacy in terms of control and competence; training should result in more actual effective coping and with it the associated benefits for mental and physical health.

From a developmental point of view, Saarni (1999) discusses the importance of self-efficacy in dealing with emotional experiences. A capacity for emotional self-efficacy should result in a person utilising their ability to deal with negative emotional experiences by being able to manage their intensity, frequency and duration. They are able to do this because they believe they have the capability to do so effectively and, therefore, do not become overwhelmed by negative emotions (Saarni, 1999). It could be

argued that increasing EI ability may result in increased Emotional Self-Efficacy (ESE). However the causal path could be the reverse.

It has been suggested that one of the mixed model approaches, often referred to as the trait approach, could also use the term 'emotional self-efficacy' (Petrides & Furnham, 2003). However, Kirk et al. (2008) disagree with this suggestion and argue that there are other dispositions in addition to self-perceptions of emotional functioning included in the trait approach and as such the two are essentially different. They concede that it may be possible that ESE is an aspect of trait emotional intelligence but they are not the same thing. ESE is solely concerned with confidence in one's emotional functioning capabilities as operationalised by the four-branch model of EI. This does not include elements such as self-perceptions of adaptability or self-motivation, which are included in some trait EI models (e.g. see Sanchez-Ruiz, et al., 2010).

Other researchers have alluded to self-efficacy as something that may be helpful to study in relation to emotion. Zeidner et al. (2005) in the study of EI and gifted children suggested that although an earlier self-report EI measure by Schutte et al. (1998) did not appear to be a valid tool for measuring ability EI, it might be useful for examining children's confidence in their social-emotional abilities. Salovey and Grewal (2005) suggest that research is needed to gain a better understanding of the underlying mechanisms by which emotion-related abilities affect relationships. One of these underlying mechanisms could be self-efficacy. Joseph and Newman (2010) also call for more research in the context of EI that examines constructs other than personality and cognitive ability, which could also include self-efficacy.

It is possible to conceive that ESE can be increased in similar ways to those suggested by Bandura (1995, 1997) in relation to self-efficacy beliefs in other behavioural realms. This could be through opportunities for mastery experiences, vicarious experiences provided by social models and social persuasion. Mastery experiences could involve learning strategies for successful emotional functioning and having the opportunity to try these out and evaluate their success. This could result in the belief that such successful strategies can be applied to other situations and contexts. Vicarious experiences provided by social models would mean having the opportunity to see others deal successfully with emotional situations, particularly if the people involved are similar to the viewer. Social persuasion could take place whereby people are persuaded that they do have the ability to master the skills of successful emotional functioning, possibly through specific teaching or training.

Discussing the limitations of the EI measures used in their study, Brackett, et al. (2006) propose that a well designed measure of ESE may relate more strongly to a performance-based ability EI measure such as the MSCEIT, than other self-report ability EI measures. The Emotional Self-Efficacy Scale (ESES) developed by Kirk et al. (2008) is based on the four-branch ability model of EI. It consists of questions that pertain to self-efficacy in relation to the ability to perceive, use, understand and manage emotion (see Appendix H). It is a self-report questionnaire however in this case a performance-based test would not be appropriate. For a measurement tool to be useful in this area it has to operate on a self-report basis. This is because self-beliefs are entirely subjective and can only be accessed using self-report tools (Bandura et al., 2003). The most

accurate observer of a person's thoughts, feelings or behaviours is the person themselves (Goldberg, 2010).

Although the original validation study of the ESES (Kirk et al., 2008) found some evidence of a positive relationship with a test of EI ability (MSCEIT total, 'Understanding' and 'Managing' factors), theoretical models of self-efficacy (e.g. Bandura, 1995, 1997) would suggest that there are differences between people's actual skills and their judgements of these abilities. Previous research with children has indicated that actual EI ability and beliefs about using these skills in social relationships show little association (Qualter, Barlow & Styliannou, in press). Further research is needed in order to explore the relationship between these two concepts and the behaviours they predict.

It would appear, therefore, that ESE as a relatively new concept, is an under researched area and one that could potentially help to further develop the field of ability EI. It is also likely to be an important predictor in other domains, including graduate employability. Although there are many studies that investigate various predictors and outcomes of ability EI, including those related to the workplace and careers, there are currently no published studies of this nature in respect of ESE. Chapter 7 of this thesis presents Study 2, the first empirical study to address this gap in the literature with an investigation of the relationship between ESE, graduate employability and career satisfaction. Chapter 8 of this thesis details Study 3 which investigates the possibility of increasing levels of ESE and ability EI through a teaching intervention for undergraduate students.

## 5.7 Main themes addressed by the research programme

The main themes from the literature reviewed in the preceding chapters and addressed in the research programme are i) understanding of graduate employability in relation to the role played by emotional competence; ii) measuring of emotional competence; and iii) the teaching of EI and ESE to undergraduate students in order to improve their employability potential.

The following chapter details Study 1, an investigation of the dimensional structure of the ESES and its relationships with other measures of emotional functioning, which addresses point ii) above. Further justification for each of the following empirical studies is provided in each chapter.

# CHAPTER 6

# STUDY 1: INVESTIGATING THE DIMENSIONAL STRUCTURE OF THE EMOTIONAL SELF-EFFICACY SCALE

## 6.1 Aims of Study 1

This study aims to investigate the underlying dimensionality of the Emotional Self-Efficacy Scale (ESES) and determine its relationship with measures of ability Emotional Intelligence (MSCEIT), trait Emotional Intelligence (TEIQue), personality, and cognitive ability. This study will investigate if ESE can be reliably measured using the ESES.

## 6.2 Introduction

It has been argued that ESE is an appropriate alternative label for trait EI (Petrides & Furnham, 2001; Petrides, Pérez-González & Furnham, 2007). However, Kirk et al. (2008) argue that although ESE may be an aspect of trait EI, the two are not identical: other aspects and dispositions are encompassed within the trait EI concept. ESE is concerned with confidence in one's emotional functioning capabilities as operationalised by the four-branch model of EI. This does not include elements such as self-perceptions of adaptability or self-motivation, which are included in trait EI models (e.g. see Sanchez-Ruiz, Pérez-González & Petrides, 2010).

The argument for the ability EI and ESE distinction builds on previous work suggesting an association between beliefs about the ability to perform a behaviour and actually performing that behaviour (e.g. Bandura, 1986; Wigfield & Eccles, 1992). Self-

efficacy may be even more important than actual task-related abilities and skills in explaining individual differences in performance (Gundlach, et al., 2003). Therefore, self-efficacy in relation to emotional capability is likely to be important; the suggestion being that a person higher in ESE is more likely to use the ability they have (Kirk et al., 2008). Bandura, Caprara, Barbaranelli, Gerbino and Pastorelli (2003) propose that it is one thing to have the ability to self-regulate emotion, but another to actually use this ability in challenging situations: this is more likely to happen if a person has a strong sense of efficacy. It seems, then, that it is one thing to possess emotional knowledge, but another to believe that you have this ability and use it accordingly (Qualter, Barlow, et al., in press).

The Emotional Self-Efficacy Scale (ESES) was developed and validated by Kirk et al. (2008). It is based on the four-branch model of ability EI and contains questions that pertain to self-efficacy in relation to the ability to perceive, use, understand and manage emotion (see Appendix H). Principal components analysis of the ESES ($N$ = 207) found a one-component solution with high internal reliability of .96 (Cronbach's alpha) for this solution. It was also found to significantly correlate with the overall MSCEIT score (.34) and with the 'Understanding' and 'Managing' subscales (.30 and .35 respectively). The authors propose the ESES to be a viable measure, which could be useful in future studies aimed at furthering understanding of the processes involved in adaptive emotional functioning.

The overall aim of the current study is to further investigate the underlying dimensionality of the ESES, including assessment of the associations between the ESES, MSCEIT and a trait EI measure (TEIQue). The innovative aspects of this study include

assessment of the associations between the ESES and measures of personality and cognitive ability, in a large UK based sample of university students and recent graduates. The study also includes exploratory and confirmatory factor analysis of the data.

## 6.3 Method

### *6.3.1 Participants*

Eight-hundred and twenty-two undergraduate students and 263 participants from the wider university community participated in the study. Specifically, these included 264 Psychology students from one university and 558 undergraduate students from a number of different subject disciplines in another university, including Business Studies, Psychology, Languages, Sociology and Health Studies. Both universities are in the North West of England. A further 263 participants were working graduates from a large number of different subject disciplines including Business Studies, Electronic Engineering, History and Human Resource Management. This gave a total sample of 1085 participants (M = 403, F = 682). The age range was 18 years to 59 years and the mean age of the sample was 23 years (SD = 5 years and 10 months).

### *6.3.2 Measures*

#### *6.3.2.1 Emotional Self-Efficacy*.

The Emotional Self-Efficacy scale (ESES) developed by Kirk et al. (2008) comprises 32 items, with eight items representing each of the four branches of the Mayer, Salovey, Caruso (2004) model. For each item, participants rate their confidence at performing this function, on a five-point Likert scale on which a '1' indicates 'not at all confident' and a '5' indicates 'very confident'. The range of

scores is 32 (indicating very low ESE) to 160 (indicating very high ESE). Examples of items include:

*'Correctly identify your own positive emotions' (Perceive emotions)*

*'Use positive emotions to generate good ideas' (Use emotions)*

*'Know what causes you to feel a positive emotion' (Understand emotions)*

*'Calm down when feeling angry' (Manage emotions)*

Kirk et al. showed the measure had good internal consistency (Cronbach's alpha [total scale] = .96); two week test-retest reliability was also good ($r[26] = .85$, $p < .0001$).

*6.3.2.2 Ability Emotional Intelligence*.

The pen and paper version of the MSCEIT, Version 2.0 (Mayer et al, 2002) was used in this study. It includes 141 items covering all four branches of the model and offering a choice of answers for each item. For example, 'Perceiving emotions' (branch 1) is measured by asking participants to indicate, on a five-point scale, the degree to which specific emotions are present in faces, landscape photographs and abstract art. 'Using emotions' (branch 2) is measured by asking participants to identify which emotions might be more helpful for particular activities and to match emotions with sensations. 'Understanding emotions' (branch 3) is measured by asking participants to predict the next emotion in a sequence of events and to identify emotions that could be combined to form other emotions, e.g. malice as a combination of envy and aggression (Mayer, et al. 2003). 'Managing emotions' (branch 4) presents various vignettes describing social situations for which participants have to evaluate ways to manage emotions

in that situation. The tests were scored by the test publisher Multi-Health Systems (MHS) using consensus scoring. Internal consistency for the MSCEIT has been reported, with Cronbach's alpha of .91 (Mayer et al.); three-week test-retest reliability is good at r = .86 (Brackett & Mayer, 2003).

*6.3.2.3 Trait Emotional Intelligence.*

The Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF: Petrides & Furnham, 2006) was used to measure trait EI. This is a self-report measure of trait EI completed as a pen and paper task; it has 30 items (15 reverse coded) and four subscales: 'well-being', 'self-control', 'emotionality' and 'sociability'. Participants respond to items on a 7-point Likert scale for which a '1' indicates 'complete disagreement' with the item and a '7' 'complete agreement'. Higher scores on each subscale indicate higher levels of that particular trait, e.g. 'well-being' or 'sociability', whereas lower scores indicate lower levels. Examples of items include:

*'On the whole I am pleased with my life' (well-being)*

*''I usually find it difficult to regulate my emotions' (self-control)* reverse coded item

*'I often pause and think about my feelings' (emotionality)*

*'I can deal effectively with people' (sociability)*

Internal consistency has been reported as satisfactory for both males and females ($\alpha$ = .84 and .89 respectively: Petrides & Furnham, 2006).

*6.3.2.4 Cognitive Ability.*

Ravens Advanced Progressive Matrices (Set 1) (Raven, Raven & Court, 1994)

was used as a test of cognitive ability. This is a non-verbal measure of the ability to form perceptual relations and to reason by analogy. It consists of a set of 12 items and is appropriate for use with young adults of above-average intelligence. All items are presented in black ink on a white background and participants are asked to identify the missing item that completes a pattern. Participants were given a time limit of 5 minutes to complete the task.

*6.3.2.5 Personality*

The International Personality Item Pool (IPIP: Goldberg, 1999) is a 50-item personality scale (24 items reverse coded), which measures the Big Five factors of personality (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness). There are 10 items for each factor and the 5-point scale is rated from '1' which indicates the item to be 'very inaccurate' to '5' indicating 'very accurate'. Higher scores on each factor indicate higher levels of that particular trait, e.g. Extraversion or Agreeableness, whereas lower scores indicate lower levels. Examples of items include;

*Am the life of the party (Extraversion)*

*Feel little concern for others (Agreeableness)* reverse coded item

*Am always prepared (Conscientiousness)*

*Get stressed out easily (Emotional Stability)* reverse coded item

*Have a rich vocabulary (Openness)*

Good internal consistency has been reported: Extraversion, $\alpha$ = .87; Agreeableness, $\alpha$ = .82; Conscientiousness, $\alpha$ = .79; Emotional Stability, $\alpha$ = .86;

Openness[5], α = .84 (http://ipip.ori.org/).

*6.3.3 Procedure*

Participants from two universities in the North West of England completed the measures in lectures. These measures take approximately one hour in total to complete. In addition, recent graduates from one of the universities completed the ESES online in response to an email request. This third sample consisted of individuals who participated in Study 2 of this thesis. Approval from the university's ethical committee was sought and obtained for this study.

*6.3.4 Analyses Plan*

The sample was split into two halves by allocating odd participant numbers to a calibration sample for exploratory factor analysis, and even numbers to a validation sample to replicate the model using confirmatory factor analysis. The calibration sample comprised 543 participants (M = 194, F = 349; mean age 23 years) and the validation sample included 542 participants (M = 209, F = 333; mean age 22 years 10 months). Once the factor structure was established, associations with the MSCEIT subscales, TEIQue subscales, IPIP dimensions, and the Raven's Advanced Matrices scores were investigated.

## 6.4 Results

The suitability of the data for factor analysis for both the calibration and validation samples was examined. Inspection of the correlation matrix for each sample revealed the presence of many coefficients of .30. Also, the Kaiser-Meyer-Oklin values

[5] Note that Openness has been renamed as 'Intellect' (http://ipip.ori.org)

were above .90 (.92 and .89 respectively), exceeding the recommended value of .60 (Kaiser, 1970, 1974); Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix.

Principal axis factoring of data in the calibration sample revealed the presence of six components with eigenvalues exceeding >1 (11.36, 2.71, 1.93, 1.34, 1.20, 1.08). The screeplot suggested four components (see Cattell, 1978). Parallel Analysis (Lance, Butts, & Michels, 2006; Velicer, Eaton, & Fava, 2000), also showed four components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (32 x 543 participants).

The four factors were correlated .62 or above. Thus, oblique rotation was appropriate to calculate common variance (Tabachnick & Fidell, 2007). Following this oblique rotation, these four factors accounted for 54.18% of the common variance and were labelled: (1) 'Using and Managing Your Own Emotions', (2) 'Identifying and Understanding Your Own Emotions', (3) 'Dealing with Emotions in Others', and (4) 'Perceiving Emotion through Facial Expressions and Body Language'. Table 3 details the items that loaded onto each factor. Items loading onto more than one factor were assigned on the basis of the largest factor loading. But in each of these cases, the item loaded onto the largest factor at above .45 and the other factor at below .45. Questions 28, 10, 29, 5 and 16 all loaded below .45 and were not retained (Tabachnick & Fidell, 2007). The internal reliabilities of the four subscales were $\alpha$ = .88 (subscale 1), $\alpha$ = .86 (subscale 2), $\alpha$ = .85 (subscale 3) and $\alpha$ = .80 (subscale 4).

Table 3. Study 1: Standardised Factor Loadings for the EFA and CFA Models.

| Factor and Items | Factor loading EFA: PME† | Factor loading CFA |
|---|---|---|
| **Factor 1. Using and Managing your own emotions** | | |
| 8. Change your negative emotion to a positive emotion | .88 | .76 |
| 3. Create a positive emotion when feeling a negative emotion | .82 | .71 |
| 18. Use positive emotions to generate good ideas | .62 | .76 |
| 30. Generate the right emotion so that creative ideas can unfold | .57 | .76 |
| 14. Get into a mood that best suits the occasion | .55 | .61 |
| 12. Regulate your own emotions when under pressure | .55 | .68 |
| 22. Create emotions to enhance cognitive performance | .54 | .65 |
| 20. Calm down when feeling angry | .53 | .55 |
| 6. Use positive emotions to generate novel solutions to old problems | .49 | .67 |
| 26. Create emotions to enhance physical performance | .48 | .63 |
| **Factor 2. Identifying and Understanding your own emotions** | | |
| 27. Figure out what causes you to feel differing emotions | .79 | .82 |
| 11. Know what causes you to feel a negative emotion | .72 | .81 |
| 1. Correctly identify your own negative emotions | .68 | .67 |
| 9. Correctly identify your own positive emotions | .68 | .64 |
| 19. Understand what causes your emotions to change | .61 | .61 |
| 4. Know what causes you to feel a positive emotion | .60 | .65 |
| **Factor 3. Dealing with Emotions in Others** | | |
| 7. Realise what causes another person to feel a positive emotion | .79 | .74 |
| 24. Help another person calm down when he or she is feeling angry | .63 | .63 |
| 31. Figure out what causes another person's differing emotions | .62 | .69 |
| 32. Help another person regulate emotions after he or she has suffered a loss | .61 | .62 |
| 15. Realise what causes another person to feel a negative emotion | .59 | .65 |
| 2. Help another person change a negative emotion to a positive emotion | .55 | .57 |
| 23. Understand what causes another person's emotions to change | .54 | .61 |
| 13. Correctly identify when another person is feeling a positive emotion | .50 | .58 |
| **Factor 4. Perceiving Emotion through Facial Expressions and Body Language** | | |
| 25. Recognize what emotion you are communicating through your facial expression | .67 | .79 |
| 21. Notice the emotion another person's body language is portraying | .63 | .68 |
| 17. Notice the emotion your body language is portraying | .57 | .77 |

Notes: 1. PME = pattern matrix element. 2. CFA model used maximum likelihood estimation. 3.
In the final model, the four factors were allowed to correlate with one another: Factors 1 and 2, r =.65; Factors 1 and 3, r = .62; Factors 1 and 4, r = .66; Factors 2 and 3, r = .69; Factors 2 and 4, r = .63; Factors 3 and 4, r = .72.
†Questions 28, 10, 29, 5 and 16 all loaded below .45 and are not retained in the final four-factor solution

Using Amos 18, CFA was conducted using the validation sample. First, a confirmatory factor analysis using all items was conducted to test for a one-factor solution, which was found in earlier research by Kirk et al. (2008). Multiple fit indices were consulted to assess model fit: the root mean square error of approximation (RMSEA), the Comparative Fit Index (CFI). As suggested by Hu and Bentler (1999), cut-off criteria indicative of good fit are RMSEA <.06, and CFI and TLI > .95. However, given the exploratory nature of the study, it was also deemed important to consider more liberal criteria indicative of moderate levels of model fit: <.08 (RMSEA) and >.90 (CFI) (Marsh, Hau, & Wen, 2004). In addition, two parsimony adjusted fit indices were used to compare models: the Parsimonious Normed Fit Index (PNFI) and Parsimonious Comparative Fit Index (PCFI). When two or more competing models fit the data equally well, quality can be assessed by examining parsimony (Mulaik et al., 1989). Parsimonious fit indices in the region of .50 are not inconceivable even with high goodness-of-fit indices (e.g., CFI = .90/1), but the larger the value the more parsimonious the model (Mulaik et al., 1989). Using these rules of thumb, fit indices revealed that a one-factor model failed to fit the observed data ($\chi^2$ (464) = 3830.11 [$p$ = .001], RMSEA = .12 [$CI_{.95}$ = .112, .20], CFI = .63, PNFI = .53, PCFI = .56). This indicated that a uni-dimensional model was not a good fit to these data.

Second, the four-factor solution was tested on the validation sample. In this model, the four factors were allowed to correlate with one another. CFA revealed an adequate fit to the data ($\chi^2$ = 1793.89, RMSEA = .07 [$CI_{.95}$ = .068, .077], CFI = .91, PNFI= .75, PCFI = .78). Factor loadings were reasonably sized ranging from .55 to .82 (see Table 3 for exact details). The internal reliabilities of the four subscales used in the

CFA were .89 (subscale 1), .86 (subscale 2), .86 (subscale 3) and .79 (subscale 4).

Due to time constraints and availability of participants, only a subset of the sample completed the other measures. Specifically 264 Psychology undergraduate students (M = 61, F = 203), whose age ranged from 18 years to 52 years (mean age 20 years and 5 months) completed, in addition to the ESES, the MSCEIT, the TEIQue, IPIP, and Raven's Advanced Matrixes. Descriptive statistics in respect of these variables can be seen in Table 4. Correlations between the respondents' scores on the ESES subscales and these other variables can be found in Table 5. The ESES showed weak correlations with the 'Using' and 'Managing' branches of the MSCEIT, and stronger correlations with personality including Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness. It also correlated well with TEIQue (total score) and all TEIQue subscales. As found in previous studies (Joseph & Newman, 2010), cognitive ability (Raven's) was significantly correlated with total ability EI (MSCEIT) and all four branches. There was no significant association between cognitive ability and ESE. The ESES total and all four subscales showed significant positive correlations with age.

Table 4. Study 1: Descriptive Statistics

| Variables | *N* | Mean | SD |
|---|---|---|---|
| ESES (Total) | 1085 | 97.55 | 15.76 |
| ESES (Using & Managing own Emotions) | 1085 | 33.91 | 7.39 |
| ESES (Identifying & Understanding Own Emotions) | 1085 | 23.22 | 4.18 |
| ESES (Dealing with Emotions in Others) | 1085 | 29.63 | 4.91 |
| ESES (Perceiving Emotion through Facial Expression & Body Language) | 1085 | 10.76 | 2.62 |
| MSCEIT Total Ability EI | 263 | 93.51 | 12.03 |
| MSCEIT (Perceiving Emotions) | 263 | 95.23 | 12.53 |
| MSCEIT (Using Emotions) | 263 | 97.86 | 13.81 |
| MSCEIT (Understanding Emotions) | 263 | 103.76 | 16.63 |
| MSCEIT (Managing Emotions) | 263 | 92.62 | 10.27 |
| TEIQue Total Trait EI | 260 | 144.38 | 19.89 |
| TEIQue (Wellbeing) | 260 | 31.78 | 6.01 |
| TEIQue (Self-Control) | 260 | 24.70 | 5.82 |
| TEIQue (Emotionality) | 260 | 39.94 | 6.90 |
| TEIQue (Sociability) | 260 | 28.96 | 5.46 |
| IPIP (Extraversion) | 263 | 33.23 | 7.45 |
| IPIP (Agreeableness) | 260 | 40.30 | 4.97 |
| IPIP (Conscientiousness) | 260 | 32.05 | 6.27 |
| IPIP (Emotional Stability) | 264 | 28.66 | 7.47 |
| IPIP (Openness) | 263 | 35.00 | 6.05 |
| Ravens Advanced Progressive Matrices | 264 | 9.44 | 1.69 |
| Age | 1057 | 22.96 | 5.87 |

Table 5. Study 1: Correlations among Emotional Self-Efficacy, Ability and Trait EI, Personality, Cognitive Ability and Age

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. ESES (Total) | (.93) | | | | | | | | | | | | | | | | | | | | | |
| 2. ESES Us/Ma/Own | .88** | (.88) | | | | | | | | | | | | | | | | | | | | |
| 3. ESES Id/Un/Own | .80** | .58** | (.86) | | | | | | | | | | | | | | | | | | | |
| 4. ESES Emo/Others | .81** | .53** | .57** | (.85) | | | | | | | | | | | | | | | | | | |
| 5. ESES Per/Fac/Bod | .74** | .53** | .52** | .61** | (.80) | | | | | | | | | | | | | | | | | |
| 6. MSCEIT (Total) | .09 | .01 | .14* | .10 | .04 | - | | | | | | | | | | | | | | | | |
| 7. MSCEIT (Perc) | .00 | -.02 | .04 | .03 | -.07 | .75** | _ | | | | | | | | | | | | | | | |
| 8. MSCEIT (Use) | .13* | .07 | .15* | .13* | .09 | .78** | .49** | - | | | | | | | | | | | | | | |
| 9. MSCEIT (Und) | .03 | .00 | .04 | .02 | .01 | .58** | .20** | .32** | _ | | | | | | | | | | | | | |
| 10. MSCEIT (Man) | .13* | .08 | .13* | .11 | .10 | .68** | .28** | .44** | .38** | - | | | | | | | | | | | | |
| 11. TEIQue (Total) | .68** | .67** | .58** | .48** | .38** | .21** | .06 | .23** | .07 | .24** | (.86) | | | | | | | | | | | |
| 12. TEIQue (WB) | .45** | .56** | .40** | .18** | .15* | .10 | .08 | .14* | -.06 | .13* | .75** | (.85) | | | | | | | | | | |
| 13. TEIQue (SC) | .56** | .62** | .45** | .32** | .29** | .16** | .08 | .20** | .11 | .12 | .74** | .50** | (.67) | | | | | | | | | |
| 14. TEIQue (Em) | .44** | .32** | .43** | .43** | .27** | .18** | -.06 | .18** | .11 | .23** | .67** | .29** | .32** | (.66) | | | | | | | | |
| 15. TEIQue (Soc) | .44** | .34** | .31** | .43** | .40** | .18** | .07 | .13* | .11 | .22** | .59** | .26** | .26** | .26** | (.70) | | | | | | | |
| 16. IPIP (Ext) | .32** | .29** | .21** | .30** | .26** | .02 | -.01 | .05 | -.05 | .08 | .46** | .40** | .14* | .25** | .49** | (.89) | | | | | | |

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17. IPIP (Agr) | .28** | .19** | .22** | .38** | .09 | .15* | -.02 | .17** | .02 | .14* | .43** | .27** | .22** | .58** | .08 | .23** | (.78) | | | | | |
| 18. IPIP (Cons) | .29** | .20** | .31** | .25** | .22** | .05 | -.05 | .07 | -.01 | .07 | .43** | .21** | .28** | .30** | .26** | .09 | .19** | (.79) | | | | |
| 19. IPIP (EStab) | .44** | .54** | .34** | .21** | .19** | .17** | .12 | .21** | .05 | .12 | .58** | .45** | .74** | .20** | .21** | .19** | .14* | .13* | (.85) | | | |
| 20. IPIP (Open) | .35** | .30** | .23** | .31** | .30** | .20** | .15* | .13* | .21** | .14* | .31** | .05 | .20** | .21** | .41** | .25** | .09 | .17** | .09 | (.83) | | |
| 21. Ravens | .01 | -.06 | .04 | .06 | .00 | .28** | .20** | .24** | .19** | .16* | -.07 | -.12 | .00 | .01 | .02 | -.09 | .07 | -.13* | .02 | .15* | | |
| 22. Age | .24** | .24** | .17** | .16** | .17** | -.16** | -.05 | -.06 | -.30** | -.21** | .19** | .10 | .21** | .12 | .07 | .04 | .18** | .16* | .13* | .07 | -.02 | - |

Note: Perc = Perceiving Emotions; Use = Using Emotions; Und = Understanding Emotions; Man = Managing Emotions; ESES Us/Ma/Own = Using and Managing Own Emotions; ESES Id/Un/Own: Identifying and Understanding Own Emotions; ESES Emo/Others = Dealing with Emotions in Others; ESES Per/Fac/Bod = Perceiving Emotion through Facial Expressions and Body Language; WB = Well Being; SC = Self Control; Em = Emotionality; Soc = Sociability; Ext = Extraversion; Agr = Agreeableness; Cons = Conscientiousness; EStab = Emotional Stability; Open = Openness; Ravens = Ravens Advanced Progressive Matrices (Set 1). Available internal reliability coefficients (alpha) are listed along the diagonal. Correlations between ESES Total, ESES Subscales and Age run for full sample (N = 1085) to maximise variability. *p<.05, **p<.01.

## 6.5 Discussion

This study explored the factor structure of the Emotional Self-Efficacy Scale (ESES). Exploratory and confirmatory factor analyses suggested that the ESES is multi-dimensional. Further, the ESES did not correlate with the MSCEIT, but correlated well with a trait EI measure; it also showed similar patterns of association with personality to the trait EI measure. In contrast to the original validation study (Kirk et al., 2008) that suggested a uni-dimensional structure of the ESES, the ESES was found to be multi-dimensional. Using exploratory and confirmatory factor analyses on two different large samples of participants, a consistent four-factor structure was found. This structure does not map clearly onto the four-branch model of EI, but instead primarily shows distinctions between confidence in emotional functioning related to oneself and to others. These are important aspects of the ability model of EI; as such, the ESES has face-validity as a measure of ESE.

In line with the empirical findings of Brackett et al., (2006) and theoretical models of ESE (Bandura, 1995, 1997; Saarni, 1999), clear differences were found between people's actual emotional skills (as measured by the MSCEIT) and their judgments of these abilities (assessed using the ESES). Previous research with children also shows little association between actual EI skills and beliefs about using these emotional skills in social relationships (Qualter, Barlow, et al., in press) and this same association has now been shown among young adults. However, although the concepts of ability EI and ESE are distinct, both may be important in terms of the behaviour they predict and future research will want to address this.

These findings also contribute to the literature on self-efficacy development. Self-efficacy beliefs are evidenced to develop from mastery experiences and social modeling (Bandura et al., 2003) so they change over the lifespan. The significant correlations between age and ESE in the current study support this assertion, and higher correlations between ability EI and ESE may be evident among middle or older adult populations.

The ESES was found to correlate well (.68) with the TEIQue. This supports the original validation of the measure where the ESES was found to correlate .70 with the 'Assessing Emotions' measure of trait EI (Schutte et al., 1998). Further, it was found that the ESES and TEIQue showed similar patterns of association with personality dimensions, suggesting they behave in a similar manner. However, given that the ESES is based exclusively on the four-branch ability model of EI and does not include measurement of other emotion related dispositions, its association with the TEIQue and personality are likely due to shared method variance and semantic overlap between the questionnaire items. Unlike the TEIQue, which measures the broader concept of trait EI, the ESES is directly focused on self-efficacy in relation to emotional functioning, as defined by the four-branch model of EI; it does not measure additional individual differences which may be related to but are not the same as EI. In this sense, the ESES could be seen as a more appropriate measure to use in studies where the researcher aims to investigate confidence in emotional functioning ability (as operationalised by the original EI ability framework) or is solely interested in the emotional self-efficacy concept.

The results of the current study suggest that ESE can be reliably measured using

the Emotional Self-Efficacy Scale (ESES). The measure produces four subscale scores that detail how able a person feels at (1) using and managing their own emotions, (2) identifying and understanding their own emotions, (3) managing the emotions of others, and (4) perceiving emotions through facial expressions and body language. The ESES correlates with another trait EI measure (TEIQue) and shows expected associations with personality; it does not correlate well with the MSCEIT ability EI measure or with cognitive ability. These findings can be interpreted as offering support to the theoretical models of ESE that propose a difference between people's actual emotional skills and their judgments of these abilities. It seems it is one thing to have EI ability, but another to believe that you can use this in everyday encounters. However both may be important in terms of the behaviour they are able to predict. Future research will want to determine the separate roles of ESE, trait EI, and ability EI in predicting life outcomes.

One limitation of this study worthy of note is the high proportion of female participants (80%) in the sub-sample who completed all the measures. Previous studies have found that females score significantly higher than males on measures of ability EI but not on self-report trait EI (e.g. Brackett et al., 2006; Joseph & Newman, 2010). This may limit the extent to which generalisations can be made from some of these findings. Future research may want to replicate this part of Study 1 with a more equal gender balance.

### 6.6 Implications for Studies 2 and 3

The ESES is a reliable measure of ESE and, as such, is appropriate to use in Study 2 in order to investigate its relationship with graduate employability. The scale should be

used as a multi-dimensional measure which includes four subscales. Further it appears to be a sufficiently reliable measure for use in the evaluation of the teaching intervention in Study 3. As the results of Study 1 indicate that ESE is a different construct to ability EI, it will be helpful to use the ESES as an additional measure to the MSCEIT, in order to investigate if the Study 3 intervention has an influence on both ESE and ability EI.

# CHAPTER 7

# STUDY 2: EMOTIONAL SELF-EFFICACY, GRADUATE EMPLOYABILITY AND CAREER SATISFACTION: TESTING THE ASSOCIATIONS

## 7.1 Aims of Study 2

Graduate employability has been the subject of little empirical research. There are a number of difficulties in defining and measuring graduate employability, which means there is a paucity of research that looks at its predictors and outcomes. Previous work has proposed that emotional functioning leads to successful graduate employability, and this study investigates this association empirically (see Chapters 2 and 3 for a full discussion of graduate employability and the CareerEDGE model). Also investigated is the association between employability and career satisfaction. The ESES is used as a self-report measure of emotional functioning as Study 1 found this to be a reliable measure based solely on the four-branch ability model of EI.

## 7.2 Introduction

Much of the discussion surrounding graduate employability focuses on the skills and competencies that employers consider desirable in their graduate recruits (e.g. Confederation of British Industry [CBI], 2009). These include self-management, team-working, communication and the ability to work under pressure (Pedagogy for Employability Group, 2006). Researchers have highlighted the need for further empirical

investigation of these skills and competencies as possible predictors of employability (Wittekind, Raeder & Grote, 2010). Some researchers (Dacre Pool & Sewell, 2007) have argued that other skills, including emotional functioning should also be studied as they are important for graduate employability. Confirming the association between emotional functioning and graduate employability is important because it would indicate that emotional functioning is a potential contributor to employability, which itself predicts better health and well-being (Berntson & Marklund, 2007). Employability may also be a predictor of career satisfaction, but empirical evidence of this relationship is limited (Rothwell & Arnold, 2007; Rothwell, Jewell & Hardie, 2009). This lack of relevant empirical research could be explained by the difficulties defining and measuring employability, although recent introductions of clear and more widely accepted definitions of employability (e.g. Dacre Pool & Sewell, 2007), together with available measures (e.g. Berntson & Marklund, 2007; Rothwell & Arnold, 2007), now allow us to investigate these areas further. The current research explores employability from an individual perspective (Rothwell, Jewell & Hardie, 2009) and was designed to investigate the associations between i) emotional self-efficacy and employability ii) employability and career satisfaction and iii) emotional self-efficacy and career satisfaction in a sample of working graduates.

### *7.2.1 Graduate Employability*

Many people agree that graduate employability is a difficult concept to define (e.g. Little, 2001, Lees, 2002, Harvey 2005). The literature suggests that employability is more than just getting a job or accumulating skills, and should not be confused with

employment rates or seen as a measure of institutional success or otherwise (see Table 1, p. 21 for employability definitions). The following definition attempts to clarify the concept:

> *'Employability is having a set of skills, knowledge, understandings and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful.'* (Dacre Pool & Sewell, 2007, p. 280).

This concept has been further developed into the CareerEDGE model of graduate employability (Dacre Pool & Sewell, 2007). This model proposes that in order to maximise their employability potential, there are five vital components that all students should have the opportunity to develop during their time in Higher Education. These are as follows:

**Career** Development Learning

**E**xperience (Work and Life)

**D**egree Subject Knowledge, Understanding and Skills

**G**eneric Skills

**E**motional Intelligence (EI)

The important component of this model for the present study is the aspect of EI. Although earlier models and theories of employability alluded to EI (e.g. Knight & York, 2004; Van der Heijde & Van der Heijden, 2006), there are good arguments for raising its

profile to an essential element in the development of graduate employability. Not only is it likely to be an important element in its own right, it is also likely to underpin a number of important factors in other elements of employability, particularly in relation to generic skills. For example, one generic skill that is consistently reported by employers as essential in graduate recruits is 'communication' (Pedagogy for Employability Group, 2006). If a person finds it difficult to perceive emotion in others, one factor of the four-branch model of EI (Mayer & Salovey, 1997; Salovey & Mayer, 1990), then they are unlikely to respond appropriately during interactions with other people in the workplace. Additionally, if a person is unable to manage their emotions effectively, there could be potentially serious consequences for team working – another generic skill cited as important by most employers.

### *7.2.2 Emotional Intelligence*

The construct of EI provides a scientific framework for the study of emotional functioning (Mikolajczak, Petrides, Coumans & Luminet, 2009). EI, as the term suggests, is closely related to both the concepts of intelligence and emotion (Mayer, Roberts & Barsade, 2008a). It brings together these two concepts and views them as working together to guide decision-making and behaviour. The most frequently used model of EI is the four-branch model (Mayer & Salovey, 1997; Salovey & Mayer, 1990). EI theory suggests that it predicts work performance (O'Boyle Jr, et al., 2010; Van Rooy & Viswesvaran, 2004). Certainly, management and human resource professionals have been keen to recruit and select employees on the basis of evidence that EI is related to

better work performance (Joseph & Newman, 2010), but is there empirical evidence of this association?

*7.2.3 EI and work related outcomes*

There have been a number of studies which indicate that EI predicts specific work related outcomes and as such has a role to play in enhancing graduate employability, including enhanced performance in the workplace with the resultant increases in salary and status (Lopes, Grewal, Kadis, Gall & Salovey, 2006). A recent study by Nelis et al., (2011) found that an EI intervention was able to improve participants' performance in an interview situation. They suggest that after the intervention, the participants referred more often to their feelings and the feelings of others whilst answering interview questions. They were also better able to manage their stress whilst being video taped, which allowed them to answer the questions calmly. These were qualities the evaluators (human resource professionals) found important in deciding how employable they considered the person to be.

The ability to successfully negotiate in the work place is also associated with a person's EI capabilities (Mueller & Curham, 2006), as is effective leadership (Kerr, Garvin, Heaton & Boyle, 2006; Rosete & Ciarrochi, 2005), more successful teamworking (Vitello-Cicciu, 2001), greater revenue generation and better customer retention in sales professionals (Kidwell, Hardesty, Murtha & Sheng, 2011).

There are a number of mechanisms by which EI may impact on performance in the workplace. By accurately perceiving emotion in others, through facial expression, body language and tone of voice, a person is more likely to be able to respond

appropriately. For example, recognising when a person is angry or confused is essential for good relationships both within organisations and with external customers. The ability to use emotion enables an employee to decide if their current state is appropriate for a particular task. Different types of emotion have been shown to enhance certain tasks. For example, upbeat more positive moods can help in creative activities and sadder moods may be more helpful for tasks that require deep concentration and focus (Salovey & Grewal, 2005). A good level of this ability will enable a person to make the most of their changing moods to maximise their performance on particular tasks. The ability to understand emotion includes the ability to label feelings, understand how they can blend together to form more complex emotions and how different feelings may evolve over time (Mayer, 2000). In the workplace, a person with a good understanding of how a colleague, employee or customer, who is currently demonstrating annoyance could easily become enraged, is more likely to be prepared for this eventuality and try to use effective strategies to prevent this happening. Finally, a person who is able to manage their emotions effectively is able to remain composed when faced with an irate or highly anxious colleague or customer and as such is more likely to achieve a satisfactory outcome to any exchange.

Therefore, the evidence suggests that EI is an important element of interpersonal functioning that leads to better communication in the workplace, thereby enhancing employability. Emotional skills and functioning in the workplace are often studied using measures of EI, e.g. the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), (Mayer, Salovey & Caruso, 2002). This type of measure looks to assess the level of a person's ability in relation to emotional functioning. However, whether or not people

feel confident about, or motivated to use, their emotional knowledge and skills has received little empirical investigation.

### *7.2.4 Emotional Self-Efficacy*

One research area that helps to address this issue is that of emotional self – efficacy. This has been proposed as a dimension of EI (Kirk, Schutte & Hine, 2011) and is concerned not just with whether a person possesses emotional knowledge and skill to a reasonable level, but also whether they *believe* they have this knowledge and skill; in other words, do they consider themselves self-efficacious in this domain. The concept of self-efficacy is most often associated with the work of Bandura (1986, 1995, 1997); Mayer, Caruso and Salovey (1999) further this work by suggesting people often act on what they *believe* about their abilities as opposed to their actual abilities, highlighting the importance of measuring emotional self-efficacy as well as emotional skill. The literature concerning individual differences in capability and skills does not provide a full explanation as to why some people demonstrate better performance in a given area than others, but some people argue that self-efficacy is even more important than actual task related abilities and skills in explaining these individual differences in performance (Gundlach, Martinko & Douglas, 2003). In the case of emotional functioning, a person may have the ability to read emotions well in other people or to manage their own emotions, but they may decide not to use either of these abilities, possibly because they are not motivated to do so or because they lack self-efficacy in this domain (Kirk, Schutte & Hine, 2008; Qualter, Barlow & Stylianou, in press). People who believe they have some control over their emotional functioning are more successful in regulating their

emotions than those who believe this is something they cannot control effectively (Bandura, Caprara, Barbaranelli, Gerbino & Pastorelli, 2003).

### *7.2.5 Emotional Self-Efficacy, Graduate Employability and Career Satisfaction*

Empirical study shows that ESE is important in predicting academic success (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001), and a recent study by Kirk et al. (2011) found some positive effects for an ESE writing intervention on workplace civility. Rothwell, Herbert & Rothwell (2008) also propose confidence in one's skills and abilities as an aspect of employability and an argument could be made for the inclusion of emotional skills here. However, the role of ESE in predicting workplace functioning and graduate employability requires investigation. It would make sense that people who are confident in their ability to manage their emotions effectively also perform these behaviours and, as such, enjoy better interpersonal relationships than those who are not. This is likely to help with employability issues such as developing and maintaining networks and being 'kept in the know' concerning possible opportunities. The current research aims to investigate whether ESE is an important predictor of graduate employability.

One concept that is often considered in the same general area as employability, but is a separate construct, is that of career satisfaction. This is not to be confused with job satisfaction, which is purely concerned with the current role, but relates to an individual's satisfaction with the accumulation of their career related experiences (Rothwell & Arnold, 2007). There is some research that indicates that employability and career satisfaction are related concepts (Rothwell & Arnold, 2007; De Vos & Soens,

2008). Van der Heijde and Van der Heijden (2006) reported mixed results for their five dimensional model of employability in predicting various objective and subjective career satisfaction and success outcomes. However, this previous research has been carried out with broad population samples and may not generalise to working graduates.

So, by which mechanism might employability and career satisfaction be associated? It may be, for example, that having well developed job specific and generic skills – both aspects of employability – gives a graduate confidence in their ability to gain alternative employment, either within their current organization or elsewhere if necessary. As such they are more likely to take a proactive approach where career management is concerned, making positive changes before they become dissatisfied with their careers. Therefore this research aims to investigate the relationship between graduate employability and career satisfaction.

A further consideration is whether or not there is a direct relationship between ESE and career satisfaction. Better emotional functioning could create a more generally positive approach to life and work which could result in a more favorable assessment of the current career situation. The current research will also investigate this possibility.

Finally, it could be that employability plays a mediating role between emotional self-efficacy and career satisfaction. Arnold (2011) discusses the issue of career capital, defined as the accumulation of assets that improve a person's chances of career satisfaction. This would appear to be a very similar construct to employability as included within this are personal attributes, social contacts and relationships. It is possible that ESE is one of these personal attributes that helps in the development and maintenance of social contacts and relationships, thereby enhancing employability.

These interactions and relationships with others also have an important role to play in shaping people's views of their careers (Bosley, Arnold & Cohen, 2009). People who consider themselves better able to perceive, use, understand and manage emotion should use these skills to form better interpersonal relationships with others in the workplace. As such they are likely to enjoy wider, more supportive networks and feel confident in their ability to gain and retain suitable employment that will bring them career satisfaction and success. The current study also explores the possible mediating role of employability in relation to ESE and career satisfaction. The purpose of this study is to explore the concepts of graduate employability and career satisfaction within the context of emotional skills.

## 7.3 Method

### *7.3.1 Sample and procedure*

An email was sent to approximately 4000 graduates (graduated 2006, 2007 and 2008 in a wide range of subjects, including e.g. Business Studies, Electronic Engineering, History and Human Resource Management) who are alumni of a university in the North West of England, requesting their participation in a research study. Further email reminders were sent 7 days and 14 days later. Respondents completed the questionnaire online. Three hundred and six working graduates participated in the study (M = 140, F = 164, not reported = 2). The age range was 23 years to 59 years and the mean age of the sample was 28 years (SD = 7 years). No incentives to take part in this study were provided.

### *7.3.2 Measures*

#### *7.3.2.1 Emotional Self-Efficacy (ESE).*

The Emotional Self-Efficacy Scale (ESES) developed by Kirk et al. (2008) originally comprised 32 items, with eight items representing each of the four branches of the Mayer, Salovey and Caruso (1997) model. Participants are required to rate their confidence in respect of each item by selecting a number on a five-point Likert scale, with a '1' indicating 'not at all confident' and a '5' indicating 'very confident'. The revised scoring system (see Study 1, p. 151) was used in this study. Only 27 items are scored; they make up four subscales. The subscales with the number of items and range of possible scores are as follows: (1) using and managing own emotions, 10 items, minimum score of 10, maximum score of 50, (2) identifying and understanding own emotions, 6 items, minimum score of 6, maximum score of 30, (3) dealing with emotions in others, 8 items, minimum score of 8, maximum score of 40 and (4) perceiving emotion through facial expressions and body language, 3 items, minimum score of 3, maximum score of 15. A higher score on each subscale is indicative of a higher level of ESE. Cronbach's alpha for the four subscales ranged from .79 to .89.

#### *7.3.2.2 Employability.*

A limited number of employability measures have been published in the literature. The three used in this research tap into the different elements of employability and are all appropriate for use with a graduate sample. The *Self-Perceived Employability Scale* (Rothwell & Arnold, 2007, see Appendix E) comprises 11 items which make up two subscales (1) internal employability, 4 items, minimum

score of 4 and maximum score of 20, and (2) external employability, 7 items, minimum score of 7 and maximum score of 35. Participants are required to state their agreement with the items by selecting a number on a five-point Likert scale, with a '1' indicating 'strong disagreement' and a '5' indicating 'strong agreement'. Examples of items include *'My personal networks in this organisation help me in my career'* (internal employability item) and *'I could easily get a similar job to mine in almost any organisation'* (external employability item). Rothwell and Arnold (2007) report good internal consistency for the measure (Cronbach's alpha for internal employability .72, external employability .79 and the total scale .83). The *Measure of Perceived Employability* (Berntson & Marklund, 2007, see Appendix D) comprises 5 items. Participants are required to state their agreement with the items by selecting a number on a five-point Likert scale, with a '1' indicating 'strong disagreement' and a '5' indicating 'strong agreement'. The total minimum score for the scale is 5 and the maximum score is 25. Examples of items include: *'My competence is sought-after in the labour market'* and *'I know of other organisations/companies where I could get work'*. Cronbach's alpha for the total scale is good ά = .88 (Berntson & Marklund, 2007). The *Perceived Employability* scale (De Vos & Soens, 2008, see Chapter 4, p. 74) comprises 3 items; '*I believe I could easily obtain a comparable job with another employer', 'I believe I could easily obtain another job that is in line with my level of education and experience'* and *'I believe I could easily obtain another job that would give me a high level of satisfaction'*. Participants are required to state their agreement with the items by

selecting a number on a five-point Likert scale, with a '1' indicating 'strong disagreement' and a '5' indicating 'strong agreement'. The total minimum score is 3 and the maximum score is 15. De Vos & Soens (2008) report good internal consistency for the measure with Cronbach's alpha for the total scale .91.

*7.3.2.3 Career Satisfaction*

The *Career Satisfaction Scale* (De Vos & Soens, 2008, adapted from Martins, Eddleston & Veiga, 2002) was selected for use in this study as it is a brief measure suitable for use with a graduate sample. It comprises 3 items that measure career satisfaction; *'I am satisfied with my career status'*, *'I am satisfied with my current job'* and *'I feel my career progress has been satisfactory'*. Participants are required to state their agreement with the items by selecting a number on a five-point Likert scale, with a '1' indicating 'strong disagreement' and a '5' indicating 'strong agreement'. The total minimum score is 3 and the maximum score is 15. De Vos and Soens (2008) report good internal consistency for the measure with Cronbach's alpha for the total scale = .87.

*7.3.3 Analyses Plan*

Before modeling, the relationships between all variables were examined. As there were significant correlations between all variables, these were entered into a structural equation model (SEM) to examine structural links between ESE, graduate employability, and career satisfaction. Model development was guided by the proposals that (1) ESE predicts employability and (2) ESE may impact directly on career satisfaction or be mediated by employability; and (3) employability predicts career satisfaction. A latent

variable of ESE was represented by the four subscales of the ESES, as identified in Study 1. The latent variable of employability was formed from the four employability indicator variables. The De Vos Career Satisfaction measure was used as an observed outcome variable. It was posited that ESE would exert some direct influence on employability, but also on career satisfaction. Further, the possibility of an indirect effect of ESE on career satisfaction via employability was investigated.

The Structural Equation Model was performed in AMOS 18 (Arbuckle, 2009). All analyses were conducted using full information maximum likelihood estimation with robust standard errors (Little & Rubin, 1987). The degree of model fit was used to make interpretations about the associations between the variables. Goodness of Fit (GOF) statistics used are the chi-square goodness of fit statistic, the comparative fit index (CFI), normed fit index (NFI), and the root mean square error of approximation (RMSEA) (Browne & Cudeck, 1992). There are rules of thumb about acceptable levels of GOF (Marsh, Hau, & Wen, 2004), such that RMSEA should be less than .05 to be viewed as having a good fit (Browne & Cudeck, 1992), or should be between .05 and .08 for a reasonable fit to the data (Hu & Bentler, 1999; Maccallum, Browne, & Sugawara, 1996). The Comparative Fit Index (CFI) should exceed .90 (Hu & Bentler, 1999), as should NFI (Tabachnick & Fidell, 2007). The Chi-square index, which tests the null hypothesis of perfect fit to the data, should be as small as possible (Tabachnick & Fidell, 2007). Unstandardised regression coefficients (*B*) and correlations (*r*, obtained as standardised regression coefficients) are reported. The alpha level is set to .05 throughout.

## 7.4 Results

Table 6 (overleaf) presents the descriptive statistics, intercorrelations and reliability coefficients (Cronbach's alpha) for the study variables.

The significant correlations between the variables support their inclusion in the model proposed. The baseline model included direct paths from (1) the latent variable ESE to the latent variable Employability (2) from ESE to the observed variable Career Satisfaction. The model also included a path from Employability to Career Satisfaction. This model was a reasonable fit to the data ($X^2$ [26, $N$ = 306] = 70.22, p<.01, NFI = .95, CFI = .97, RMSEA = .08). However, this model included a non-significant path from ESE to Career Satisfaction suggesting that ESE did not directly affect Career Satisfaction; instead ESE indirectly affected Career Satisfaction via Employability. This path was subsequently removed from the model, which improved model fit slightly ($X^2$ = 70.23, p<.01, NFI = .95, CFI = .98, RMSEA = .07). Figure 11 (overleaf) displays the final model, with all significant pathways included.

As common method variance (CMV) is a concern for all research involving measures derived from the same respondent, a post hoc Harman one-factor analysis (Harman, 1967) was carried out. Should the results reveal a single factor, or one general factor that accounts for the majority of covariance among the variables, this could suggest that CMV is a cause for concern. However in this case, the test revealed 10 factors with eigenvalues greater than 1. These factors accounted for 67% of the variance and the first factor accounted for 32%. This does not allow a definitive conclusion that CMV had no

effect (Chang, van Witteloostuijn & Eden, 2010) but would suggest its effects are limited in relation to these data.

Table 6. Study 2: Descriptive Statistics, Intercorrelations and Reliability Coefficients (Cronbach's alpha) for the Study Variables.

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. ESES<br>Using & Managing Own Emotions | 36.44 | 7.20 | .92 | | | | | | | | |
| 2. ESES<br>Identifying & Understanding Own Emotions | 23.61 | 4.01 | .69** | .90 | | | | | | | |
| 3. ESES<br>Dealing with Emotions in Others | 30.02 | 5.09 | .73** | .74** | .89 | | | | | | |
| 4. ESES<br>Perceiving Emotion through Facial Expressions and Body Language | 11.35 | 2.51 | .67** | .70** | .70** | .86 | | | | | |
| 5. Employability<br>Rothwell & Arnold (Internal Employability) | 14.83 | 2.73 | .35** | .16** | .28** | .22** | .67 | | | | |
| 6. Employability<br>Rothwell & Arnold (External Employability) | 24.86 | 4.05 | .34** | .22** | .31** | .25** | .54** | .74 | | | |
| 7. Employability<br>Berntson & Marklund | 17.10 | 3.52 | .42** | .22** | .32** | .26** | .62** | .69** | .78 | | |
| 8. Employability<br>De Vos & Soens | 9.78 | 2.49 | .40** | .27** | .32** | .25** | .50** | .73** | .68** | .82 | |
| 9. Career Satisfaction<br>De Vos & Soens | 10.28 | 3.10 | .30** | .18** | .20** | .16** | .50** | .39** | .51** | .45** | .86 |

Note: Alphas are on the diagonal. ** = $p<.01$

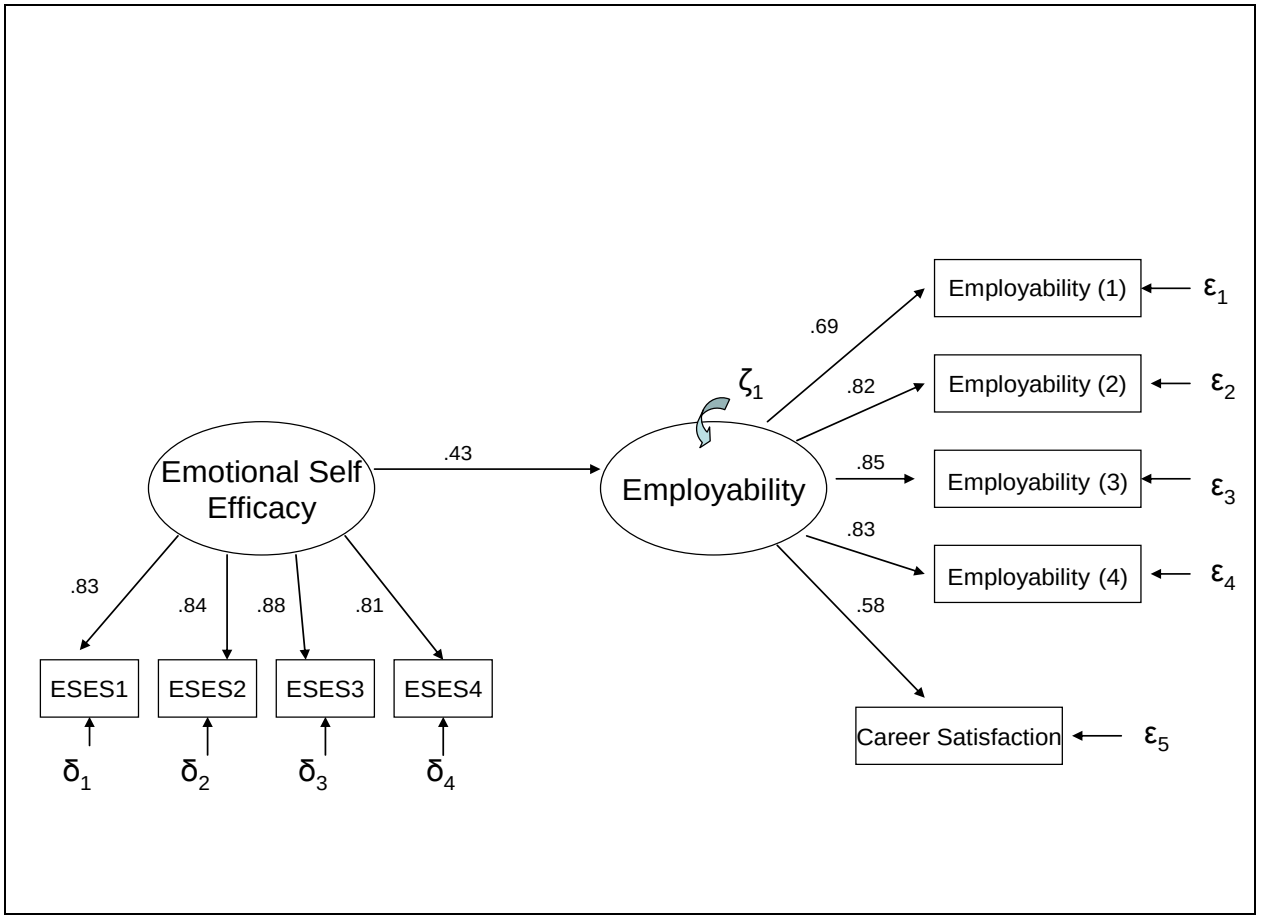


Figure 11. Study 2: Final Structural Equation Model Linking Emotional Self-Efficacy and Employability Variables to Career Satisfaction.

Note. ESES (1) = Using & Managing Own Emotions; ESES (2) = Identifying & Understanding Own Emotions; ESES (3) = Dealing with Emotions in Others; ESES (4) = Perceiving Emotion through Facial Expressions and Body Language; Employability (1) = Rothwell & Arnold (Internal Employability); Employability (2) = Rothwell & Arnold (External Employability); Employability (3) = Berntson & Marklund; Employability (4) = De Vos & Soens; Career Satisfaction = De Vos & Soens.

## 7.5 Discussion

Findings from the current study show that ESE is highly related to employability and suggest that working graduates who have confidence in their emotional functioning also perceive themselves as highly employable. This implies that beliefs concerning emotional functioning influence self-perceived employability; people who are more confident in their abilities to perceive, use, understand and manage emotion also consider themselves more employable. Employability is concerned with having certain skills and attributes that make a person more likely to choose, secure and retain employment, such as having good personal networks, being aware of opportunities and feeling respected within an organisation. Somebody who is confident in their emotional functioning, and sees themselves as an effective communicator with their colleagues, managers and customers, is more likely to be able to develop and maintain their personal networks and gain the respect of others.

The findings regarding the associations between ESE, employability and career satisfaction are of particular importance. In line with Rothwell and Arnold, (2007) and De Vos and Soens, (2008) a significant relationship was found between employability and career satisfaction, but within a graduate sample. Furthermore ESE does not have a direct effect on career satisfaction, but operates indirectly via employability. Thus, having confidence in your emotional functioning does not in itself bring you career satisfaction; instead, better emotional functioning results in better communication and social interaction in the workplace, increasing feelings of perceived employability, which leads to a more satisfying career.

The current findings must be seen within the context of the self-efficacy and emotional skills distinction. It may not be sufficient to possess the ability to accurately recognise and manage emotions such as anger or confusion in a colleague or customer; confidence in these abilities is also necessary for better emotional functioning in the workplace. This not only means that future research will want to establish the links between both EI ability and ESE in predicting behaviour that enhance employability, but that any interventions designed to increase graduate employability should look to increase both skills and confidence.

Such ideas are important within the context of the CareerEDGE model of Graduate Employability (Dacre Pool & Sewell, 2007), which proposes that undergraduate students should be given the opportunity to develop their emotional skill whilst within Higher Education. It seems students should also be given the opportunity to gain confidence in their emotional functioning. Both the teaching of emotional skill and the increasing of ESE could be done through teaching and learning schemes that provide students with knowledge of emotional functioning and emotion management strategies. Giving students the opportunity to practice possible emotion management strategies and then reflect on these mastery experiences within a safe and supportive environment will increase their levels of self-efficacy in relation to emotional functioning (Bandura, 1995). Based on these results, including such opportunities in educational curricula will lead to higher levels of ESE, with the resultant enhancement in employability and general career satisfaction. This study has taken the first step in testing the theoretical assumptions of the CareerEDGE model in providing empirical evidence of a pathway from emotional

functioning to graduate employability. Future studies may want to investigate other potential pathways, for example between generic skills and graduate employability.

The finding that ESE predicts graduate employability is an important one and adds support to the proposal that people who are confident in their emotional abilities are more likely to use these skills in the workplace. As such they are likely to enjoy better interpersonal relationships than those with little confidence in their EI ability. This will help them maintain and enhance their employability, particularly in relation to the development of supportive networks to keep them updated on possible opportunities.

There are some limitations to this study that should be noted. The design is cross-sectional and it is not possible to be certain about the direction of causality in the data. Further studies could examine the relationships using longitudinal designs. Also the study utilised measurement tools that were all self-report; as such the study is reliant on the participants' self-perceptions of their ESE and employability, which could contribute to common method bias (see Spector, 2006 for a detailed discussion). Although the post hoc analysis carried out does not indicate that CMV was a problem in relation to this data, Future studies may be able to utilise observational methodology to study what it is that people higher in EI and/or ESE actually do in the workplace. Such a design would mean that possible mechanisms by which these concepts influence behaviour can be examined. For example, in relation to managing emotion, do people with high levels of ability EI and/or ESE actively manage conflict or are they are able to spot potential conflict before it happens and withdraw from the situation?

As Study 1 revealed a strong relationship between personality and ESE it would be useful to include a measure of personality in future studies that allows for this to be

controlled for in the analysis. Additionally, although this sample included graduates from a very wide range of subject disciplines, the numbers from each discipline were too small for any useful analysis of this individual difference to be carried out. Therefore, further research might explore the effects of ESE on graduate employability with targeted cohorts from specific subject disciplines.

In view of the findings from the current study, future empirical studies will want to design, deliver and evaluate appropriate interventions to see if it is possible to increase levels of EI and ESE in relation to undergraduate students. EI interventions often take the form of one day workshops, which can be useful in raising awareness of the importance of EI in both everyday experience and the workplace. But such brief exposure to EI training is unlikely to result in a person making the changes necessary for them to successfully improve their ability in this area (Zeidner et al., 2008). Additionally, if EI and ESE are to be included in educational curricula, any such courses must be based on empirical research and their impact evaluated (e.g. Qualter, Gardner & Whiteley, 2007; Salovey & Grewal, 2005; Zeidner, Roberts & Matthews, 2002). It should, then, be possible to investigate which aspects of emotional functioning it is possible to change: can we improve both emotional ability and a person's confidence in this ability? These issues are addressed in Chapter 8 of this thesis.

As well as there being important ethical reasons for intervening, such as wanting to give students a better chance in the workplace, there are also good research and methodological reasons why we might design emotional skills/confidence interventions for undergraduate students. There is an interactive and reciprocal relationship between science and application whereby research and theory guide intervention strategies and the

evaluation of interventions and policies provides the bases for reformulating and validating theory and assessing the direction of causality. By determining if an aspect of emotional functioning can be changed in response to certain intervention techniques, we can establish the exact relationships between it and other variables, thus advancing our theoretical and practical knowledge of EI.

In conclusion, the results of this study suggest that confidence in emotional functioning is important for graduate employability and career satisfaction. This study adds to the literature on graduate employability by providing some empirical evidence of predictors and outcomes, which support the inclusion within educational curricula of activities to develop and improve emotional functioning. In addition to the more general life benefits that improved emotional functioning brings, it should also enhance graduate employability; as such, it will ensure graduates have a greater chance of securing and retaining occupations in which they can experience satisfaction and success.

### 7.6 Implications for Study 3

Study 2 provides evidence to support the theory that adaptive emotional functioning, and in particular ESE, is an important aspect of graduate employability. However, as previously discussed, there is currently limited empirical research that demonstrates it is possible to improve levels of ability EI and ESE in young adults. Therefore, in Study 3 a theoretically grounded teaching intervention for undergraduate university students is designed and delivered with the aim of improving levels of ESE and ability EI. The intervention is rigorously evaluated using appropriate measurement tools of ability EI (MSCEIT) and ESE (ESES).

# CHAPTER 8

# STUDY 3: IMPROVING EMOTIONAL INTELLIGENCE AND EMOTIONAL SELF-EFFICACY THROUGH A TEACHING INTERVENTION FOR UNIVERSITY STUDENTS.

## 8.1 Aims of Study 3

EI continues to receive a substantial amount of attention from researchers who argue that it is an important predictor of health, wellbeing and in particular, work-related outcomes. In Study 2, it was found that ESE had an important influence on graduate employability. However, there are very few empirical studies which demonstrate that emotional functioning ability is something that it is possible to teach and develop. Study 3 investigates whether it is possible to improve levels of EI and ESE in university students through a teaching intervention.

## 8.2 Introduction

The last two decades have seen a substantial amount of attention paid to the subject of EI. Much debate has centred around the different conceptualisations of EI with researchers in the field defining it as either a type of cognitive *ability* involving the ability to perceive, use, understand and manage emotion (the four-branch model of EI; Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004) or as personality *traits* related to dealing with emotions (Petrides, Furnham & Mavroveli, 2007; Petrides, Pita &

Kokkinaki, 2007). These two views are often termed ability and trait EI respectively. A further, more recent, addition to the literature is concerned with how confident people are in relation to their emotional abilities, termed emotional self-efficacy (ESE) (Kirk, Schutte & Hine, 2008). There is evidence to suggest that adaptive emotional functioning predicts important work-related outcomes (e.g. Boland & Ross, 2010; Kerr, Garvin, Heaton & Boyle, 2006; Lopes, Grewal, Kadis, Gall & Salovey, 2006; O'Boyle Jr., Humphrey, Pollack, Hawver & Story, 2010), may have an important role to play in relation to academic achievement (MacCann, Fogarty, Zeidner & Roberts, 2011) and graduate employability (see Study 2). However, there is little empirical research that demonstrates that it is possible to develop EI and ESE in young adults. This study aims to contribute to this under-researched area by investigating if it is possible to increase levels of ability EI and ESE in a student population through a theoretically based teaching intervention.

### *8.2.1 The importance of EI and ESE*

Both ability EI and ESE appear to be important predictors of academic success and graduate employability; theoretically, it should also be possible to improve them. As such, there is a need for interventions that help students to develop both of these areas. Previous research has also shown that trait EI predicts various important outcomes, but personality traits are relatively stable beyond a certain age and designing interventions with a view to making positive changes would be questionable. As undergraduate students are gaining qualifications, knowledge and skills to prepare them for future lives in the world of work, it would make sense to ensure they are also equipped with

knowledge and skills in relation to emotional functioning and with the confidence to enable them to act on these abilities. Surveys of employers over the last two decades consistently report employability skills predicted by EI, such as communication and team-working, as highly desirable in graduate recruits (e.g. Pedagogy for Employability Group, 2006: Confederation of British Industry [CBI], 2009). Some models of graduate employability include EI as a key element (Dacre Pool & Sewell, 2007) so there appears to be a good argument for designing and delivering EI courses for students in HE. As ability EI and ESE are important but distinct constructs, any intervention would need to incorporate elements that address both of these aspects of emotional functioning. It could be that some students require help in developing their knowledge and skills in this area, whereas others need to build their confidence in their abilities and some may need to do both.

*8.2.2 Designing EI/ESE teaching interventions*

A tripartite model of EI that encompasses both ability and trait EI viewpoints has recently been proposed (Mikolajczak, Petrides, Coumans & Luminet, 2009; Nelis, Quoidbach, Mikolajczak & Hansenne, 2009). It could be used as a guiding framework for the design of EI/ESE interventions. The three levels consist of (i) *knowledge* of emotions and strategies to deal with emotional situations, (ii) actual *abilities* in relation to emotional functioning and (iii) personality *traits* in dealing with emotions. A further level is proposed here (iv) to incorporate *self-efficacy* in relation to emotional functioning. An EI course should include activities to address levels (i), (ii) and (iv), but would be unlikely to change personality traits (iii) which are normally considered to be

relatively stable (e.g. Pervin & John, 1997). However, it would be possible to teach people who, for example, score low on traits of happiness or optimism, alternative ways of dealing with situations.

It is imperative that any EI courses are based on a clear theoretically sound model of EI and do not purely consist of materials gathered from pre-existing courses that may be related to EI but are not equivalent (Gohm, 2004). In relation to specific EI interventions, there is a concern that at present very few EI training programmes have been systematically designed, implemented and evaluated (Zeidner, Roberts & Matthews, 2008). A search of the EI literature reveals very few examples of interventions aimed at increasing EI through education that have a solid theoretical underpinning. It is possible to raise awareness of EI through short workshops or one-day seminars, but it is unlikely that these will result in people making the required changes to their thoughts and behaviours that would enable them to improve their EI ability (Zeidner et al., 2008). It may take several weeks, with periods of reflection between activities to effect longer lasting change.

To answer the call for theoretically based EI interventions, Nelis et al. (2009, 2011) designed a teaching intervention for use with an undergraduate cohort (see Chapter 5, p. 133 for full details). The intervention was evaluated using a mixture of trait and ability EI measures and the results of the original study revealed significant improvements in the 'Perceiving' and 'Managing' emotions branches. 'Understanding' emotions remained unchanged and the 'Using' emotions branch was not measured. It was also found that the positive changes remained significant six months later. The researchers described their results as promising, but suggested that future work would

benefit from replicating the results with a larger and more heterogeneous sample. They also recommended a control group that was engaged in other group activities running concurrently with the intervention group. Their later study (Nelis et al., 2011) indicated that compared with a control group, the intervention group showed significant improvements in respect of emotion 'Understanding' and regulation ('Managing'). The 'Perceiving' and 'Using' elements of the four-branch model were not included in this study. Again these results remained stable over a six-month period.

*8.2.3 The present study*

Building on the work of Nelis et al. (2009) which was carried out with a small sample of Belgian psychology undergraduates ($n$ = 19), the intervention designed and delivered in respect of this study incorporated a larger sample size, with male and female students from a diverse range of subject disciplines. The study also included a control group. The intervention was based on the Salovey and Mayer four-branch model of ability EI with the intention of improving both ability EI and ESE. The study was evaluated using appropriate measures of both ability EI (MSCEIT) and ESE (ESES). Importantly, the MSCEIT generates scores for the individual branches of the four-branch model making it possible to investigate which elements of ability EI can be improved through intervention. Research concerning the factorial structure of the MSCEIT has also resulted in a recommendation that single branch, as opposed to a global EI score, are used (Fiori & Antonakis, 2011). The ESES generates scores for four subscales. These do not map directly onto the four-branch ability model, but primarily show distinctions

between confidence in emotional functioning related to oneself and to others (see Study 1).

## 8.3 Method

### *8.3.1 Participants*

The participants were undergraduate students from a university in the North West of England. They were drawn from a wide range of disciplines including Business, Japanese Studies, Police and Criminal Investigations, Psychology, Fashion, Public Relations and Screenwriting, thus avoiding a common criticism in the literature of studies with samples drawn from just one course (often Psychology). There were 134 participants: 66 in the intervention group (M = 31; F = 35), with a mean age of 24 years (*SD* = 8.06); and 68 in the control group (M = 29; F = 39) with a mean age of 22 years (*SD* = 3.33). All participants were in their second or third year at university. The intervention group completed an EI module and the control group completed a module unrelated to EI.

### *8.3.2 Measures*

*8.3.2.1 Ability Emotional Intelligence*. The online version of the MSCEIT, Version 2.0 (Mayer et al., 2002) was used in this study. It includes 141 items covering all four branches. The tests were scored by MHS using consensus scoring. Internal consistency for the MSCEIT has been reported, with Cronbach's alpha of .91 (Mayer et al., 2002.); three-week test-retest reliability is reported at .86 (Brackett & Mayer, 2003). See Chapter 6 (p. 146), for further details of the MSCEIT.

*8.3.2.2 Emotional Self-Efficacy*. The Emotional Self-Efficacy Scale (ESES) developed by Kirk et al. (2008) originally comprised 32 items, with eight items representing each of the four branches of the Mayer, Salovey & Caruso (1997) model. Participants are required to rate their confidence in respect of each item by selecting a number on a five-point scale, with a '1' indicating 'not at all confident' and a '5' indicating 'very confident'. The revised scoring system (see Study 1, Chapter 6) was used in this study. Only 27 items are scored; they make up four subscales. Each subscale with its number of items and range of possible scores are as follows: (1) using and managing own emotions, 10 items, minimum score of 10, maximum score of 50, (2) identifying and understanding own emotions, 6 items, minimum score of 6, maximum score of 30, (3) dealing with emotions in others, 8 items, minimum score of 8, maximum score of 40 and (4) perceiving emotion through facial expressions and body language, 3 items, minimum score of 3, maximum score of 15. Cronbach's alpha for the four subscales ranged from .79 to .89. See Chapter 6, (p. 151) for full details of items.

*8.3.2.3 Cognitive Ability*. Grade Point Average was used, defined as the mean of all module grades during the first year at university. Participants gave permission for their grades to be accessed from the university system.

*8.3.3 EI Intervention*

Full details and rationale of the intervention designed for this study are provided in Appendix I. Briefly, the intervention consisted of a level 5 (stage 2 of the degree, thereby taken in 2nd or 3rd Year) module called 'Emotional Intelligence' taught in a

British university based in the North West of England. It was included as a free choice elective subject available to any student from any discipline who was able to accommodate the module in their timetable between academic years 2008/9 and 2010/11. The classes ranged in size between 4 students and 18 students and all had the same tutor (the author of this thesis). The module consisted of 11 classes taught weekly for 2 hours, with extra reading of relevant theoretical articles. It was designed around the Mayer and Salovey four-branch model of EI with classes that addressed i) Perception of emotion; ii) Using emotion; iii) Understanding emotion; and iv) Managing emotion (for a full, detailed description of the module design and content, see Appendix I). Students completed the MSCEIT and ESES during the first class and were given a report and detailed one-to-one feedback of their results. They were asked to reflect on their results and incorporate these reflections in their first journal entry. The tests were repeated in the final class. During the classes a wide range of activities were provided including, mini-lectures, video clips, case studies, group tasks and discussions, role play and an off-campus visit to an art gallery. The module was formally assessed by reflective journal, essay and a case study report. The students' academic marks in respect of the module were not used in this research as ethical consent was not sought for this. The intention of the module was to help the students to develop their EI knowledge and skills and improve their ESE, through a process of theory, practice and reflective learning. As an example, 'Managing Emotion', the fourth branch of the Mayer & Salovey model of EI, was addressed by a mini-lecture which covered elements such as explanations of emotion management and why this is different to suppressing or venting emotion. Case studies and personal experiences that involved poor emotional management were analysed and

discussed. The students were given an article to read detailing research into effectively managing anger and asked to critique media reports of this research. Effective strategies for anger management were covered. Role play exercises provided active practice of the theory covered. The students were also directed to use their journals to reflect on the theory and activities covered in the class and how this might relate to themselves and their own personal experiences.

*8.3.4 Procedure*

Participants in the intervention group completed the measures during the first class (before any teaching took place) and during the final class. Completion of the pen and paper measures and the online test was supervised by the class tutor at both time points.

Participants in the control group were recruited from two other elective modules, one concerned with career planning and one with starting businesses, which are taught in a similar way to the EI module (small class sizes, mini-lectures and workshop activities). All three modules attract students from a diverse range of subjects. The control group participants completed the same pre and post intervention measures within the same week as the intervention group. The control group participants also received one-to-one feedback and a report with details of their test results, together with some suggestions to help them improve their EI if necessary.

A small sub-sample of the intervention group ($n$ = 15) also completed the ESES at a third time point, approximately 8 weeks after time 2. This was a convenience sample (M = 7; F = 8), with a mean age of 26 years ($SD$ = 11.77) who agreed to complete the questionnaire whilst collecting their coursework from the class tutor.

**8.4 Results**

In order to check for any baseline differences between the intervention and control groups, independent samples t-tests were conducted in respect of the variables cognitive ability and age. There was no significant difference in cognitive ability between the intervention group ($M$ = 56.51, $SD$ = 7.31) and the control group ($M$ = 57.09, $SD$ = 6.91); t(127) = .463, ns. However the two groups differed significantly in age: intervention group ($M$ = 23.92, $SD$ = 8.06) and control group ($M$ = 21.61, $SD$ = 3.33); t(86) = 2.16, p = <.05 (two-tailed).

Eight mixed design group (intervention vs. control) x time (time 1 vs. time 2) repeated measures ANCOVAs were conducted, with 'group' as the between subject factor and 'time' as the within subject factor. As age was found to be significantly different in the two groups this was controlled for in the analysis. Significant group x time interactions were found in respect of MSCEIT branches 'Understanding Emotion' (F(1,91) = 8.90, p<.01, partial $\eta^2$ = .09), and 'Managing Emotion' (F(1,91) = 4.88, p<.05, partial $\eta^2$ = .05). No significant group x time interactions were found for MSCEIT branches 'Perceiving Emotion' (F(1,91) = .87, ns) and 'Using Emotion', (F(1,91) = .17, ns). Significant group x time interactions were found in respect of all four subscales of the ESES; 'Using and Managing Own Emotions' (F(1,106) = 7.96, p<.01, partial $\eta^2$ = .07); 'Identifying and Understanding Own Emotions' (F(1,106) = 18.45, p<.01, partial $\eta^2$ = .15); 'Dealing with Emotions in Others' (F(1,106) = 27.04, p<.01, partial $\eta^2$ = .20); and 'Perceiving Emotion through Facial Expressions and Body Language' (F(1,106) = 9.19, p<.01, partial $\eta^2$ = .08). See Figures 12 to 17 for all significant group x time interactions.

The means, standard deviations and statistics for differences between time 1 and time 2 in respect of each variable and both groups are provided in Table 7. Analyses show a significant effect of the intervention on ability EI 'Understanding Emotion' and 'Managing Emotion' scores. Analyses also indicate significant effects in relation to Emotional Self-Efficacy.

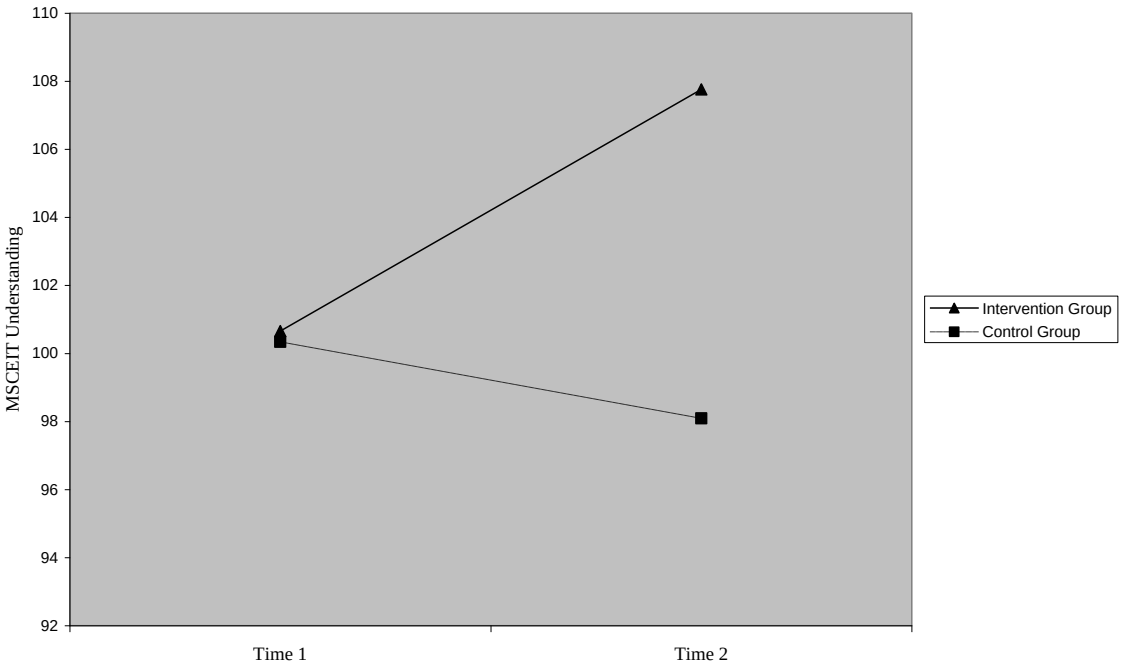


Figure 12. Study 3: Effect of EI Intervention on Ability EI 'Understanding Emotions'.

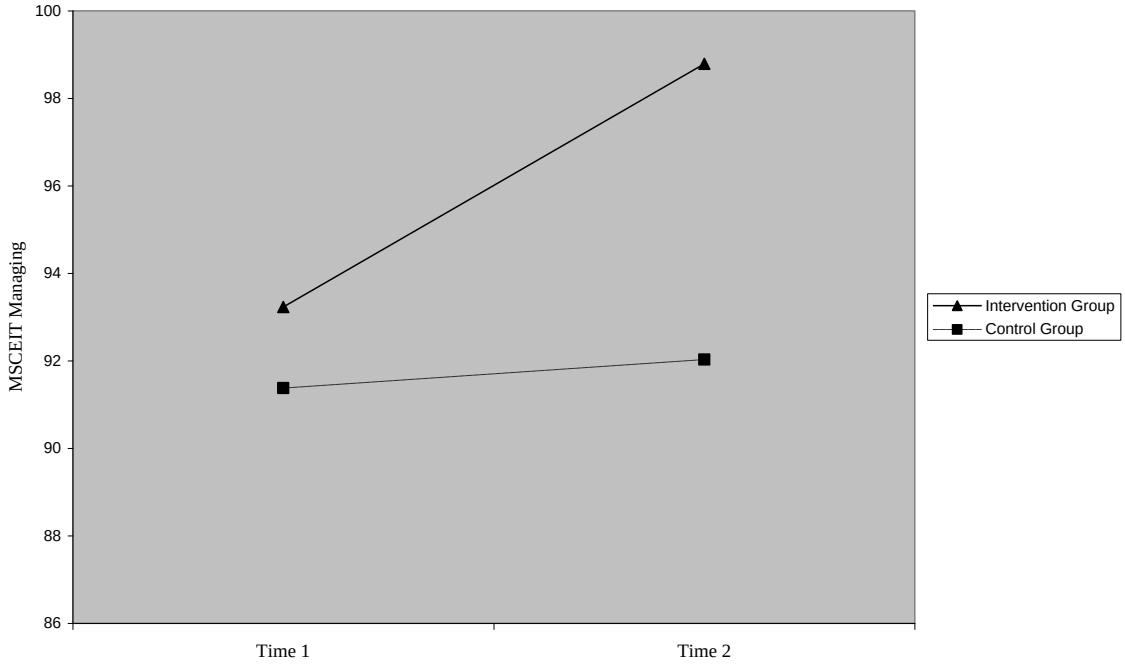


Figure 13. Study 3: Effect of EI Intervention on Ability EI 'Managing Emotions'.

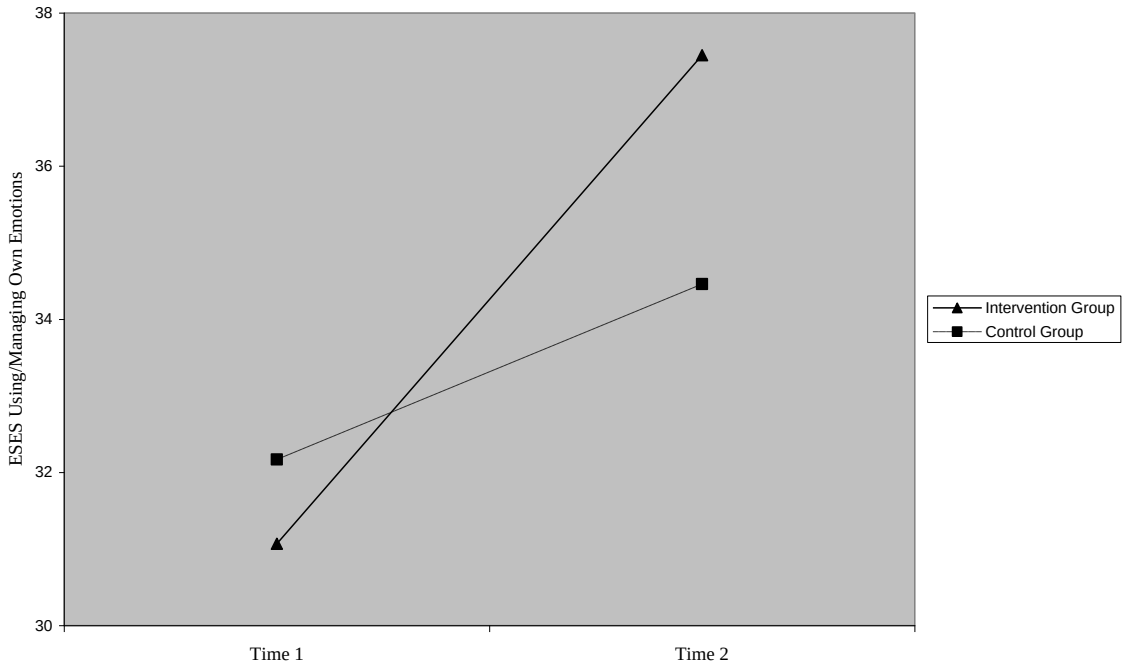


Figure 14. Study 3: Effect of EI Intervention on Emotional Self-Efficacy, 'Using and Managing Own Emotions'.

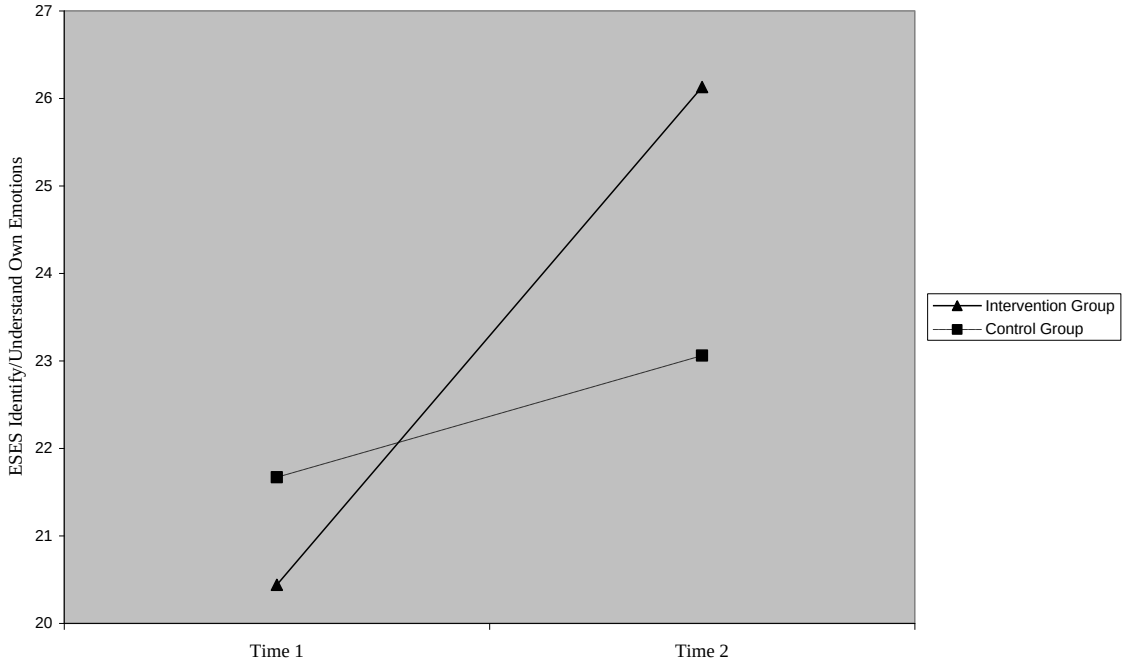


Figure 15. Study 3: Effect of EI Intervention on Emotional Self-Efficacy, 'Identifying and Understanding Own Emotions'.

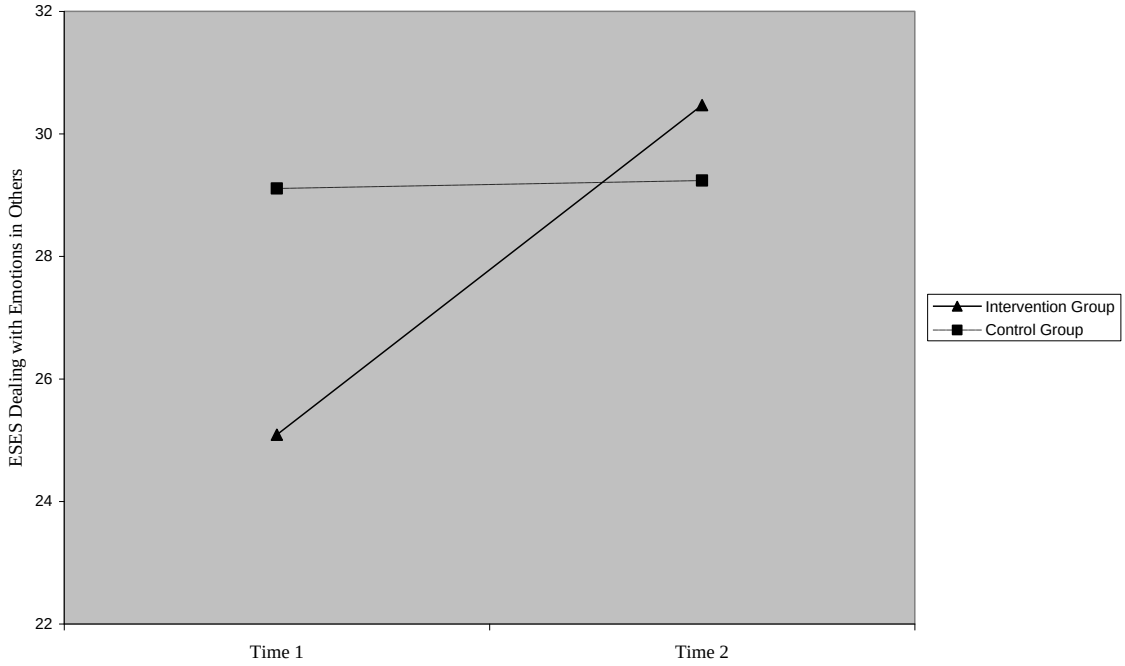


Figure 16. Study 3: Effect of EI Intervention on Emotional Self-Efficacy, 'Dealing with Emotion in Others'.

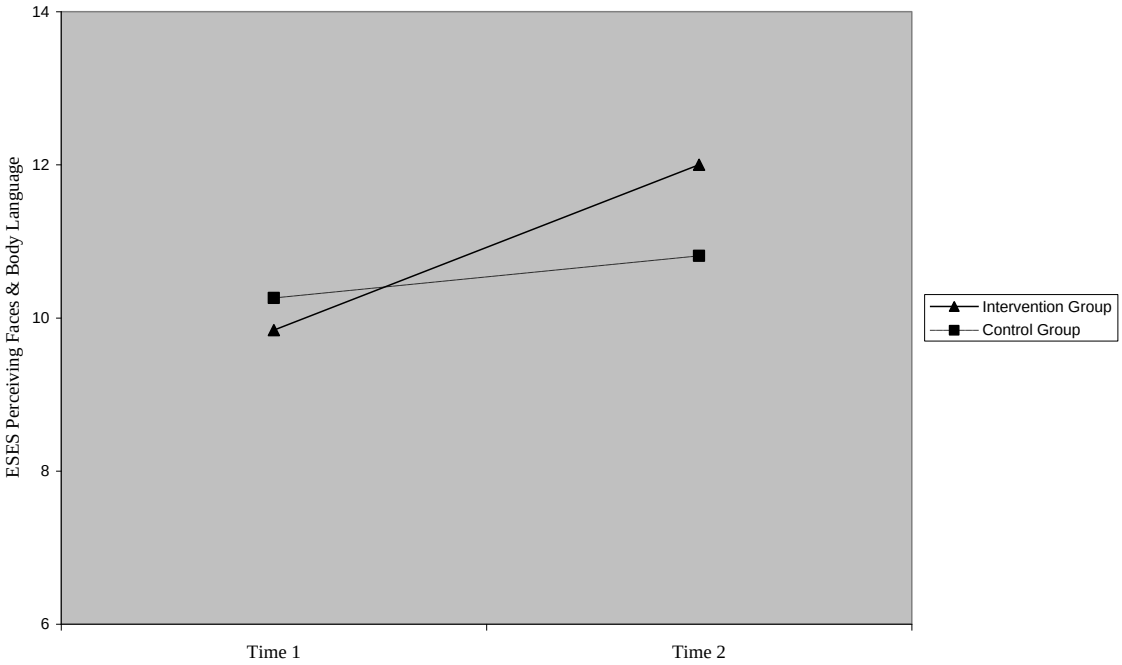


Figure 17. Study 3: Effect of EI Intervention on Emotional Self-Efficacy, 'Perceiving Emotion through Facial Expression and Body Language'.

Table 7. Study 3: Means, Standard Deviations and ANCOVA results for Group x Time

| Variables | Intervention Group | | Control Group | | | |
|---|---|---|---|---|---|---|
| | T1 Mean (SD) | T2 Mean (SD) | T1 Mean (SD) | T2 Mean (SD) | ANCOVA | Partial $\eta^2$ |
| MSCEIT Perceiving Emotions [1] | 92.66 (12.33) | 94.85 (14.48) | 93.44 (12.91) | 92.66 (11.71) | F(1,91) = .87 | .01 |
| MSCEIT Using Emotions [1] | 96.79 (15.39) | 96.52 (15.04) | 103.16 (15.63) | 102.09 (16.05) | F(1,91) = .17 | .00 |
| MSCEIT Understanding Emotions [1] | 100.66 (18.00) | 107.76 (21.54) | 100.34 (16.80) | 98.09 (12.62) | F(1,91) = 8.90 ** | .09 |
| MSCEIT Managing Emotions [1] | 93.23 (11.43) | 98.79 (14.19) | 91.38 (9.31) | 92.03 (9.18) | F(1,91) = 4.88 * | .05 |
| ESES Using & Managing Own Emotions [2] | 31.07 (8.06) | 37.45 (7.27) | 32.17 (5.97) | 34.46 (5.87) | F(1,106) = 7.96 ** | .07 |
| ESES Identifying & Understanding Own Emotions [2] | 20.44 (4.30) | 26.13 (4.74) | 21.67 (4.00) | 23.06 (4.22) | F(1,106) = 18.45 ** | .15 |
| ESES Dealing with Emotions in Others [2] | 25.09 (6.52) | 30.47 (5.59) | 29.11 (4.19) | 29.24 (4.19) | F(1,106) = 27.04 ** | .20 |
| ESES Perceiving Emotion through Facial Expressions and Body Language [2] | 9.84 (2.75) | 12.00 (2.43) | 10.26 (2.42) | 10.81 (2.47) | F(1,106) = 9.19 ** | .08 |

Note:
1. Intervention Group *N* = 62, Control Group *N* = 32
2. Intervention Group *N* = 55, Control Group *N* = 54
* p<.05, ** p<.01

Further analyses were carried out in respect of all significant F tests using two one-way repeated measures ANOVAs and two one-way independent groups ANCOVAs for each relevant DV (see Tables 8 and 9). As would be predicted by the significant group x time interactions for the 'Understanding' and 'Managing' Emotions branches of the MSCEIT, significant differences between time 1 and time 2 were found for the intervention group but not for the control group. There were also no significant differences between the two groups at time 1, but significant differences at time 2. This suggests that the two groups had similar levels of understanding and managing emotion ability pre-intervention, but the intervention group had significantly improved when measured post-intervention. Analyses in respect of ESES 'Using and Managing Own Emotions' and 'Identifying and Understanding Own Emotions' subscales revealed no significant difference between the intervention and control groups at time 1, but a significant difference at time 2 and significant improvements for both groups over time. This suggests that the two groups had similar levels of self-efficacy in terms of using, managing, identifying and understanding their own emotions at time 1, but the intervention group had significantly higher levels at time 2. Analyses in respect of the ESES 'Dealing with Emotions in Others' subscale revealed somewhat different results. The intervention group had significantly lower self-efficacy in relation to dealing with emotions in others at time 1, but by time 2 this difference between the two groups was non-significant. This suggests that the intervention was able to remediate the original deficit in the intervention group. Analyses in respect of the ESES 'Perceiving Emotion through Facial Expression and Body Language' subscale indicated no significant difference between the intervention and control groups at time 1, but this was significant

at time 2, with the intervention group significantly improving and the control group remaining unchanged.

Time x group x gender ANCOVAs were also carried out (see Table 10) and revealed no significant interactions, suggesting that the intervention is similarly effective for males and females. The exception to this was in respect of the MSCEIT 'Understanding' branch for which the results indicate a significantly greater positive effect for males in the intervention group. This could be interpreted as evidence for the EI intervention being particularly helpful for males in terms of their understanding of emotions. But the results may be due in part to the decrease in scores between time 1 and time 2 for males in the control group. One explanation for this could be a possible lack of motivation for males in the control group to complete these items of the MSCEIT for the second time, unlike the intervention group who had a greater understanding of emotions post intervention and may have been more motivated to demonstrate this when completing the test again. However why this would be the case for males and not the females in the control group is somewhat puzzling.

The data for the small sub-sample of the intervention group who completed the ESES at three time points (pre-intervention, post-intervention and approximately 8 weeks later) was also analysed. One-way repeated measures ANOVAs were conducted in respect of all four subscales of the ESES (see Table 11). There was a significant effect for time in respect of 'Identifying and Understanding Own Emotions' (subscale 2) and 'Dealing with Emotions in Others' (subscale 3). 'Using and Managing Own Emotions' (subscale 1) was approaching significance. There was no significant effect of time in respect of 'Perceiving Emotion through Facial Expressions and Body Language'

(subscale 4). Further a priori analyses were carried out in respect of Subscales 1, 2 and 3 using repeated measures t-tests (see Tables 12, 13 and 14). Significant differences were found between time 1 and time 2 in respect of 'Identifying and Understanding Own Emotions' (subscale 2) and 'Dealing with Emotions in Others' (subscale 3). There was no significant difference in the scores between time 1 and time 2 in respect of 'Using and Managing Own Emotions' (subscale 1). However, there was a significant difference in respect of this subscale between time 2 and time 3 and between time 1 and 3, suggesting this element of emotional functioning continues to develop in the weeks after the intervention. There were no significant differences between time 2 and 3 in respect of subscales 2 and 3 but both had significant changes between time 1 and time 3.

This would provide some very early and tentative support for the stability of the changes in ESE over two months.

Table 8. Study 3: One-Way Between-Groups ANCOVAs (a priori comparisons for significant interactions)

| Variables | Df | Error Df | F | Partial $\eta^2$ |
|---|---|---|---|---|
| | | | | |
| MSCEIT (Understanding Emotions) [1] | | | | |
| Intervention vs Control T1 | 1 | 91 | .43 | .005 |
| Intervention vs Control T2 | 1 | 91 | 9.26 ** | .09 |
| MSCEIT (Managing Emotions) [1] | | | | |
| Intervention vs Control T1 | 1 | 91 | 1.17 | .01 |
| Intervention vs Control T2 | 1 | 91 | 7.67 ** | .08 |
| ESES (Using & Managing Own Emotions) [2] | | | | |
| Intervention vs Control T1 | 1 | 106 | .87 | .008 |
| Intervention vs Control T2 | 1 | 106 | 4.68 * | .04 |
| ESES (Identifying & Understanding Own Emotions) [2] | | | | |
| Intervention vs Control T1 | 1 | 106 | 2.82 | .03 |
| Intervention vs Control T2 | 1 | 106 | 12.80 ** | .11 |
| ESES (Dealing with Emotions in Others) [2] | | | | |
| Intervention vs Control T1 | 1 | 106 | 13.39 ** | .11 |
| Intervention vs Control T2 | 1 | 106 | 1.36 | .01 |
| ESES (Perceiving Emotion through Facial Expression and Body Language) [2] | | | | |
| Intervention vs Control T1 | 1 | 106 | .67 | .006 |
| Intervention vs Control T2 | 1 | 106 | 5.94 * | .05 |

Note:
1. Intervention Group *N* = 62, Control Group *N* = 32
2. Intervention Group *N* = 55, Control Group *N* = 55
T1 = Pre-intervention. T2 = Post-intervention.
* p<.05, ** p<.01

Table 9. Study 3: One-Way Repeated Measures ANOVAs (a priori comparisons for significant interactions)

| Variables | Df | Error Df | F | Partial $\eta^2$ |
|---|---|---|---|---|
| MSCEIT (Understanding Emotions) [1] | | | | |
| Intervention T1 vs T2 | 1 | 61 | 15.13 ** | .20 |
| Control T1 vs T2 | 1 | 31 | .78 | .03 |
| MSCEIT (Managing Emotions) [1] | | | | |
| Intervention T1 vs T2 | 1 | 61 | 14.16 ** | .19 |
| Control T1 vs T2 | 1 | 31 | .25 | .01 |
| ESES (Using & Managing Own Emotions) [2] | | | | |
| Intervention T1 vs T2 | 1 | 54 | 32.70 ** | .38 |
| Control T1 vs T2 | 1 | 54 | 6.15 * | .10 |
| ESES (Identifying & Understanding Own Emotions) [2] | | | | |
| Intervention T1 vs T2 | 1 | 54 | 47.91 ** | .47 |
| Control T1 vs T2 | 1 | 54 | 4.57 * | .08 |
| ESES (Dealing with Emotions in Others) [2] | | | | |
| Intervention T1 vs T2 | 1 | 54 | 47.45 ** | .47 |
| Control T1 vs T2 | 1 | 54 | .00 | .00 |
| ESES (Perceiving Emotion through Facial Expression and Body Language) [2] | | | | |
| Intervention T1 vs T2 | 1 | 54 | 34.29 ** | .39 |
| Control T1 vs T2 | 1 | 54 | 2.11 | .04 |

Note:
1. Intervention Group *N* = 62, Control Group *N* = 32
2. Intervention Group *N* = 55, Control Group *N* = 55
T1 = Pre-intervention. T2 = Post-intervention.
* p<.05, ** p<.01

Table 10. Study 3: Means, Standard Deviations and ANCOVAs for Group x Gender x Time

| Variables | Intervention Group Male | | Intervention Group Female | | Control Group Male | | Control Group Female | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | T1 Mean (SD) | T2 Mean (SD) | T1 Mean (SD) | T2 Mean (SD) | T1 Mean (SD) | T2 Mean (SD) | T1 Mean (SD) | T2 Mean (SD) | ANCOVA | Partial $\eta^2$ |
| MSCEIT[1] Branch 1 | 94.77(11.45) | 94.61(16.94) | 90.55(13.00) | 95.10(11.80) | 92.23(15.40) | 94.15(11.22) | 94.26(11.27) | 91.63(12.23) | F(1,89) = 3.28 | .04 |
| MSCEIT[1] Branch 2 | 97.87(17.59) | 96.00(16.77) | 95.71(13.03) | 97.03(13.35) | 112.15(19.06) | 105.69(20.71) | 97.00(8.94) | 99.63(11.92) | F(1,89) = 1.11 | .01 |
| MSCEIT[1] Branch 3 | 105.48(15.27) | 115.61(22.63) | 95.84(19.43) | 99.90(17.43) | 105.54(21.92) | 97.23(11.66) | 96.79(11.54) | 98.68(13.52) | F(1,89) = 6.85** | .07 |
| MSCEIT[1] Branch 4 | 95.71(11.43) | 103.42(15.91) | 90.74(11.07) | 94.16(10.60) | 95.38(8.78) | 94.77(8.96) | 88.63(8.86) | 90.16(9.08) | F(1,89) = 1.94 | .02 |
| ESES[2] Sub 1 | 33.04(7.19) | 39.04(6.29) | 29.04(8.54) | 35.81(7.95) | 34.40(6.11) | 36.25(4.97) | 30.85(5.56) | 33.41(6.17) | F(1,104) = 0.00 | .00 |
| ESES[2] Sub 2 | 21.32(4.02) | 26.39(2.39) | 19.52(4.46) | 25.85(6.37) | 23.60(3.32) | 23.40(3.33) | 20.53(3.98) | 22.85(4.70) | F(1,104) = 0.39 | .00 |
| ESES[2] Sub 3 | 24.61(6.69) | 31.36(4.76) | 25.59(6.42) | 29.56(6.30) | 29.60(4.17) | 29.40(2.35) | 28.82(4.24) | 29.15(5.00) | F(1,104) = 0.29 | .03 |
| ESES[2] Sub 4 | 10.00(2.67) | 12.46(1.73) | 9.67(2.87) | 11.52(2.95) | 10.20(2.71) | 10.20(2.53) | 10.29(2.28) | 11.18(2.41) | F(1,104) = 2.03 | .02 |

Note:
1. Intervention Group Male *N* = 31, Intervention Group Female *N* = 31. Control Group Male *N* = 13, Control Group Female *N* = 19
2. Intervention Group Male *N* = 28, Intervention Group Female *N* = 27. Control Group Male *N* = 20, Control Group Female *N* = 34
MSCEIT Branch 1 = Perceiving Emotion, MSCEIT Branch 2 = Using Emotion, MSCEIT Branch 3 = Understanding Emotion, MSCEIT Branch 4 = Managing Emotion
ESES Subscale 1 = Using & Managing Own Emotions, ESES Subscale 2 = Identifying & Understanding Own Emotions, ESES Subscale 3 = Dealing with Emotions in Others, ESES Subscale 4 = Perceiving Emotion through Facial Expressions and Body Language.
** p = .01

Table 11. Study 3: One-Way Repeated Measures ANOVAs for ESES Subscales at Time 1, Time 2 and Time 3

| Variables | Sub-Sample of Intervention Group ($n$ = 15) | | | | |
|---|---|---|---|---|---|
| | Time 1 Mean (SD) | Time 2 Mean (SD) | Time 3 Mean (SD) | ANOVA | Partial $\eta^2$ |
| ESES Subscale 1 Using & Managing Own Emotions | 32.73 (7.36) | 35.20 (5.85) | 37.00 (4.54) | F(2,13) = 3.51, p = .06 | .35 |
| ESES Subscale 2 Identifying & Understanding Own Emotions | 21.67 (3.72) | 24.20 (4.16) | 24.87 (3.60) | F(2,13) = 3.82, p = .05 | .37 |
| ESES Subscale 3 Dealing with Emotions in Others | 25.67 (5.43) | 28.60 (6.58) | 29.47 (5.67) | F(2,13) = 3.79, p = .05 | .37 |
| ESES Subscale 4 Perceiving Emotion through Facial Expressions and Body Language | 10.00 (2.88) | 10.93 (2.43) | 10.67 (2.19) | F(2,13) = 0.94, p = .42 | .13 |

Table 12. Study 3: Repeated Measures T-tests (a priori comparisons) between Time 1 and Time 2

| Variables | Sub-Sample of Intervention Group ($n$ = 15) | | | |
|---|---|---|---|---|
| | Time 1 Mean (SD) | Time 2 Mean (SD) | t-tests | $\eta^2$ |
| ESES Subscale 1 Using & Managing Own Emotions | 32.73 (7.36) | 35.20 (5.85) | t(14) = 1.28, p = .22 | .10 |
| ESES Subscale 2 Identifying & Understanding Own Emotions | 21.67 (3.72) | 24.20 (4.16) | t(14) = 2.57, p = .02 | .32 |
| ESES Subscale 3 Dealing with Emotions in Others | 25.67 (5.43) | 28.60 (6.58) | t(14) = 2.17, p = .05 | .25 |

Table 13. Study 3: Repeated Measures T-tests (a priori comparisons) between Time 2 and Time 3

| Variables | Sub-Sample of Intervention Group ($n$ = 15) | | | |
|---|---|---|---|---|
| | Time 2 Mean (SD) | Time 3 Mean (SD) | t-tests | $\eta^2$ |
| ESES Subscale 1 Using & Managing Own Emotions | 35.20 (5.85) | 37.00 (4.54) | t(14) = 2.16, p = .05 | .25 |
| ESES Subscale 2 Identifying & Understanding Own Emotions | 24.20 (4.16) | 24.87 (3.60) | t(14) = 1.01, p = .33 | .07 |
| ESES Subscale 3 Dealing with Emotions in Others | 28.60 (6.58) | 29.47 (5.67) | t(14) = 1.14, p = .27 | .08 |

Table 14. Study 3: Repeated Measures T-tests (a priori comparisons) between Time 1 and Time 3

| Variables | Sub-Sample of Intervention Group (*n* = 15) | | | |
|---|---|---|---|---|
| | Time 1 Mean (SD) | Time 3 Mean (SD) | t-tests | $\eta^2$ |
| ESES Subscale 1 Using & Managing Own Emotions | 32.73 (7.36) | 37.00 (4.54) | t(14) = 2.19, p = .05 | .26 |
| ESES Subscale 2 Identifying & Understanding Own Emotions | 21.67 (3.72) | 24.87 (3.60) | t(14) = 2.83, p = .01 | .36 |
| ESES Subscale 3 Dealing with Emotions in Others | 25.67 (5.43) | 29.47 (5.67) | t(14) = 2.83, p = .01 | .36 |

## 8.5 Discussion

Previous research has suggested that higher levels of ability EI and ESE are desirable for a number of important reasons associated with work-related outcomes, academic achievement and graduate employability, but until now there have been few studies that demonstrate it is possible to increase levels of EI and ESE through teaching or training. This teaching programme was designed with a strong theoretical focus and was evaluated using appropriate, psychometrically valid measurement tools, as suggested by previous authors in the field (e.g. Nelis et al., 2009; Zeidner et al., 2008). Positive changes in EI and ESE were seen across the intervention group in both male and female participants. It should be pointed out that positive improvements in ESE were also demonstrated by the control group, although not to the same degree as the intervention group. This could be explained by their engagement with the career planning module, which some of the control group studied, which involves self-awareness activities. Both the control group modules also include a number of opportunities for the students to interact and work together on group activities. It is possible that these resulted in more positive self-evaluations of emotional functioning too.

It seems it is possible to improve ability EI particularly in relation to understanding and managing emotion, sometimes referred to as the 'strategic' elements of the four-branch model (Mayer, Salovey, Caruso & Sitarenios, 2003). The earlier intervention study carried out over 4 weeks by Nelis et al. (2009) did not result in any improvements in understanding emotion. As the intervention in this study was carried out over a longer 11 week period, it is possible that this had an important effect on the

results: people needed a longer period of teaching and reflection in order to develop their emotional understanding abilities. Developing the 'Understanding emotions' element of EI could be crucial for graduate employability, particularly in relation to future leadership potential, as the ability to 'understand' emotion has been shown to be the most consistent predictor of leadership emergence (Côté et al., 2010). Developing the 'Managing emotions' element of EI may be equally important as this branch is strongly related to academic achievement; in fact, it appears to be the vital element that links EI to problem-focused coping skills which are associated with valued educational outcomes such as academic success (MacCann et al., 2011). It is also associated with better work performance (Joseph & Newman, 2010) and life satisfaction (Bastian et al., 2005).

Although significant improvements were recorded in respect of the 'Understanding emotions' and the 'Managing emotions' branches, there were no significant improvements in respect of the 'Perceiving' and 'Using' branches. The 'Using' branch of the MSCEIT has received the most criticism in respect of its psychometric properties (e.g. Rossen, Kranzler & Algina, 2008) and some authors choose to exclude this branch from their studies (e.g. Joseph & Newman, 2010). MacCann et al. (2011) point out that as a construct the 'Using' branch is possibly redundant with other EI constructs as it has not been possible to recover as a distinct factor in other research studies. In many ways it is difficult to distinguish conceptually from the 'Managing emotions' branch, for example, if a person feels angry about an injustice but is able to use that anger to motivate themselves to do something about it, are they 'using' or 'managing' their emotion? It could be that the students improved their ability to 'use' emotion in the sense of the word as used in the above example, but that these changes are

reflected in the scores on 'Managing emotions'. The 'Using and Managing own Emotions' subscale of the ESES measures confidence in one's ability for both of these areas, and positive changes were recorded for the students post-intervention suggesting some positive effects in this area as a result of the intervention.

It could be that the 'Perceiving emotions' element is something that would only be possible to improve through intensive training in recognising facial expressions and body language in others, for example using Ekman's Micro-Expression Training Tool or METT (Ekman, 2003). There has been some success in using this tool with patients with schizophrenia who have deficits in facial affect recognition and a healthy comparison group in the same study (Russell, Chu & Phillips, 2006). There is a suggestion that increasing the ability to 'perceive emotions' as measured by the MSCEIT, may have potentially negative consequences, as a recent study reports that high scorers in this branch are more likely to display organisational and interpersonal deviance (Winkel, Wyland, Shaffer & Clason, 2011), something described as a potential 'dark side' of EI (Austin, Farrelly, Black, & Moore, 2007; Barlow, Qualter, & Stylianou, 2010). However, as the authors suggest, this is likely to be influenced by other variables, such as a person's moral inclinations. More research is needed to clarify the potential positive and negative effects of increasing ability in this area.

In addition to recognising emotion in facial expressions, within the 'Perceiving emotions' section of the MSCEIT there are a number of items relating to identification of emotion in photographs and abstract art. Although there are likely to be benefits in helping students become more aware of emotion in many areas of life including the arts, and in using art as a strategy to help manage emotions, it is debatable whether it is

possible or indeed desirable to teach people to interpret art in a prescribed way in order for them to improve their EI scores. The value of this as a skill for life is also questionable.

The 'Perceiving emotions' branch of ability EI relates to the ability to perceive emotions in oneself and others accurately (e.g. Mayer, Salovey & Caruso, 2008). However, this section of the MSCEIT does not include any items to measure perception of emotion in oneself. Again, it could be that the students improve in identifying how they are feeling at a particular time but this will not be determined with the MSCEIT. The ESES includes items that measure confidence in this ability, which are included in the 'identifying and understanding own emotions' subscale and positive changes were seen in self-perceptions of this ability. Therefore, although this study did not result in significant improvements in the ability to perceive or use emotion, this may reflect measurement issues connected to the MSCEIT. The authors themselves acknowledge the MSCEIT as having limitations, particularly in relation to factor structure and the 'Perceiving emotions' scale (Mayer et al., 2008b).

The results of this study also show that it is possible to increase a person's self-efficacy in relation to their emotional functioning by teaching them about emotions and emotional intelligence. The programme was designed with a distinctly experiential learning model in mind, giving the students the opportunity to genuinely engage with the subject on a deeper level than the purely theoretical. This is consistent with the idea of providing mastery experiences, considered to be the most effective way of creating a strong sense of self-efficacy (Bandura, 1995). As such it is possible that this had an important influence on the development of ESE. The pre-intervention scores in respect

of ESE would also counteract any argument that suggests only students who already feel confident about their emotional abilities would be attracted to a taught module of this nature. In this case, the students who elected to take the EI module had lower pre-intervention ESE scores than the control group but this had been reversed post-intervention.

The results of the study with the small sub-sample of the intervention group would provide some evidence of longer term effects of the intervention on levels of ESE. As the results of Study 2 demonstrate that ESE is an important predictor of graduate employability, this suggests positive long-term implications for undergraduates who participate in the EI module.

### 8.6 Limitations and Future Directions

Although this study included participants from a diverse sample of students, it was not possible to look at differences between students from different subject disciplines. Recent research found differences in levels of trait EI in students from different faculties (Sánchez-Ruiz, Pérez-González & Petrides, 2010) and it would be interesting to compare the benefits of this type of intervention for students from science and arts subjects. As with this trait EI study, there might be different levels of ability EI and ESE between students from different subject areas suggesting certain groups may benefit more from an EI/ESE intervention than others. Future studies may also want to look at the influence of the teacher on EI and ESE development by comparing groups taught by different tutors.

The finding that the changes in ESE in the small sub-sample remained significant after two months is of particular note, suggesting longer term effects of the intervention. Future studies will want to replicate these results with a larger sample and include measures of ability EI in addition to ESE.

The focus of this PhD was to investigate the relationship between EI and graduate employability. An extension of Study 3 could investigate how the intervention impacts on graduate employability. Future longitudinal studies following the students into the workplace could be enlightening and enable us to investigate if students with higher levels of EI and ESE whilst at university, are then able to successfully develop their employability once they join the graduate workforce.

Ability EI and ESE are areas everybody should benefit from developing. Unlike other aspects of individual difference, such as IQ and personality, it is possible to change EI and ESE. This is particularly important for young adults who will shortly be entering the workplace and will need to have the necessary knowledge and skills to help them gain and retain employment that gives them satisfaction and the opportunity for success (Dacre Pool & Sewell, 2007). Additionally, EI is related to academic success at university (e.g. MacCann et al., 2011), which will also improve the chances of securing satisfying graduate occupations. The purpose of this intervention was to help students to gain the most benefit from their time in education and prepare them for life after university. However, it is likely that interventions of this nature will help other people during periods of transition, for example young people about to enter Post-Compulsory Education.

According to Bandura (1995), a major goal of education should be to provide students with the opportunities to develop their intellect and efficacy beliefs to enable them to educate themselves throughout their lifetime. Including opportunities for students to increase their knowledge, understanding, skills and efficacy in relation to emotional functioning is something that all universities should consider incorporating into their curricula.

# CHAPTER 9

# GENERAL DISCUSSION

## 9.1 Introduction

The employability of their graduates is something of major concern to all Higher Education establishments, both nationally and internationally. However, as a result of difficulties with regard to its definition and measurement, graduate employability has been the subject of very little empirical research. A number of theoretical viewpoints have either alluded to or specifically included EI as an aspect of employability (e.g. Knight & Yorke, 2004; Dacre Pool & Sewell, 2007). Additionally a good deal of research has shown that EI predicts a number of important work-related outcomes (e.g. Boland & Ross, 2010; Kerr et al., 2006; Lopes et al., 2006; O'Boyle Jr. et al., 2010) and may have an important role to play in relation to academic achievement (MacCann et al., 2011). As employability is concerned with developing the skills, knowledge, understandings and personal attributes that make a person more likely to choose, secure and retain occupations in which they can be satisfied and successful (Dacre Pool & Sewell, 2007) the suggestion that EI may have a role to play in the development of graduate employability is an entirely plausible one.

This thesis has presented the results of three studies concerned with emotional functioning and graduate employability. Previously, the two concepts have been linked theoretically (e.g. Dacre Pool & Sewell, 2007; Knight & York, 2004), but this work provides the first empirical evidence of this relationship.

## 9.2 Aims of this Research

The main aims of this research were i) to investigate the psychometric properties of a new measure of emotional functioning, the Emotional Self-Efficacy Scale, ii) to establish if there is a relationship between emotional functioning and graduate employability and iii) design, deliver and evaluate a teaching intervention to help develop EI and ESE in undergraduate students.

The following section includes a summary and critical evaluation of the studies designed to achieve these research aims. The findings are discussed in the context of the wider research literature; and innovative aspects, together with contribution to the development of theory are highlighted.

## 9.3 Summary and Critical Evaluation of the Research

### *9.3.1 Study 1*

In order to determine appropriate measures for use in Studies 2 and 3, Study 1 investigated the psychometric properties of a new measure of emotional functioning, the Emotional Self-Efficacy Scale or ESES (Kirk et al., 2008). This measure is based on the four-branch ability model of EI (Mayer & Salovey, 1997) and contains items that pertain to self-efficacy in relation to the ability to perceive, use, understand and manage emotion. An initial validation study found a one component solution for the measure (Kirk et al., 2008) but analysis of the data in Study 1 suggested a multi-dimensional structure. This structure does not map clearly onto the four-branch model of EI, but instead primarily shows distinctions between confidence in EI ability related to oneself and to others. These findings suggest that some people may feel confident in their overall EI ability,

whilst others may feel confident about their ability to identify and understand their own emotions but not in their ability to deal with emotions in others or vice versa.

The findings from Study 1 indicate that ESE is not a uni-dimensional construct, but is something with different, distinct elements. Although four distinct factors were found, only three items loaded onto the fourth factor 'Perceiving Emotion through Facial Expressions and Body Language'. Future studies might look to develop more items to explore this dimension further. However, the four dimensions of ESE revealed by Study 1 are important aspects of the ability model of EI and this study provides some early evidence for the validity of the ESES as a measure of emotional functioning.

These findings also suggest that people experience confidence in their EI ability in a different way to that proposed by EI ability theory, i.e. in accordance with the four-branch model. For example, this theory suggests that having the ability to understand your own emotions effectively means you will also be skilled in understanding emotions in others; both are included in one branch of the model. However, belief in our EI ability may work in a different way and we may feel confident about understanding our own emotions but not other people's. We develop beliefs that help us to organise our world and give meaning to our experiences. These beliefs have an important influence on the way we behave (Dweck, 2000). It could be that our belief systems concerning emotional functioning are separated into 'self' and 'others', whereas our actual EI ability fits the four-branch conceptualisation.

There is also the possibility that ability EI may be conceptualised in the same or a similar way to the findings for ESE. If this is the case then measurement of ability EI is limited because it does not currently reflect the 'self' and 'others' dimensions.

Redevelopment of the MSCEIT or the development of a new measure of ability EI would enable this idea to be explored further. In order to investigate this suggestion, any measure would need to include items that pertain to perceiving, using, understanding and managing emotion both in the self and in others. Perceiving emotion in others could still be tested through accurate recognition of facial expressions, whereas perceiving emotion in the self could possibly be tested through descriptions of thoughts, physiological and behavioural reactions, with the question 'what would you normally be feeling if you, for example, '*had negative thoughts, felt hot and had clenched fists', a) enthusiastic b) angry or c) fearful*. It may be that redeveloping the MSCEIT in this way and testing its psychometric properties could provide a solution to some of the current psychometric issues with ability EI measurement discussed in some detail in this thesis. Future research may want to explore these ideas further.

The results of Study 1 also revealed clear differences between some people's actual emotional skills, as measured by an EI performance measure (MSCEIT), and their judgments of these abilities, as measured by the ESES. This suggests that EI ability and ESE are distinct constructs, supporting earlier empirical findings (e.g. Brackett et al., 2006) and theoretical models of ESE (Bandura, 1995, 1997; Saarni, 1999). It also adds to findings from studies with children (Qualter, Barlow, et al., in press; Qualter, Gardner et al., in press) and extends these findings to young adults.

It is important to note that the results of Study 1 do not indicate a negative correlation between ability EI and ESE, i.e. that people low in EI tend to have high levels of ESE or vice versa. The lack of significant correlations between the two constructs would suggest that for some people their level of confidence in their EI ability is matched

by actual ability but for others, this is clearly not the case. Brackett et al. (2006) detailed similar findings for another self-report EI measure (Self-Rated Emotional Intelligence Scale) and the MSCEIT and put forward some possible explanations which would also be applicable to the findings of Study 1 here. Firstly, self-report measures are often prone to socially desirable responding (Day & Carroll, 2008) which suggests that some people may not want to admit to a lack of confidence in their EI ability. Secondly, a person's actual EI ability may influence their responses on a self-report measure, for example, somebody with very low EI ability may not have the necessary metacognitive skill to be able to accurately report on their EI ability. Kruger and Dunning (1999) refer to this group as the 'unskilled and unaware' and suggest this is an issue for both intellectual and social domains. Finally, for many people this could be the first time that they have had to think about their self-efficacy in relation to emotional functioning. In other areas of competence, for example numerical ability or problem solving skill, people learn how to develop these abilities throughout their education and generally receive a good deal of feedback over a number of years. This enables them to gain an understanding of how competent they are in relation to others and how confident they are in these abilities. This is not usually the case for EI ability, but as Brackett et al. (2006) point out, discrepancies between ability EI and self-report measures may diminish as more people are exposed to social and emotional learning as part of their general educational experience.

However, although ability EI and ESE appear to be separate constructs, both may be important in terms of the behaviour and other outcomes they predict. There is a growing literature of empirical work detailing various outcomes predicted by ability EI.

However, ESE is a relatively new concept and the ESES a very recent addition to the literature; as such, there are currently very few published studies in this area. Future work will want to use both measures of ability EI and ESE to explore their respective predictive abilities for various outcome measures. In line with other work on actual ability and self-efficacy (e.g. Bandura, 1986; Wigfield & Eccles, 1992) we could find that ESE is even more important than task-related skills (ability EI) in explaining individual differences in performance (Gundlach, Martinko & Douglas, 2003).

Study 1 also found that the ESES significantly correlated with a trait EI measure (TEIQue) and a personality measure (IPIP). This suggests that ESE and trait EI are related constructs, as are ESE and personality. However, these constructs are not identical and as such, should not be considered interchangeable. ESE is solely concerned with confidence in one's EI ability, whereas trait EI (as measured by the TEIQue) and personality include a number of other areas of individual difference. It is also possible that the significant relationships found may to some degree be due to all three measures being self-report. Additionally this could be as a result of semantic overlap for some of the items. For example, item 12 of the ESES asks how confident you are in your ability to '*regulate your own emotions when under pressure*' and item 4 of the TEIQue asks how strongly you agree with the statement '*I usually find it difficult to regulate my emotions*'.

This study is the first to report the finding of a significant positive relationship between ESE and age, which is of interest and is consistent with general theoretical models of self-efficacy which propose that it develops over the lifespan (e.g. Bandura et al., 2003). This may be as a result of having had more opportunities for mastery experiences and greater exposure to social modeling the older we are. For example, over

the years a person will experience a huge number of emotional events, both of a positive and negative nature. They should also learn, either through their own experiences or by observing others, that some ways of dealing with such events have better outcomes than others and as such develop strategies that work for them. Successful use of these strategies should lead to increased self-efficacy for this domain (Bandura, 1995).

*9.3.2 Study 2*

Having investigated relevant measures and explored the structure of ESE in Study 1, the next stage in this research was to provide the first empirical investigation of the relationship between emotional functioning and graduate employability. This was addressed in Study 2 with a sample of working graduates who completed an online questionnaire comprising measures of ESE, employability and career satisfaction. It was decided to use the ESES for a number of reasons: i) the relationship between ability EI and various work-related outcomes had already been established by a number of different research studies, whereas ESE is a new and under-researched area, ii) the ESES is a self-report measure based solely on the four-branch model of EI so provides data measuring confidence in EI ability, as opposed to trait EI measures which usually include a number of other aspects of individual difference, iii) time constraints - the ESES takes approximately five minutes to complete, as opposed to approximately forty minutes for the MSCEIT and the participants were *working* graduates, iv) the MSCEIT is a commercial product and a fee is charged for each use whereas permission was granted for free use of the ESES.

The data were analysed using structural equation modeling and Study 2 found that confidence in EI ability, as measured by the ESES, is a strong predictor of employability in a graduate sample. Employability is concerned with having certain skills and attributes that make a person more likely to choose, secure and retain employment, such as having effective personal networks, being aware of opportunities and feeling respected within an organization. Somebody who is confident in their emotional functioning, and as such, considers themselves an effective communicator with their colleagues, managers and customers, is more likely to be able to develop and maintain their personal networks and gain the respect of others. In other words, they are better able to develop their social networks (both in terms of quantity and quality), or increase their 'social capital' (Fugate et al., 2004). Empirical studies have shown that ability EI predicts a number of important work-related outcomes (e.g. Boland & Ross, 2010; Kerr et al., 2006; Lopes et al., 2006; O'Boyle Jr. et al., 2010) and as such, is likely to be important for graduate employability. There are also a number of theoretical models of employability that either explicitly include EI (Dacre Pool & Sewell, 2007) or allude to it (Knight & Yorke, 2004; Fugate et al., 2004; Van der Heijde & Van der Heijden, 2006). This literature can now be extended to include the direct importance of ESE for graduate employability. Future studies will want to investigate the comparative importance of ability EI for graduate employability.

Theoretical models (e.g. Dacre Pool & Sewell, 2007) indicate that there are likely to be a number of other predictors of graduate employability. Study 2 investigated one predictor, ESE, but future studies will want to explore other possibilities, for example generic skills such as numerical ability or writing for varied purposes/audiences. In view of the ability/self-efficacy distinction, it would be useful for such studies to include

objective performance measures, together with measures of self-efficacy. This would allow questions to be answered, such as whether it is actual ability that enhances employability or confidence in the ability that makes a difference or whether graduates need both.

The results also showed a significant positive relationship between graduate employability and career satisfaction. This is consistent with previous work carried out with general population samples (Rothwell & Arnold, 2007; De Vos & Soens, 2008) but extends this to specifically relate to working graduates. Further it was found that ESE does not have a direct effect on career satisfaction but operates indirectly via employability. This suggests that having confidence in your EI ability does not in itself bring career satisfaction; instead, better emotional functioning results in better communication and social interaction in the workplace, increasing feelings of perceived employability, which leads to a more satisfying career. Reasons for studying and improving employability have included its importance for the economy, e.g. human capital theory (Becker, 1975), and its importance for organisations, as detailed in various employer surveys (e.g. CBI, 1999; 2009). However we can now argue for the importance of employability for the individual graduate, as those who perceive themselves as having greater employability also experience greater satisfaction with their careers.

The strong link between ESE and graduate employability suggests that confidence in your emotional abilities is necessary for better functioning in the workplace. Future research will want to establish the links between both EI ability and ESE in predicting graduate employability. It will also be useful to know whether there are any interaction effects. For example, we know from Study 2 that graduates with high ESE also perceive

themselves as being highly employable, but it could be the case that graduates with high levels of EI ability and ESE are the 'most' employable. Controlling for the effects of other individual differences, for example personality and cognitive ability, would also be beneficial to future studies. Additionally, it would be helpful to investigate the differences between graduates of specific subject disciplines. It is possible that EI ability and ESE are more important for the employability of graduates from some subject disciplines, e.g. Psychology, rather than others, e.g. Physics. It is of course possible that the importance of EI ability and ESE for graduate employability will be more strongly influenced by the type of role the graduates are employed in, e.g. a Physics graduate working in the NHS may consider EI ability and ESE as more important for their self-perceived employability than a Psychology graduate in a role that involves mostly statistical analysis.

The main limitation of this study is its reliance on cross-sectional data which means it is not possible to be definitive about the direction of causality. Additionally, the measures used were all self-report which could have resulted in some socially desirable responding. However it is possible that this would not be as much of an issue with participants responding anonymously to an online questionnaire, as opposed to completing measures in person with the researcher or in a group situation. Nevertheless, future studies will want to utilise longitudinal, multiple source methodology in order to explore this area further. For example, it would be useful to know if students with high levels of ability EI and ESE whilst in HE, go on to enjoy higher levels of employability once they are part of the working graduate population. Such a research design would also enable investigation into any further development of ability EI and ESE beyond the HE

environment, which may be due in part to experiences within organisations and possibly explained by more opportunities for mastery experiences and exposure to social modeling. Using line-manager/supervisor employability data in addition to self-report data could also prove enlightening and would permit an exploration of the relationship between the two methods of measurement.

However, Study 2 has provided a better understanding of the relationship between emotional functioning, graduate employability and career satisfaction. It adds to the literature by using empirical research to establish ESE as a new predictor of graduate employability and career satisfaction as one of the outcomes. The results of Study 2 also suggest that any interventions designed to increase graduate employability should look to increase both EI ability and self-efficacy in this ability.

### *9.3.3 Study 3*

Having established that there is a relationship between emotional functioning and graduate employability, the next stage in this research project was to investigate the possibility of improving ability EI and ESE in undergraduates to help them enhance their employability potential. There had previously been very few empirical studies to demonstrate that improving ability EI through teaching or training was possible and there were no previous studies in relation to improving levels of ESE. This was addressed in Study 3 which involved the design, delivery and evaluation of a teaching intervention for undergraduate students. The intervention was designed using the Mayer and Salovey (1997) four-branch ability model of EI as the theoretical framework. It was offered as a taught elective module to any student interested in taking the module and able to

accommodate it within their timetable. Both male and female students were recruited from a range of different subjects and they completed measures of ability EI (MSCEIT) and ESE (ESES) pre and post intervention. A control group of students, studying an unrelated module, completed the same measures at the same time points.

Positive changes in EI and ESE were seen across the intervention group in both male and female participants, providing evidence to support the idea that it is possible to improve levels of emotional functioning through a teaching intervention. Theory and previous empirical studies support the idea that ability EI is something that can be worked on and improved, unlike personality traits which tend to remain relatively stable. These findings support this in relation to the 'Understanding' and 'Managing' elements of the four-branch model. However, these positive changes were not evident for all the branches, with no significant improvements for the 'Perceiving' and 'Using' emotion elements. This may reflect measurement issues with the MSCEIT; the 'Using' branch has received a good deal of criticism concerning its psychometric properties (e.g. Rossen et al., 2008) and the limitations of the 'Perceiving' emotion scale have been acknowledged by its authors (Mayer et al., 2008b). It is also possible that the teaching intervention succeeded in improving some of these skills, but that the MSCEIT was not able to effectively measure these changes. MacCann et al. (2011) have suggested that the 'Using' branch is possibly redundant.

Alternatively, it could be that the 'Perceiving' and 'Using' elements of the four-branch model are resistant to change. There has been some research using Ekman's Micro Expression Training Tool or METT (Ekman, 2003) which involves repeated exposure to facial expressions in video clips and still images. One study found that it was

possible to improve facial affect recognition in patients with schizophrenia and a healthy comparison group (Russell, Chu & Phillips, 2006). However it is as yet unclear if these findings would generalise to real-life experiences.

The positive changes in the 'Understanding' and 'Managing' branches are of particular note. These branches, sometimes referred to as the 'strategic' elements of ability EI (Mayer et al., 2003) seem to be particularly important for academic success, leadership, work performance and life satisfaction (Bastian et al., 2005; Côté et al., 2010; Joseph & Newman, 2010; MacCann et al., 2011); as such they are likely to have a significant impact on employability.

With the results of Study 2 indicating the significance of ESE as a predictor of employability, the increases evident in all the ESES subscales are of particular importance. The teaching intervention had a substantial impact on the students' confidence in relation to their EI ability. This supports general self-efficacy theory (e.g. Bandura, 1986, 1995, 1997), which asserts that self-efficacy is something that can be improved, unlike personality traits which remain stable over time. As improvements were clearly demonstrated, this also adds support to the findings for Study 1, which indicate that ESE is related to, but not the same as, personality traits. Self-efficacy theory (Bandura, 1995) also proposes that mastery experiences and social modelling are effective ways of creating a strong sense of efficacy. The highly interactive nature of the teaching intervention provided opportunities for mastery experiences and social modelling (both tutor and peer), which in line with the theory, may have contributed to the success of the module by substantially improving the students' ESE. Future studies may also want to investigate the possible influence of the tutor on the results with a

comparative study using different tutors. It could be that the personality of the tutor or indeed their own levels of ability EI and ESE have a key role to play in whether or not the students are successful in increasing their levels of ability EI and ESE.

It may also be the case that certain student groups benefit more from EI interventions than others. Recent research found differences in levels of trait EI in students from different faculties (Sánchez-Ruiz et al., 2010) and it would be interesting to compare students from different subject disciplines on measures of ability EI and ESE. As with this trait EI study, we may find different levels of ability EI and ESE for students from different subject areas. There may be some discipline areas that attract students with high levels of emotional functioning ability, whereas others may not. By establishing who might benefit the most from EI interventions we will be able to target these groups. This may be particularly important for future employability.

Although Study 3 found that participating in the EI teaching intervention improved aspects of EI ability and ESE, it would be helpful to know if these improvements are sustained over a period of time and only longitudinal research would be able to address this issue. The study with the small sub-sample of the intervention group provides some tentative support for the stability of the changes in ESE over time. However, the stability of the changes in ability EI is as yet unknown. Future research will also want to include further data collection points, ideally once the graduates are in the workplace. This would be helpful in determining the longer term effects of the intervention on ability EI and ESE. It would also be useful to include some multiple source measures of employability, possibly using line manager ratings in addition to self-

report questionnaires, at these later time points. This would enable us to determine the longer term effects of ability EI and ESE on graduate employability.

### 9.4 Conclusions

This thesis makes an important contribution to two distinct research areas: emotional competence and graduate employability. It is also the first empirical work that synthesises these two diverse areas in an attempt to extend our understanding of the impact of one (emotional intelligence) on the other (graduate employability). Study 1 provides a vital contribution to the validation of a new measure in the field of emotional competence, the ESES. Hopefully this now provides opportunities for future researchers to use this tool to investigate the role of ESE in other domains, for example within intimate or family relationships. The discovery that ESE may be conceptualized in a different way to ability EI is of particular importance, as it indicates that some people are very confident in their own emotional competence, but have low confidence when it comes to dealing with the emotions of others or vice versa. Recognition of this finding will allow future researchers to design interventions that target both the interpersonal and intrapersonal elements of ESE.

The use of this measurement tool in Study 2 enabled the establishment of ESE as an important predictor of employability in a working graduate sample. Despite researchers suggesting theoretical reasons for a relationship between the two concepts, this is the first study to provide empirical evidence of the relationship between emotional competence and graduate employability. This also makes possible some potentially vital work with groups other than working graduates. If ESE is an important factor in the

employability of graduates, this might also be the case for other groups such as young people 'Not In Education Employment or Training', often referred to as 'NEETs'. In addition to working with these groups to improve the more traditional generic employability skills, such as literacy and numeracy, it could be that including emotional competence training would give them an even greater chance of entering and finding satisfaction and success within the workplace. The finding that employability mediates the effect of ESE on career satisfaction provides further evidence to support this suggestion.

Although establishing emotional competence as a predictor of graduate employability is an interesting finding in its own right, providing the means to help students to improve their ability and confidence in this area is of fundamental importance. Study 3 provides the first empirical evidence from a UK based sample that supports the assertion that it is possible to design interventions that result in an increase in both ESE and ability EI. The teaching intervention designed and delivered for undergraduates for the purpose of this research also has the potential to be adapted for any number of different groups, including the NEET group described above, but also for different occupational groups such as educators or health care workers. It could also be modified to suit different age groups. For example, the elderly, many of whom have no option but to share their lives, physically and emotionally, with non-family members. Using the intervention in residential homes may help the occupants to gain a better understanding of the way emotion has an effect on their lives and relationships. Armed with this insight and some helpful strategies for managing emotion could result in more positive later life experiences for this rapidly increasing group within our society.

The key contribution of this thesis is the establishment of emotional competence as something of vital importance to future graduates who, let us not forget, are our potential future leaders, both in workplaces and society in general. Additionally, this thesis details new credible evidence to support the theory that EI ability and self-efficacy in that ability is something that HEIs can teach and students can learn. Students receive a broad education within HE, including the teaching of skills such as research and critical analysis, in addition to their specialist subject knowledge, but they are rarely taught something that is a fundamental basis for all human communication – emotional intelligence. Study 2 provides evidence that adaptive emotional functioning is an important element of graduate employability and Study 3 demonstrates that it is possible to teach this successfully. Dweck (2000) asks,

> *"As adults in this society our mission is to equip the next generations with the tools they need to live a life of growth and contribution. Can we make a commitment to help them become smarter than we were?'*(p. 155)

Including opportunities for students to increase their knowledge, understanding, skills and efficacy in relation to EI will help them become 'emotionally smarter' and is something that all universities should consider incorporating into their curricula.

# REFERENCES


Amabile, T.M., Barsade, S.G., Mueller, J.S., & Staw, B.M. (2005). Affect and Creativity at Work. *Administrative Science Quarterly, 50,* 367-403. DOI: 10.2189/asqu.2005.50.3.367

Amitay, O.A., & Mongrain, M. (2007). From Emotional Intelligence to Intelligent Choice of Partner. *The Journal of Social Psychology, 147*(4), 325–343. DOI: 10.3200/SOCP.147.4.325-344

Antonakis, J., Ashkanasy, N.M., & Dasborough, M.T. (2009). Does leadership need emotional intelligence? *The Leadership Quarterly, 20*, 247-261. DOI: 10.1016/j.leaqua.2009.01.006

Antoncic, B., & Hisrich, R.D. (2003). Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development*, *10*(1), 7–24.

Arbuckle, J.L. (2009). *AMOS 18 User's Guide*, Chicago: SPSS Inc.

Arnold, J. (2011). Career concepts in the 21st century. *The Psychologist, 24*(2), 106-109.

Arthur, M.B. (1994). The boundaryless career: A new perspective for organizational enquiry. *Journal of Organizational Behavior, 15,* 295-306. DOI: 10.1002/job.4030150402

Ashforth, B.E., & Humphrey, R.H. (1995). Emotion in the Workplace: A Reappraisal. *Human Relations, 48,* 97–125. DOI: 10.1177/001872679504800201

Ashkanasy, N.M., & Daus, C.S. (2005). Rumours of the death of emotional intelligence in organizational behaviour are vastly exaggerated. *Journal of Organizational Behavior, 26,* 441–452. DOI: 10.1002/job.320

Ashkanasy, N.M., & Dasborough, M.T. (2003). Emotional Awareness and Emotional Intelligence in Leadership Teaching. *Journal of Education for Business*, September/October, 18–22. DOI: 10.1080/08832320309599082

Atkins, M.J. (1999). Oven-ready and Self-basting: taking stock of employability skills. *Teaching in Higher Education, 4(*2), 267-280. DOI: 10.1080/1356251990040208

Austin, E.J. (2010). Measurement of ability emotional intelligence: Results for two new tests. British Journal of Psychology, 101, 563-578. DOI: 10.1348/000712609X474370

Austin, E.J., Farrelly, D., Black, C., & Moore, H. (2007). Emotional intelligence, machiavellianism and emotional manipulation: Does EI have a dark side? *Personality and Individual Differences, 43*, 179–189. DOI: 10.1016/j.paid.2006.11.019

Bagby, R.M.; Parker, J.D., & Taylor, G.J. (1994). The twenty item Toronto Alexithymia Scale-2: Convergent, discriminant and concurrent validity. *Journal of Psychosomatic Research, 38*, 33 – 40. Cited in Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences, 47*, 36–41. DOI: 10.1016/j.paid.2009.01.046

Bandura, A. (1977). Self-efficacy. Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-Efficacy in Changing Societies*, (pp. 1-45). Cambridge: Cambridge University Press.

Bandura, A. (1997). *Self –efficacy: The Exercise of Control*. New York: Freeman.

Bandura, A., Barbaranelli, C., Caprara, G.V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development, 72,*187-206. DOI: 10.1111/1467-8624.00273

Bandura A., Caprara, G.V., Barbaranelli., C., Gerbino., M., & Pastorelli, C. (2003). Role of Affective Self-Regulatory Efficacy in Diverse Spheres of Psychosocial Functioning. *Child Development, 74*, 769–782. DOI: 10.1111/1467-8624.00567

Bandura, A., Caprara, G.V., & Pastorelli, C. (1996). Multifaceted Impact of Self-Efficacy Beliefs on Academic Functioning. *Child Development, 67*, 1206-1222. DOI: 10.2307/1131888

Barlow, A., Qualter, P., & Stylianou, M.S. (2010). Relationships between Machiavellianism, Emotional Intelligence and Theory of Mind in Children. *Personality and Individual Differences, 48*, 78-82. DOI: 10.1016/j.paid.2009.08.021

Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): Technical Manual*, Toronto: Multi-Health Systems.

Bartlett, M.S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of the Royal Statistical Society, 16* (Series B), 296–298.

Bastian, V.A., Burns, N.R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences, 39*, 1135-1145. DOI: 10.1016/j.paid.2005.04.006

Beasley, K. (1987). The emotional quotient. *Br. Mensa Mag*. May, p 25. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59*, 507–536. DOI: 10.1146/annurev.psych.59.103006.093646

Beauvais, A.M., Brady, N., O'Shea, E.R., & Quinn Griffin, M.T. (2011). Emotional intelligence and nursing performance among nursing students. *Nurse Education Today, 31*(4), 396-401. DOI: 10.1016/j.nedt2010.07.013

Becker, G.S. (1975). *Human Capital*, Chicago: Chicago University Press. Cited in Yorke, M. (2004). Employability in the Undergraduate Curriculum: some student perspectives. *European Journal of Education*, 39(4), 409-427. DOI: 10.1111/j.1465-3435.2004.00194x

Bennett, N., Dunne, E., & Carré, C. (1999). Patterns of core and generic skill provision in higher education. *Higher Education, 37*, 71-93. DOI: 10.1023/A:1003451727126

Bennett, R. (2002). Employers' Demands for Personal Transferable Skills in Graduates: a content analysis of 1000 job advertisements and an associated empirical study. *Journal of Vocational Education & Training, 54*(4), 457-476. DOI: 10.1080/13636820200200209

Berntson, E. & Marklund, S. (2007). The relationship between perceived employability and subsequent health. *Work & Stress, 21*(3) 279–292. DOI: 10.1080/02678370701659215

Binet, A. (1886). *La psychologie du raisonnement* (The psychology of reasoning). Paris: Alcan. Cited in Kaufman, A.S., & Kaufman, J.C. (2001). Emotional Intelligence as an Aspect of General Intelligence: What Would David Wechsler Say? *Emotion, 1*(3), 258-264. DOI: 10.1037//1528-3542.1.3.258

Boekaerts, M. (2003). Towards a model that integrates motivation, affect and learning. In L. Smith, C. Rogers and P. Tomlinson (Eds.), *Development and motivation: joint perspectives* (pp.173-189). Leicester: British Psychological Society. Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Boekaerts, M., & Niemivirta, M. (2000). Self-regulated learning: finding a balance between learning goals and ego-protecting goals. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp.417-450). London: Academic Press. Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Boland, M.J., & Ross, W.H. (2010). Emotional Intelligence and Dispute Mediation in Escalating and De-Escalating Situations. *Journal of Applied Social Psychology. 40*(12), 3059–3105. DOI: 10.1111./j.1559-1816.2010.00692.x

Bosley, S., Arnold, J., & Cohen, L. (2009). How other people shape our careers: A typology drawn from career narratives. *Human Relations, 62*, 1487-1520. DOI: 10.1177/0018726709334492

Bower, G.H. (1981). Mood and memory. *American Psychologist*, 36, 129–148. Cited in J. D. Mayer, (2000). Emotion, Intelligence and Emotional Intelligence. In J. P. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp.410–431). Mahwah, NJ: Lawrence Erlbaum & Associates.

Boyatzis, R.E., Baker, A., Leonard, D., Rhee, K., & Thompson, L. (1995). Will it make a difference? In R.E. Boyatzis, S.S. Cowen, & D.A. Kolb, (Eds.), *Innovation in Professional Education.* San Francisco, CA: Jossey-Bass. Cited in Warn, J., & Tranter, P. (2001). Measuring Quality in Higher Education: a competency approach. *Quality in Higher Education, 7*(3), 191-198. DOI: 10.1080/13538320120098078

Brackett, M.A., & Katulak, N.A. (2007). Emotional Intelligence in the Classroom: Skill-Based Training for Teachers and Students. In J. Ciarrochi, & J.D. Mayer (Eds.), *Applying Emotional Intelligence*. *A Practitioner's Guide* (pp. 1–27). Hove: Psychology Press.

Brackett, M.A., & Mayer, J.D. (2003). Convergent, Discriminant, and Incremental Validity of Competing Measures of Emotional Intelligence. *Personality and Social Psychology Bulletin, 29*, 1147–1158. DOI: 10.1177/0146167203254596

Brackett, M.A., Mayer, J.D., & Warner, R.M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality & Individual Differences, 36*, 1387–1402. DOI: 10.1016/S0191-8869(03)00236-8

Brackett, M.A., Rivers, S.E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional ability to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*(4), 780–795. DOI: 10.1037/0022-3514.91.4.780

Brackett, M.A., Warner, R.M., & Bosco, J. (2005). Emotional intelligence and relationship quality among couples. *Personal Relationships, 12*, 197–212. DOI: 10.1111/j.1350-4126.2005.00111.x

Bridgstock, R. (2009). The graduate attributes we've overlooked: enhancing graduate employability through career management skills. *Higher Education Research & Development, 28*(1), 31-44. DOI: 10.1080/07294360802444347

Brody, N. (2004). What Cognitive Intelligence Is and What Emotional Intelligence Is Not. *Psychological Inquiry, 15*, 234 – 238.

Brown, P., & Hesketh, A. (2004). *The Mismanagement of Talent*. Oxford: Oxford University Press.

Brown, P., Hesketh, A., & Williams, S. (2003). Employability in a Knowledge-driven Economy [1]. *Journal of Education and Work, 16*(2), 107-126. DOI: 10.1080/13639080305562

Browne, M.W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods and Research, 21*, 230-258. DOI: 10.1177/0049124192021002005

Burton, C.M., & King, L.A. (2004). The health benefits of writing about intensely positive experiences. *Journal of Research in Personality, 38*, 150-163. DOI: 10.1016/S0092-6566(03)00058-8

Burton, C.M., & King, L.A. (2008). Effects of (very) brief writing on health: The two minute miracle. *British Journal of Health Psychology, 13*, 9-14. DOI: 10.1348/135910707X250910

Burton, C.M. & King, L.A. (2009). The health benefits of writing about positive experiences: The role of broadened cognition. *Psychology & Health, 24*(8), 867-879. DOI: 10.1080/08870440801989946

Byron, K. (2007). Male and female managers' ability to read emotions: Relationships with supervisors' performance ratings and subordinates' satisfaction ratings. *Journal of Occupational and Organizational Psychology, 80*, 713–733. DOI: 10.1348/096317907X174349

Caruso, D.R., & Salovey, P. (2004). *The Emotionally Intelligent Manager*. San Francisco: Jossey-Bass.

Cattell, R. B. (1978). The scientific use of factor analysis in behavioral and life sciences. New York: Plenum

CBI (1999). Making Employability Work: An Agenda for Action. London: CBI. Cited in McQuaid, R.W., & Lindsay, C. (2005). The Concept of Employability. *Urban Studies, 42*(2), 197-219. DOI: 10.1080/0042098042000316100

CBI (2009). Future fit. Preparing graduates for the world of work. CBI. Available at: http://www.cbi.org.uk/pdf/20090326-CBI-FutureFit-Preparing-graduates-for-the-world-of-work.pdf [accessed 7.4.11]

Chang, S-J., van Witteloostuijn, A., & Eden, L. (2010). From the Editors: Common method variance in international business research. Journal of International Business Studies, 41, 178-184. DOI: 10.1057/jibs.2009.88

Cherniss, C. (2000). Emotional Intelligence: What it is and Why it Matters. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA, April 15, 2000.

Ciarrochi, J., Caputi, P., & Mayer, J.D. (2003). The distinctiveness and utility of a measure of trait emotional awareness. *Personality and Individual Differences, 34,* 1477–1490. DOI: 10.1016/SO191-8869(02)00129-0

Ciarrochi, J., Chan, A.Y., & Caputi, P. (2000). A critical evaluation of the emotional intelligence concept. *Personality & Individual Differences, 28,* 539–561. DOI: 10.1016/SO191-8869(99)00119-1

Ciarrochi, J., & Mayer, J.D. (2007). *Applying Emotional Intelligence. A Practitioner's Guide*. Hove, East Sussex: Psychology Press.

Clarke, M. (2008). Understanding and managing employability in changing career contexts. *Journal of European Industrial Training, 32*(4), 258-284. DOI: 10.1108/03090590810871379

Clarke, N. (2010). Emotional Intelligence and its relationship to transformational leadership and key project manager competence. *Project Management Journal, 41*(2), 5–20. DOI: 10.1002/pmj.20162

Cobb, C.D., & Mayer, J.D. (2000). Emotional Intelligence. What the research says. *Educational Leadership, 58,* 14–18.

Committee on Higher Education (1963). *Higher Education* [Report of the Committee appointed by the Prime Minister under the chairmanship of Lord Robbins, 1961-63: 'The Robbins Report']. London: Her Majesty's Stationery Office.

Connor, R.M., & Little, I.S. (2003). Revisiting the predictive validity of emotional intelligence: self-report versus ability-based measures. *Personality & Individual Differences, 35,* 1893–1902.

Cooper, R.K., & Sawaf, A. (1997). *Executive EQ: Emotional Intelligence in Leadership and Organisations*. New York: Grosset/Putman. Cited in Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership & Organization Development Journal*, *27*(4), 265–279. DOI: 10.1108/01437730610666028

Côté, S., & Miners, C.T.H. (2006). Emotional Intelligence, Cognitive Intelligence and Job Performance. *Administrative Science Quarterly, 51*, 1-28.

Côté, S., Lopes, P.N., Salovey, P., & Miners, C.T.H. (2010). Emotional intelligence and leadership emergence in small groups. *The Leadership Quarterly, 21,* 496–508. DOI: 10.1016/j.leaqua.2010.03.012

Cranmer, S. (2006). Enhancing graduate employability: best intentions and mixed outcomes. *Studies in Higher Education, 31*(2), 169-184. DOI: 10.1080/03075070600572041

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334. DOI: 10.1007/BF02310555

Dacre Pool, L., & Sewell, P. (2007). The key to employability: developing a practical model of graduate employability. *Education + Training*, *49*(4), 277-289. DOI: 10.1108/00400910710754435

Dacre Pool, L. (2009). Can we teach students to be more emotionally intelligent? Association of Graduate Careers Advisory Services. Available at: http://www.agcas.org.uk/assets/download?file=768&parent=308 [accessed 2.6.09]

Damasio, A.R. (1994). *Descartes' error: Emotion, reason and the human brain*. New York: Putnam.

Dasborough, M.T. (2006). Cognitive asymmetry in employee emotional reactions to leadership behaviours. *The Leadership Quarterly, 17*, 163-178. DOI: 10.1016/j.leaqua.2005.12.004

Daus, C.S., & Ashkanasy, N.M. (2003). Will the real emotional intelligence please stand up? On deconstructing the emotional intelligence 'debate'. *The Industrial-Organizational Psychologist, 41*(2), 69–72.

Daus, C.S., & Ashkanasy, N.M. (2005). The case for the ability-based model of emotional intelligence in organizational behaviour. *Journal of Organizational Behavior, 26*, 453-466. DOI: 10.1002/job.321

Davies, M., Stankov, L., & Roberts, R.D. (1998). Emotional Intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology, 75,* 989–1015. DOI: 10.1037//0022-3514.75.4.989

Day, A.L., & Carroll, S.A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual Differences, 36,* 1443–1458. DOI: 10.1016/s0191-8869(03)00240-x

Day, A.L., & Carroll, S.A. (2008). Faking emotional intelligence (EI): comparing response distortion on ability and trait-based EI measures. *Journal of Organizational Behavior, 29,* 761-784. DOI: 10.1002/job.485

De Cuyper, N., Mauno, S., Kinnunen, U., & Mäkikangas, A. (2011). The role of job resources in the relation between perceived employability and turnover intention: A prospective two-sample study. *Journal of Vocational Behavior, 78,* 253-263. DOI: 10.1016J.JVB.2010.09.008

De Vos, A., & Soens, N. (2008). Protean attitude and career success: the mediating role of self-management. *Journal of Vocational Behavior, 73,* 449-456. DOI:10.1016/j.jvb.2008.08.007

DfES (2002). Work related Learning Report. DfES WRLRI. Cited in Lees, D. (2002). *Graduate Employability – Literature Review*. LTSN Generic Centre. Available at: http://www.palatine.ac.uk/files/emp/1233.pdf [accessed 20.5.11]

Di Fabio, A., & Palazzeschi, L. (2009). An in-depth look at scholastic success: Fluid intelligence, personality traits or emotional intelligence? *Personality and Individual Differences, 46,* 581–585. DOI: 10.1016/j.paid.2008.12.012

doctorjob.com (2004). *Are graduate employability initiatives worth it?* Student Survey July 2004. Oxon: GTI Specialist Publishers.

Dulewicz, V., & Higgs, M.J. (1999). Can emotional intelligence be measured and developed? *Leadership & Organization Development Journal, 20*(5), 242-252.

Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D., & Schellinger, K.B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development, 82*(1), 405-432. DOI: 10.1111/j.1467-8624.2010.01564.x

Dweck, C. S. (2000). *Self-theories: Their Role in Motivation, Personality and Development.* New York: Psychology Press.

Eby, L.T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the bondaryless career. *Journal of Organizational Behavior, 15,* 307-324. Cited in De Vos, A., & Soens, N. (2008). Protean attitude and career success: the mediating role of self-management. *Journal of Vocational Behavior, 73,* 449-456. DOI:10.1016/j.jvb.2008.08.007

Ekman, P. (2003). Darwin, deception and facial expression. *Annals of the New York Academy of Sciences, 1000,* 205–221. DOI: 10.1196/annals.1280.010

Ekman, P., Friesen, W.V., & Ancoli, S. (1980). Facial signs of emotional experience. *Journal of Personality and Social Psychology, 39,* 1125 – 1134. Cited in Mayer, J. D., DiPaolo, M., & Salovey, P. (1990). Perceiving Affective Content in Ambiguous Visual Stimuli: A Component of Emotional Intelligence. *Journal of Personality Assessment, 54*(3 & 4), 772–781. DOI: 10.1207/815327752jpa5403&4_29

Engelberg, E., & Sjöberg, L. (2004). Internet Use, Social Skills and Adjustment. *CyberPsychology & Behavior, 7*(1), 41–47. DOI: 10.1089/109493104322820101

Evers, C., Stok, F.M., & De Ridder, D.T.D. (2010). Feeding Your Feelings: Emotion Regulation Strategies and Emotional Eating. *Personality and Social Psychology Bulletin, 36*(6), 792-804. DOI: 10.1177/0146167210371383

Extremera, N., Ruiz-Aranda, D., Pineda-Galán, C., & Salguero, J.M. (2011). Emotional intelligence and its relation with hedonic and eudaimonic well-being: A prospective study. *Personality and Individual Differences, 51,* 11-16. DOI: 10.1016/j.paid.2011.02.029

Fan, H., Jackson, T., Yang, X., Tang, W., & Zhang, J. (2010). The factor structure of the Mayer-Salovey-Caruso Emotional Intelligence Test V2.0 (MSCEIT): A meta-analytic structural equation modelling approach. *Personality and Individual Differences, 48,* 781–785. DOI: 10.1016/j.paid.2010.02.004

Fineman, S. (2004). Getting the Measure of Emotion – and the Cautionary Tale of Emotional Intelligence. *Human Relations, 57,* 719–740. DOI: 10.1177/0018726704044953

Fiori, M., & Antonakis, J. (2011). The ability model of emotional intelligence: Searching for valid measures. *Personality and Individual Differences, 50,* 329-334. DOI: 10.1016/j.paid.2010.10.010

Flavell, J.H. (1979). Metacognition and cognitive monitoring: a new area of cognitive developmental inquiry. *American Psychologist, 34,* 906-1011. Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Fox, K.E., Tett, R.P., & Palmer, P.C. (2003) *Is Emotional Intelligence a Valid Predictor of Job Performance?* Paper presented at the 18th annual Society of Industrial Organizational Psychologists conference, Orlando, FL.

Freudenthaler, H.H., & Neubauer, A.C. (2005). Emotional Intelligence. The convergent and discriminant validities of intra and interpersonal emotional abilities. *Personality and Individual Differences, 39*, 569–579. Cited in Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences, 47*, 36–41. DOI: 10.1016/j.paid2009.01.046

Fugate, M., Kinicki, A.J., & Ashforth, B.E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38. DOI: 10.1016/j.jvb.2003.10.005

Gardner, H. (1983*). Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, K. (2008). *Ability emotional intelligence, trait emotional intelligence and borderline personality disorder*. Unpublished doctoral dissertation, University of Central Lancashire.

Gardner, K.J., & Qualter, P. (2010). Concurrent and incremental validity of three trait emotional intelligence measures. Special issue on emotional intelligence, *Australian Journal of Psychology*, *62*(1), 5-13. DOI: 10.1080/00049530903312857

Gardner, K.J., & Qualter, P. (2011). Factor structure, measurement invariance and structural invariance of the MSCEIT V2.0. *Personality and Individual Differences. 51*(4), 492-496. DOI: 10.1016/j.paid.2011.05.004

Gazier, B. (1998). Observations and recommendations, in: B. Gazier (Ed). *Employablity – Concepts and Policies*, 298 – 315. Berlin: European Employment Observatory. Cited in McQuaid, R. W., & Lindsay, C. (2005). The Concept of Employability. *Urban Studies*, *42*(2), 197-219. DOI: 10.1080/0042098042000316100

Gazier, B. (2001). Employability: the complexity of a policy notion. In P. Weinert, M. Baukens, P. Bollerot et al. (Eds.), *Employability: From Theory to Practice*, (pp. 3-23). New Brunswick, NJ: Transaction Books. Cited in McQuaid, R. W., & Lindsay, C. (2005). The Concept of Employability. *Urban Studies*, *42*(2), 197-219. DOI: 10.1080/0042098042000316100

Gazier, B. (2006). Promoting employability in the context of globalisation in the EU and Japan. Background Paper. 11th EU-Japan Symposium. Available from http://ec.europa.eu/ [Accessed 16th May 2011].

Gignac, G.E. (2005). Evaluating the MSCEIT V2.0 via CFA: Comment on Mayer et al. (2003). *Emotion, 5*, 233–235. DOI: 10.1037/1528-3542.5.2.233

Gohm, C.L. (2003). Mood Regulation and Emotional Intelligence: Individual Differences. *Journal of Personality and Social Psychology*, *84*(3), 594–607. DOI: 10.1037/0022-3514.84.3.594

Gohm, C.L. (2004). Moving Forward With Emotional Intelligence. *Psychological Inquiry*, *15*(3), 222 – 227.

Gohm, C.L., Corser, G.C., & Dalsky, D.J. (2005). Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Personality & Individual Differences*, *39*, 1017–1028. DOI:10.1016/j.paid.2005.03.018

Goldberg, L.R. (2010). Personality, Demographics, and Self-Reported Behavioral Acts: The Development of Avocational Interest Scales from Estimates of the Amount of Time Spent in Interest-Related Activities. In C.R. Agnew, D.E. Carlston, W.G. Graziano & J.R. Kelly (Eds.), *Then a miracle occurs: Focusing on behaviour in social psychological theory and research*, (pp.205–226). New York: Oxford University Press.

Goldberg, L.R. (1999). International Personality Item Pool: A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences. Available from http://ipip.ori.org/ [Accessed 1st August 2011].

Goldenberg, I., Matheson, K., & Mantler, J. (2006). The Assessment of Emotional Intelligence: A Comparison of Performance-Based and Self-Report Methodologies. *Journal of Personality Assessment*, *86*(1), 33–45. DOI: 10.1207/s15327752jpa8601_05

Goleman, D (1996). *Emotional Intelligence*. London: Bloomsbury.

Goleman, D (1998). *Working with emotional Intelligence*. London: Bloomsbury.

Goleman, D (2005). *Emotional intelligence (10th Anniversary Ed.)*. New York: Bantam. Cited in Mayer, J.D., Salovey, P., & Caruso, D.R. (2008). Emotional Intelligence. New Ability or Eclectic Traits? *American Psychologist*, *63*(6), 503–517. DOI: 10.1037/0003-066X.63.6.503

Greatbatch D. & Lewis, P. (2007). *Generic Employability Skills II*. Produced by the Centre for Developing and Evaluating Lifelong Learning at the University of Nottingham. Available at http://www.swslim.org.uk/Documents/GES/GES_II-FULL_REPORT_06.03.07.pdf [Accessed 13th May 2011].

Green, W., Hammer, S., & Star, C. (2009). Facing up to the challenge: why is it so hard to develop graduate attributes? *Higher Education Research & Development, 28*(1), 17-29. DOI: 10.1080/07294360802444339

Grewal, D. & Salovey, P. (2005). Feeling Smart: The Science of Emotional Intelligence. *American Scientist, 93,* 330-339. DOI: 10.1511/2005.4.330

Gundlach, M.J., Martinko, M.J., & Douglas, S.C. (2003). Emotional Intelligence, Causal Reasoning and the Self-Efficacy Development Process. *The International Journal of Organizational Analysis*, *11*(3), 229–246.

Harman, H.H. (1967). *Modern Factor Analysis*. 2nd Edition, Revised. Chicago: University of Chicago Press.

Harvey, L. (1999). *Employability Audit Toolkit* (Birmingham Centre for Research into Quality). Cited in Harvey, L. (2001). Defining and Measuring Employability. *Quality in Higher Education, 7*(2), 97-109. DOI: 10.1080/13538320120059990

Harvey, L. (2000). New realities: the relationship between higher education and employment. *Tertiary Education and Management, 6,* 3-17. DOI: 10.1080/13583883.2000.9967007

Harvey, L. (2001). Defining and Measuring Employability. *Quality in Higher Education, 7*(2), 97-109. DOI: 10.1080/13538320120059990

Harvey, L. (2003). *On employability*. The Higher Education Academy. Available at http://www.heacademy.ac.uk/assets/York/documents/resources/resourcedatabase/id464_on_employability.pdf [Accessed 13th May 2011].

Harvey, L. (2005). Embedding and Integrating Employability. *New Directions for Institutional Research*, *128*, 13-28. DOI:10.1002/ir.160

Harvey, L., Locke, W., & Morey, A. (2002). Enhancing Employability, Recognising Diversity: Making Links Between Higher Education and the World of Work. Cited in Harvey, L. (2005). Embedding and Integrating Employability. *New Directions for Institutional Research*, *128*, 13-28. DOI:10.1002/ir.160

Harvey, L., Moon, S., Geall, V., & Bower, R. (1997). *Graduates' Work: organizational Change and Students' Attributes.* Birmingham: Centre for Research into Quality, University of Central England.

Herrnstein, R.J., & Murray, C. (1994). *The Bell Curve. Intelligence and Class Structure in American Life*. New York: Free Press.

Hillage, J., & Pollard, E. (1998). *Employability: Developing a Framework for Policy Analysis.* Research Brief No 85. London: Department for Education & Employment.

Hinchliffe, G. (2005). Graduate Employability: a need for realism? Paper from the Ninth Quality in Higher Education International Seminar in collaboration with ESECT and The Independent. Birmingham UK, 27th-28th January 2005.

Hind, D., & Moss, S. (2005). *Employability skills.* Sunderland: Business Education Publishers.

HM Treasury (1997). Treasury Press Release 122/97, 13th October: Gordon Brown unveils UK Employment Action Plan. London: HM Treasury. Cited in McQuaid, R.W. & Lindsay, C. (2005). The Concept of Employability. *Urban Studies, 42*(2), 197-219. DOI: 10.1080/0042098042000316100

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional versus new alternatives. *Structural Equation Modeling, 6*, 1-55. DOI: 10.1080/10705519909540118

Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K (2007). Emotional Intelligence and Education: A critical review. *Educational Psychology, 27*(2), 235-254. DOI: 10.1080/01443410601066735

Humphrey, N., Lendrum, A., & Wigelsworth, M. (2010). Social and emotional aspects of learning (SEAL) programme in secondary schools: national evaluation. Research Brief, DFE – RB049. Available at: www.education.gov.uk/publications/eOrderingDownload/DFE-RB049.pdf [Accessed 5.7.11]

International Personality Item Pool: A Scientific Collaboration for the Development of Advanced Measures of Personality Traits and Other Individual Differences. http://ipip.ori.org/ [Accessed 7.7.11]

Isen, A.M., Daubman, K.A., & Nowicki, G.P. (1987). Positive Affect Facilitates Creative Problem Solving. *Journal of Personality and Social Psychology, 52*(6), 1122-1131. DOI: 10.1037//0022-3514.52.6.1122

Isen, A.M., Shalker, T., Clark, M., & Karp, L. (1978). Positive affect, accessibility of material in memory and behaviour: A cognitive loop? *Journal of Personality and Social Psychology, 36*, 1–12. Cited in Mayer, J.D. (2000). Emotion, Intelligence and Emotional Intelligence. In J.P. Forgas (Ed.), *The Handbook of Affect and Social Cognition*, (pp.410–431). Mahwah, NJ: Lawrence Erlbaum & Associates.

Izard, C.E. (2001). Emotional intelligence or adaptive emotions? *Emotion, 1*, 249–257. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities:

Emotional Intelligence. *Annual Review of Psychology*, *59*, 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Izard, C.E., Fine, S., Schultz, D., Mostow, A.J., Ackerman, B., & Youngstrom, E. (2001). Emotion knowledge as a predictor of social behaviour and academic competence in children at risk. *Psychological Science, 12*, 18–23. DOI: 10.1111/1467-9280.00304

Jaeger, A.J. (2003). Job Competencies and the Curriculum: An Inquiry Into Emotional Intelligence in Graduate Professional Education. *Research in Higher Education, 44*(6), 615–639. DOI: 10.1023/A:102611972465

Johnes, G. (2006). *Career interruptions and labour market outcomes*. EOC Working Paper Series, No 45, Equal Opportunities Commission, Manchester.

Joseph, D.L., & Newman, D.A. (2010). Emotional Intelligence: An Integrative Meta-Analysis and Cascading Model. *Journal of Applied Psychology, 95*(1), 54–78. DOI: 10.1037/a0017286

Judge, T.A., & Bono, J.E. (2001). Relationship of Core Self-Evaluations Traits – Self-Esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability – With Job Satisfaction and Job Performance: A Meta-Analysis. *Journal of Applied Psychology, 86*(1), 80-92. DOI: 10.1037//0021-9010.86.1.80

Kaiser, H. (1970). A second generation Little Jiffy. *Psychometrika*, *35*, 401–415.

Kaiser, H. (1974). An index of factorial simplicity. *Psychometrika*, *39*, 31–36.

Kassem, C.L. (2002). Developing the Teaching Professional: What teacher educators need to know about emotions. *Teacher Development*, *6*(3), 363–372. DOI: 10.1080/13664530200200177

Kaufman, A.S., & Kaufman, J.C. (2001). Emotional Intelligence as an Aspect of General Intelligence: What Would David Wechsler Say? *Emotion*, *1*(3), 258-264. DOI: 10.1037//1528-3542.1.3.258

Keele, S.M., & Bell, R.C. (2008). The factorial validity of emotional intelligence. An unresolved issue. *Personality and Individual Differences, 44*, 487-500. DOI: 10.1016/j.paid.2007.09.013

Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership & Organization Development Journal*, *27*(4), 265–279. DOI: 10.1108/01437730610666028

Kidwell, B., Hardesty, D.M., Murtha, B.R. & Sheng, S. (2011). Emotional Intelligence in Marketing Exchanges. *Journal of Marketing, 75*, 78–95. DOI: 10.1509/jmkg.75.1.78

Kirk, B.A., Schutte, N.S., & Hine, D.W. (2008). Development and preliminary validation of an emotional self-efficacy scale. *Personality and Individual Differences, 45*, 432–436. DOI: 10.1016/j.paid.2008.06.010

Kirk, B.A., Schutte, N.S., & Hine, D.W. (2011). The Effect of an Expressive writing Intervention for Employees on Emotional Self-Efficacy, Emotional Intelligence, Affect, and Workplace incivility. *Journal of Applied Social Psychology, 41*(1), 179–195. DOI: 10.1111/j.1559-1816.2010.00708.x

Knight, P.T. (2001). Editorial: employability and quality. *Quality in Higher Education, 7*(2), 93-95. DOI: 10.1080/13538320120059981

Knight, P., & Yorke, M. (2000). Skills *plus*: Tuning the Undergraduate Curriculum. Skills Plus Project Report. York: The Higher Education Academy.

Knight, P., & Yorke, M. (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Kornacki, S.A., & Caruso, D.R. (2007). A Theory-Based, Practical Approach to Emotional Intelligence Training: Ten Ways to Increase Emotional Skills. In J. Ciarrochi, & J.D. Mayer, (Eds.), *Applying Emotional Intelligence. A Practitioner's Guide,* (pp 53–88). Hove: Psychology Press.

Kruger, J., & Dunning, D. (1999). Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments. *Journal of Personality and Social Psychology, 77*(6), 1121-1134. DOI: 10.1037//0022-3514.77.6.1121

Lance, C.E., Butts, M.M., & Michels, L.C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9, 202–220. DOI: 10.1177/1094428105284919

Landy, F.J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior, 26*, 411–424. DOI: 10.1002/job.317

Lane, R.D., Quinlan, D.M., Schwartz, G.E., Walker, P.A., & Zeitlin, S.B. (1990). The Levels of Emotional Awareness Scale: a cognitive developmental measure of emotion. *Journal of Personality Assessment, 55*, 124–134. Cited in Mayer, J.D., Roberts R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59*, 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Law, K.S., Wong, C.S., & Song, L.J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology, 89*, 483–496. DOI: 10.1037/0021-9010.89.3.483

Law, W., & Watts, A. G. (1977). *Schools, Careers and Community*. London: Church Information Office.

Lawrence, D. (1996). *Enhancing Self-Esteem in the Classroom, 2nd ed*. London: Paul Chapman.

Lees, D. (2002). *Graduate Employability – Literature Review*. LTSN Generic Centre. Available at: http://www.palatine.ac.uk/files/emp/1233.pdf [Accessed 13 May 2011]

Leuner, B. (1966). Emotional intelligence and emancipation. *Praxis Kinderpsychol. Kinderpsychiatrie 15*, 193–203. Cited in Mayer, J.D., Roberts R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59*, 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Little, B. (2001). Reading Between the Lines of Graduate Employment. *Quality in Higher Education, 7*(2), 121-129. DOI: 10.1080/13538320120060015

Little, R.J.A., & Rubin, D.B. (1987). *Statistical Analysis with Missing Data.* New York: John Wiley.

Locke, E.A. (2005). Why emotional intelligence is an invalid concept. *Journal of Organizational Behavior, 26*, 425–431. DOI: 10.1002/job.318

Lopes, P.N., Brackett, M.A., Nezlek, J.B., Schutz, A., Sellin, I., & Salovey, P. (2004). Emotional intelligence and social interaction. *Personality and Social Psychological Bulletin, 30*, 1018–1034. DOI: 10.1177/0146167204264762

Lopes, P.N., Grewal, D., Kadis, J., Gall, M., & Salovey, P. (2006). Evidence that emotional intelligence is related to job performance and affect and attitudes at work. *Psicothema, 18*, 132–138.

Lopes, P.N., Nezlek, J.B., Extremera, N., Hertel, H., Fernández-Berrocal, P., Schütz, A., & Salovey, P. (2011). Emotion Regulation and the Quality of Social Interaction: Does the Ability to Evaluate Emotional Situations and Identify Effective Responses Matter? *Journal of Personality, 79*(2), 429-467. DOI: 10.1111/j.1467-6494.2010.00689.x

Lopes, P.N., Salovey, P., Côté, S., & Beers, M. (2005). Emotion regulation abilities and the quality of social interation. *Emotion, 5*, 113–118. DOI: 10.1037/1528-3542.5.1.113

Lopes, P.N., Salovey, P., & Strauss, R. (2003). Emotional intelligence, personality, and the perceived quality of social relationships. *Personality and Individual Differences, 3,* 641 – 659. DOI: 10.1016/s0191-8869(02)00242-8

Lyubormirsky, S., Dickerhoof, R., Boehm, J.K. & Sheldon, K. (2011). Becoming Happier Takes Both a Will and a Proper Way: An Experimental Longitudinal Intervention to Boost Well-Being. *Emotion, 11*(2), 391-402. DOI: 10.1037/a0022575

Lyubomirsky, S., King, L., & Deiner, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131,* 803–855. DOI: 10.1037/0033-2909.131.6.803

MacCallum, R.C., Browne, M.W., & Sugawara, H.M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1,* 130-149. DOI: 10.1037//1082-989X.1.2.130

MacCann, C., Fogarty, G.J., Zeidner, M., & Roberts, R.D. (2011). Coping mediates the relationship between emotional intelligence (EI) and academic achievement. *Contemporary Educational Psychology, 36,* 60-70. DOI: 10.1016/j.cedpsych.2010.11.002

MacCann, C., & Roberts, R.D. (2008). New paradigms for Assessing Emotional Intelligence: Theory and Data. *Emotion, 8*(4), 540–551. DOI: 10.1037/a0012746

Marsh, H.W., Hau, K.T., & Wen, Z.L. (2004) In search of golden rules: Comment on hypothesis testing approaches to setting cutoff values for fit indexes and dangers in overgeneralising Hu & Bentler's (1999) findings. *Structural Equation Modeling, 11,* 320-341. DOI: 10.1207/s15328007sem1103_2

Martins, A., Ramalho, N., & Morin, E. (2010). A comprehensive meta-analysis of the relationship between Emotional Intelligence and health. *Personality and Individual Differences, 49,* 554–564. DOI: 10.1016/j.paid.2010.05.029

Martins, L.L., Eddleston, K.A., & Veiga, J.F. (2002). Moderators of the relationship between work-family conflict and career satisfaction. *Academy of Management Journal, 45*(2), 399–409. DOI: 10.2307/3069354

Mason, G., Williams, G., Cranmer, S., & Guile, D. (2003). How much does higher education enhance the employability of graduates? Report to HEFCE. Cited in Yorke, M. (2004). Employability in the Undergraduate Curriculum: some student perspectives. *European Journal of Education, 39*(4), 409-427. DOI: 10.1111/j.1465-3435.2004.00194.x

Matsumoto, D., LeRoux, J.A., Wilson-Cohn, C., Raroue, J., & Kooken, K. (2000). A new test to measure emotion recognition ability: Matsumoto and Ekman's Japanese and Caucasian Brief Affect Recognition Test (JACBART). *Journal of Nonverbal Behavior, 24*, 179–209. Cited in Mayer, J.D., Roberts R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59*, 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Matthews, G., Emo, A.K., Funke, G., Zeidner, M., Roberts, R.D., Costa Jr, P.T., & Schulze, R. (2006). Emotional intelligence, personality and task-induced stress. *Journal of Experimental Psychology: Applied*, *12*(2), 96–107. DOI: 10.1037/1076-898x.12.2.96

Maul, A. (2011). The factor structure and cross-test convergence of the Mayer-Salovey-Caruso model of emotional intelligence. *Personality and Individual Differences, 50*, 457-463. DOI: 10.1016/j.paid.2010.11.007

Mayer, J.D. (2000). Emotion, Intelligence and Emotional Intelligence. In J.P. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp 410 – 431). Mahwah, NJ: Lawrence Erlbaum & Associates.

Mayer, J.D. (2006). A New Field Guide to Emotional Intelligence. In J. Ciarrochi, J.P. Forgas & J.D. Mayer (Eds.), *Emotional Intelligence in Everyday Life* (pp 3–26) 2nd ed. New York: Psychology Press.

Mayer, J.D., & Caruso, D. (2002). The effective leader: Understanding and applying emotional intelligence. *Ivey Business Journal*, Nov/Dec 2002.

Mayer, J.D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267–298. DOI: 10.1016/S0160-2896(99)00016-1

Mayer, J.D., & Cobb, C.D. (2000). Educational Policy on Emotional Intelligence: Does It Make Sense? *Educational Psychology Review*, *12*(2), 163–183. DOI: 10.1023/A:1009093231445

Mayer, J.D., DiPaolo, M., & Salovey, P. (1990). Perceiving Affective Content in Ambiguous Visual Stimuli: A Component of Emotional Intelligence. *Journal of Personality Assessment, 54*(3 & 4), 772–781. DOI: 10.1207/s15327752jpa5403&4_29

Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008a). Human Abilities: Emotional Intelligence. *Annual Review of Psychology*, 59, 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Mayer, J.D. & Salovey, P. (1993). The Intelligence of Emotional Intelligence. *Intelligence, 17*, 433–442. DOI: 10.1016/0160-2896(93)90010-3

Mayer, J.D., & Salovey, P. (1997). What Is Emotional Intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional Development and Emotional Intelligence: Implications for educators* (pp 3 – 31). New York: Basic Books.

Mayer, J.D., Salovey, P., & Caruso, D. (2000). Models of Emotional Intelligence. In R. Sternberg. *Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.

Mayer, J.D., Salovey, P., & Caruso, D.R. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test – MSCEIT. User's Manual.* Toronto: Multi-Health Systems Inc.

Mayer, J.D., Salovey, P., & Caruso, D.R. (2004). Emotional Intelligence: Theory, Findings and Implications. *Psychological Inquiry*, *15*, 197–215. DOI: 10.1207/s15327965pli1503_02

Mayer, J.D., Salovey, P., & Caruso, D.R. (2008b). Emotional Intelligence. New Ability or Eclectic Traits? *American Psychologist, 63*(6), 503–517. DOI: 10.1037/0003-066X.63.6.503

Mayer, J.D., Salovey, P., Caruso, D.R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion, 1*, 232–242. DOI: 10.1037//1528-3542.1.3.232

Mayer, J.D., Salovey, P., Caruso, D.R., & Sitarenios, G. (2003). Measuring Emotional Intelligence with the MSCEIT V2.0. *Emotion, 3*(1), 97–105. DOI: 10.1037/1528-3542.3.1.97

McQuaid, R.W., & Lindsay, C. (2005). The Concept of Employability. *Urban Studies, 42*(2), 197-219. DOI: 10.1080/0042098042000316100

Mestre, J.M., Guil, R., Lopes, P.N., Salovey, P., & Gil-Olarte, P. (2006). Emotional intelligence and social and academic adaptation to school. *Psicothema, 18*, 112–117.

Mikolajczak, M., Petrides K.V., Coumans, N., & Luminet, O. (2009). The moderating effect of trait emotional intelligence on mood deterioration following laboratory-induced stress. *International Journal of Clinical and Health Psychology, 9*(3), 455 – 477.

Mikolajczak, M., Nelis, D., Hansenne, M., & Quoidbach, J. (2008). If you can regulate sadness you can probably regulate shame: associations between trait emotional intelligence, emotion regulation and coping efficiency across discrete emotions. *Personality and Individual Differences, 44*, 1356–1368. DOI: 10.1016/j.paid.2007.12.004

Moon, J. (2004). *Reflection and employability*. Learning and Employability Series 4. York: Learning and Teaching Support Network.

Moreland, N. (2006). *Entrepreneurship and higher education: an employability perspective*. Learning & Employability, Series 1. York: The Higher Education Academy.

Morley, L. (2001). Producing New Workers: quality, equality and employability in higher education. *Quality in Higher Education, 7*(2), 131-138. DOI: 10.1080/13538320120060024

Mueller, J., & Curhan, J. (2006). Emotional intelligence and counterpart mood induction in a negotiation. *International Journal of Conflict Management, 17*, 110–128. DOI: 10.1108/10444060610736602

Mulaik, S. A., James, L. R., Alstine, J. V., Bennet, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin, 105,* 430-445

Murphy, R. (2001). *A Briefing on Key Skills in Higher Education*. LTSN Generic Centre, Assessment Series No 5. York: Learning and Teaching Support Network.

Myers, L.L., & Tucker, M.L. (2005). Increasing awareness of Emotional Intelligence in a business curriculum. *Business Communication Quarterly*, *68*(1), 44–51. DOI: 10.1177/1080569904273753

Nabi, G., & Holden, R. (2008). Graduate entrepreneurship: intentions, education and training. *Education & Training*, *50*(7), 545–551. DOI: 10.1108/00400910810909018

Nauta, A., van Vianen, A., van der Heijden, B., van Dam, K., & Willemsen, M. (2009). Understanding the factors that promote employability orientation: The impact of employability culture, career satisfaction, and role breadth self-efficacy. *Journal of Occupational and Organisational Psychology, 82*, 233-251. DOI: 10.1348/096317908X320147

NCIHE (1997). *Higher education in the learning society* [Report of the National Committee of Inquiry into Higher Education: 'The Dearing Report']. Norwich: HMSO.

Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences, 47*, 36–41. DOI: 10.1016/j.paid2009.01.046

Nelis, D., Kotsou, I., Quoidbach, J., Hansenne, M., Weyens, F., Dupuis, P., & Mikolajczak, M. (2011). Increasing Emotional Competence Improves Psychological and Physical Well-Being, Social Relationships, and Employability. *Emotion, 11*(2), 354-366. DOI: 10.1037/a0021554

Niedenthal, P.M., Krauth-Gruber, S., & Ric, F. (2006). *Psychology of Emotion*. Hove: Psychology Press.

Norman, M. & Hyland, T. (2003). The role of confidence in lifelong learning, *Educational Studies (03055698), 29* (2/3), 261-272. DOI: 10.1080/03055690303275

Nowicki, S.J., & Duke, M.P. (1994). Individual differences in the nonverbal communication of affect: The Diagnostic Analysis of Nonverbal Accuracy Scale. *Journal of Nonverbal Behavior, 19,* 9–35. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59,* 507 – 536. DOI:10.1146/annurev.psych.59.103006.093646

Nowicki, S. Jr. (2000). *Manual for the receptive tests of the Diagnostic Analysis of Nonverbal Accuracy 2.* Unpublished report. Emory University Department of Psychology, Atlanta, GA. Cited in Byron, K. (2007). Male and female managers' ability to read emotions: Relationships with supervisors' performance ratings and subordinates' satisfaction ratings. *Journal of Occupational and Organizational Psychology, 80,* 713-733. DOI: 10.1348/096317907X174349

O'Boyle, Jr., E.H., Humphrey, R.H., Pollack, J.M., Hawver, T.H., & Story, P.A. (2010). The relation between emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior, 32*(5), 788-818. DOI: 10.1002/job.714

Oatley, K. (2004). Emotional Intelligence and the Intelligence of Emotions. *Psychological Inquiry, 15*(3), 216–238.

Organ, D.W. & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour. *Personnel Psychology, 48,* 775–802. DOI: 10.1111/j.1744-6570.1995.tb01781.x

Owens, T.J. (1993). Accentuate the positive – and the negative: rethinking the use of self-esteem, self-deprecation and self-confidence. *Social Psychology Quarterly, 56*(4), 288-299. DOI: 10.2307/2786665

Palmer, B.R., Gignac, G., Manocha, R., & Stough, C. (2005). A psychometric evaluation of the Mayer-Salovey-Caruso Emotional Intelligence Test Version 2.0. *Intelligence, 33,* 285 – 305. DOI: 10.1016/j.intell.2004.11.003

Parkinson, B. (2001). Anger on and off the road. *British Journal of Psychology, 92*, 507-526. DOI: 10.1348/000712601162310

Paulhus, D.L., Lysy, D., & Yik, M. (1998). Self-report measures of intelligence: Are they useful as proxy measures of IQ? *Journal of Personality, 64*, 525-555. DOI: 10.1111/1467-6494.00023

Payne, W.L. (1986). A study of emotion: developing emotional intelligence, self-integration; relating to fear, pain and desire. *Disset. Abstra. Int. A: Human. Social Sci*, 47: 203A. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59,* 507 – 536. DOI:10.1146/annurev.psych.59.103006.093646

Pedagogy for Employability Group (2006). *Pedagogy for employability*. Learning and Employability Series 1. York: The Higher Education Academy.

Pennebaker, J.W. (1997). *Opening Up: The Healing Power of Expressing Emotion*. New York: Guilford Press.

Pervin, L.A. & John, O.P. (1997). *Personality: Theory and Research*. New York: John Wiley.

Petrides, K.V. (2009). Technical manual for the Trait Emotional Intelligence Questionnaire (TEIQue: 1st ed. 1st printing). London: London Psychometric Laboratory. Cited in Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences, 47*, 36–41. DOI: 10.1016/j.paid2009.01.046

Petrides, K.V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences, 29,* 313–320. DOI: 10.1016/s0191-8869(99)00195-6

Petrides, K.V., & Furnham, A. (2001). Trait Emotional Intelligence: Psychometric Investigation with Reference to Established Trait Taxonomies. *European Journal of Personality, 15*, 425–448. DOI: 10.1002/per.416

Petrides, K.V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality, 17,* 39–57. DOI: 10.1002/per.466

Petrides, K.V., & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology, 36*, 552 – 569. DOI: 10.111/j.0021-9029.2006.00019.x

Petrides, K.V., Furnham, A., & Mavroveli, S. (2007). Trait emotional intelligence: Moving forward in the field of EI. In G. Matthews, M. Zeidner, & R. Roberts, (Eds.), *Emotional intelligence: Knowns and unknowns* (Series in Affective Science). Oxford: Oxford University Press

Petrides, K.V., Pérez-González, J.C., & Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion, 21*(1), 26-55. DOI: 10.1080/02699930601038912

Petrides, K.V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology, 98,* 273-289. DOI: 10.1348/000712606x120618

Pilling, B., & Eroglu, S. (1994). An empirical examination of the impact of salesperson empathy and professionalism and merchandize salability on retail buyer's evaluations. *Journal of Personal Selling & Sales Management, 14*(1), 45 – 58.

Pinquart, M., Juang, L.P., & Silbereisen, R.K. (2003). Self-efficacy and successful school-to-work transition: A longitudinal study. *Journal of Vocational Behavior, 63,* 329-346. DOI: 10.1016/S0001-8791(02)00031-3

Planalp, S., & Fitness, J. (1999). Thinking/Feeling about Social and Personal Relationships. *Journal of Social and Personal Relationships, 16*(6), 731 – 750. DOI: 10.1177/0265407599166004

Purcell, K. & Elias, P. (2004). *Seven Years On: Graduate Careers in a Changing Labour Market*. Short Report. The Higher Education Careers Services Unit. Available at: http://www.prospects.ac.uk/downloads/csdesk/members/reports/seven_years_on.pdf [accessed 20.11.09]

Purcell, K., Pitcher, J., & Simm, C. (1999). *Working Out? Graduates' Early Experience of the Labour Market*. Manchester: Careers Service Unit. Cited in Harvey, L. (2005). Embedding and Integrating Employability. *New Directions for Institutional Research, 128,* 13-28.

Qualter, P., Barlow, A., & Stylianou, M.S. (in press). Investigating the relationships between Ability and Trait Emotional Intelligence and Theory of Mind. *British Journal of Developmental Psychology.* DOI: 10.1348/026151010X502999

Qualter, P., Gardner, K.J., Hutchinson, J. Pope, D, & Whiteley, H.E. (in press). Emotional Intelligence, Emotional Self-Efficacy and Academic Success in British Secondary Schools. *Learning and Individual Differences*.

Qualter, P., Gardner, K.J., Pope, D., & Hutchinson, J.M. (2008). Emotional intelligence and school success. Paper presented at the BPS Education Section Conference, Milton Keynes, 2008.

Qualter, P., Gardner, K.J., & Whiteley, H.E. (2007). Emotional Intelligence: Review of Research and Educational Implications. *Pastoral Care*, March, 11-20. DOI: 10.1111/j.1468-0122.2007.00395.x

Qualter, P., Henzi, P., & Barrett, L. (2009). Social engagement, emotional intelligence and loneliness among school-children: Full Research Report. ESRC End of Award Report, RES-000-22-1802. Swindon: ESRC.

Rae, D. (2007). Connecting enterprise and graduate employability. Challenges to the higher education culture and curriculum? *Education + Training*, 49 (8/9), 605-619. DOI: 10.1108/00400910710834049

Raven, J., Raven, J.C., & Court, J.H. (1994). *Manual for Raven's Progressive Matrices and Vocabulary Tests.* Oxford, England: Oxford Psychologists Press.

Reicherts, M. (1999). Dimensions de l'ouverture emotionnelle (DOE). Concept theorique, instrument et validation. In *8th Congress of the Swiss Society of Psychology;* Fribourg. Cited in Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences, 47*, 36–41. DOI: 10.1016/j.paid2009.01.046

Reilly, J., & Mulhern, G. (1995). Gender differences in self-estimated IQ: The need for care in interpreting group data. *Personality and Individual Differences, 18*, 189-192. DOI: 10.1016/0191-8869(94)00148-L

Roberts, R.D., Schulze, R., & MacCann, C. (2007). The measurement of emotional intelligence: a decade of progress? In G. Boyle, G. Matthews, & D. Saklofske (Eds.), *Sage Personality Handbook Series*. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology, 59,* 507–536. DOI:10.1146/annurev.psych.59.103006.093646

Roberts, R.D., Schulze, R., O'Brien, K., MacCann, C., Reid, J., & Maul, A. (2006). Exploring the validity of the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) with established emotions measures. *Emotion*, 6, 663 – 669. DOI: 10.1037/1528-3542.6.4.663

Roberts, R.D., Zeidner, M., & Matthews, G. (2001). Does emotional intelligence meet traditional standards for an intelligence? Some new data and conclusions. *Emotion, 1*, 196–231. DOI: 10.1037//1528-3542.1.3.196

Rode, J.C., Mooney, C.H., Arthaud-Day, M.L., Near, J.P., Baldwin, T.T., Rubin, R.S., & Bommer, W.H. (2007). Emotional intelligence and individual performance: evidence of direct and moderated effects. *Journal of Organizational Behavior, 28*, 399–421. DOI: 10.1002/job.429

Rosete, D. & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance of leadership effectiveness. *Leadership Organizational Development Journal, 26*, 388–399. DOI: 10.1108/01437730510607871

Rossen, E., Kranzler, J.H., & Algina, J. (2008). Confirmatory factor analysis of the Mayer-Salovey-Caruso Emotional Intelligence Test V 2.0 (MSCEIT). *Personality and Individual Differences, 44*, 1258–1269. DOI: 10.1016/j.paid.2007.11.020

Rothwell, A., & Arnold, J. (2007). Self-perceived employability: development and validation of a scale. *Personnel Review, 46*(1), 23–41. DOI: 10.1108/00483480710716704

Rothwell, A., Herbert, I., & Rothwell, F. (2008). Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behavior, 73*, 1–12. DOI: 10.1016/j.jvb.2007.12.001

Rothwell, A., Jewell, S., & Hardie, M. (2009). Self-perceived employability: Investigating the responses of post-graduate students. *Journal of Vocational Behavior, 75*, 152 – 161. DOI: 10.1016/j.jvb.2009.05.002

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 1-28. Cited in P. Knight, & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Russell, T.A., Chu, E., & Phillips, M.L. (2006). A pilot study to investigate the effectiveness of emotion recognition remediation in schizophrenia using the micro-expression training tool. *British Journal of Clinical Psychology, 45*, 579–583. DOI: 10.1348/014466505X90866

Saarni, C (1999). *The Development of Emotional Competence*. New York: Guilford Press.

Saks, A., & Ashforth, B. (1999). Effects of individual differences and job search behaviours on the employment status of recent university graduates. *Journal of Vocational Behavior, 54*(2), 335-349. DOI: 10.1006/jvb.1998.1665

Sala, F. (2002). *Emotional competence inventory: Technical manual*. Philadelphia PA: McClelland Center for Research, HayGroup.

Salguero, J.M., Palomera, R., & Fernández-Berrocal, P. (2011). Perceived emotional intelligence as a predictor of psychological adjustment in adolescents: a 1-year prospective study. *European Journal of Psychology of Education, 26*(2). DOI: 10.1007/s/0212-011-0063-8

Salovey P., & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*, 185–211.

Salovey, P., & Grewal, D. (2005). The Science of Emotional Intelligence. *Current Directions in Psychological Science, 14*(6), 281–285. DOI: 10.1111/j.0963-7214.2005.00381.x

Sánchez-Ruiz, M.J., Pérez-González, J.C., & Petrides, K.V. (2010). Trait emotional intelligence profiles of students from different university faculties. *Australian Journal of Psychology, 62*(1), 51-57. DOI: 10.1080/00049530903312907

Schön, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books. Cited in Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Schulte, M.J., Ree, M.J., & Carretta, T.R. (2004). Emotional intelligence: not much more than *g* and personality. *Personality and Individual Differences, 37*, 1059–1068. DOI: 10.1016/j.paid.2003.11.014

Schunk, D.H., & Hanson, A.R. (1985). Peer models: Influence of children's self-efficacy and achievement behaviours. *Journal of Educational Psychology, 77*(3), 313-322. DOI: 10.1037//0022-0663.77.3.313

Schutte, N.S., Malouff, J.M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*, 167 – 177. DOI: 10.1016/SO191-8869(98)00001-4

Seligman, M. (1998). *Learned Optimism*. New York: Free Press. Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Sewell, P., & Dacre Pool, L. (2010). Moving from conceptual ambiguity to operational clarity. Employability, enterprise and entrepreneurship in higher education. *Education + Training, 52*(1), 89-94. DOI: 10.1108/00400911011017708

Seo, M.G., & Feldman Barrett, L (2007). Being Emotional During Decision Making – Good or Bad? An Empirical Investigation. *Academy of Management Journal, 50*(4), 923-940.

Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress and Health*, *19*, 23 – 239. DOI: 10.1002/smi.979

Smith, J., McKnight, A., & Naylor, R. (2000). Graduate employability: policy and performance in higher education in the UK. The Economic Journal, 110, F382-F411. Cited in Lees, D. (2002). *Graduate Employability – Literature Review*. LTSN Generic Centre. Available at: http://www.palatine.ac.uk/files/emp/1233.pdf [accessed 20.5.11]

Spector, P. (2006). Method Variance in Organizational Research. Truth or Urban Legend? *Organizational Research Methods*, 9(2), 221–232. DOI: 10.1177/1094428105284955

Stajkovic, A.D., & Luthans, F. (1998a). Self efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, *124*(2), 240–261. DOI: 10.1037//0033-2909.124.2.240

Stajkovic, A.D., & Luthans, F. (1998b). Social cognitive theory and self-efficacy. *Organizational Dynamics, 26*(4), 62–74. DOI: 10.1016/S0090-2616(98)90006-7

Stephenson, J. (1998). The concept of capability and its importance in higher education. In J. Stephenson & M. Yorke (Eds.), *Capability and Quality in Higher Education* (pp. 1–13). London: Kogan Page. Cited in Yorke, M. & Knight, P. T. (2006). Curricula for economic and social gain. *Higher Education, 51,* 565-588. DOI: 10.1007/s10734-004-1704-5

Sternberg, R.J. (1997). *Successful Intelligence*. New York: Plume. Cited in P. Knight, & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Sternberg R.J. & Grigorenko, E.L. (2000). *Practical intelligence and its development*. In Bar-On, R. & Parker, J. (Eds.), *The Handbook of Emotional Intelligence,* (pp 215-243). San Francisco: Jossey Bass. Cited in P. Knight & M. Yorke (2004). *Learning, Curriculum and Employability in Higher Education*. London: RoutledgeFalmer.

Sutherland, J (2008). Higher education, the graduate and the labour market: from Robbins to Dearing. *Education + Training*, *50*(1), 47-51. DOI: 10.1108/00400910810855496

Tabachnick, B.G., & Fidell, L.S. (2007). *Using Multivariate Statistics (5th Edition).* Needham Heights, MA: Allyn & Bacon.

Tett, R.P., Fox, K.E., & Wang, A. (2005). Development and validation of a self-report measure of emotional intelligence as a multidimensional trait domain. *Personality and Social Psychology Bulletin, 31,* 859–888. DOI: 10.1177/0146167204272860

Tett, R.P., Wang, A., & Fox, K.E. (2006). *MEIA: Multidimensional Emotional Intelligence Assessment Manual.* Port Huron, MI: Sigma Assessment Systems. Cited in Mayer, J.D., Roberts, R.D., & Barsade, S.G. (2008). Human Abilities: Emotional Intelligence. *Annual Review of Psychology*, *59*, 507 – 536. DOI:10.1146/annurev.psych.59.103006.093646

Tomlinson, M. (2007). Graduate employability and student attitudes and orientations to the labour market. *Journal of Education and Work*, *20*(4), 285-304. DOI: 10.1080/13639080701650164

Trinidad, D.R., & Johnson, C.A. (2002). The association between emotional intelligence and early adolescent tobacco and alcohol use. *Personality & Individual Differences, 32*(1), 95–105. DOI: 10.1016/S0191-8869(01)0008-3

Tucker, M.L., Sojka, J. Z., Barone, F.J., & McCarthy, A.M. (2000). Training Tomorrow's Leaders: Enhancing the Emotional Intelligence of Business Graduates. *Journal of Education for Business*, July/August, 331 – 337. DOI: 10.1080/08832320009599036

UK Commission for Employment and Skills (2009). *The Employability Challenge*. London: UKCES.

Van der Heijde, C.M., & Van der Heijden, B.I.J.M. (2006). A Competence-Based Multidimensional Operalization and Measurement of Employability. *Human Resource Management, 45*(3), 449–476. DOI: 10.1002/hrm.20119

Van Rooy, D.L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, *65*, 71–95. DOI: 10.1016/S0001-8791(03)00076-9

Van Rooy, D.L., Viswesvaran, C., & Pluta, P. (2005). An evaluation of construct validity: What is this thing called Emotional Intelligence? *Human Performance, 18,* 445–462. DOI.:10.1207/s15327043hup1804_9

Vandervoort, D.J. (2006). The Importance of Emotional Intelligence in Higher Education. *Current Psychology: Developmental, Learning, Personality, Social, 25*(1), 4–7. DOI: 10.1007/s12144-006-1011-7

Velicer, W.F., Eaton, C.A., & Fava, J.L. (2000). Construct explication through factor or component analysis: A review and evaluation of alternative procedures for determining the number of factors or components. In R.D. Goffin & E. Helmes (Eds.), *Problems and solutions in human assessment: Honoring Douglas N Jackson at seventy*. Norwell, MA: Kluwer Academic.

Visser, B A., Bay, D., Cook G. L., & Myburgh, J. (2010). Psychopathic and antisocial, but not emotionally intelligent. *Personality & Individual Differences, 48*, 644–648. DOI: 10.1016/j.paid.2010.01.003

Vitello-Cicciu, J.M. (2001). Leadership Practices and Emotional Intelligence of Nursing Leaders (unpublished dissertation), Santa Barbara, CA., Fielding Graduate Institute. Cited in Vitello-Cicciu, J.M. (2003). Emotional Intelligence. *Nursing Management*, October, 2003. DOI: 10.1097/00006247-200310000-00010

Warn, J., & Tranter, P. (2001). Measuring Quality in Higher Education: a competency approach. *Quality in Higher Education, 7*(3), 191-198. DOI: 10.1080/13538320120098078

Washer, P. (2007). Revisiting Key Skills: A Practical Framework for Higher Education. *Quality in Higher Education, 13*(1), 57-67. DOI: 10.1080/13538320701272755

Waterhouse, L. (2006). Multiple Intelligences, the Mozart Effect and Emotional Intelligence: A Critical Review. *Educational Psychologist, 41*(4), 207–225. DOI: 10.1207/51532698Sep4104_1

Watts, A.G. (2006). *Career development learning and employability*. Learning and employability, Series Two, York: The Higher Education Academy.

Watts, A.G. (2007). Personal communication, July 8th, 2007.

Watts, A.G. & Hawthorn, R. (1992). *Careers Education and the Curriculum in Higher Education*. NICEC Project Report. Cambridge: Careers Research and Advisory Centre.

Wechsler, D. (1950). Cognitive, conative, and non-intellective intelligence. *American Psychologist, 5*, 78–83. Cited in Kaufman, A.S. & Kaufman, J.C. (2001). Emotional Intelligence as an Aspect of General Intelligence: What Would David Wechsler Say? *Emotion, 1*(3), 258-264. DOI: 10.1037//1528-3542.1.3.258

Wechsler, D. (1997). *WAIS III: Wechsler Adult Intelligence Scale* (3rd ed). San Antonia, TX: The Psychological Corporation. Cited in Mayer, J.D., Salovey, P., & Caruso, D.R. (2008b). Emotional Intelligence. New Ability or Eclectic Traits? *American Psychologist, 63*(6), 503–517. DOI: 10.1037/0003-066X.63.6.503

Wells, A. (1994). A multi-dimensional measure of worry: development and preliminary validation of the anxious thoughts inventory. *Anxiety, Stress and Coping, 6,* 289–299. Cited in Bastian, V.A., Burns, N.R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality & Individual Differences, 39,* 1135–1145. DOI: 10.1016/j.paid.2005.04.006

Wigfield, A., & Eccles, J. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review, 12,* 265-310. DOI: 10.1016/0273-2297(92)90011-P

Wing, J.F., Schutte, N.S., & Byrne, B. (2006). The Effect of Positive Writing on Emotional Intelligence and Life Satisfaction. *Journal of Clinical Psychology, 62*(10), 1291-1302. DOI: 10.1002/jclp.20292

Winkel, D.E., Wyland, R.L., Shaffer, M.A., & Clason, P. (2011). A new perspective on psychological resources: Unanticipated consequences of impulsivity and emotional intelligence. *Journal of Occupational and Organizational Psychology, 84,* 78–94. DOI: 10.1348/2044-8325.002001

Wittekind, A., Raeder, S., & Grote, G. (2010). A longitudinal study of determinants of perceived employability. *Journal of Organizational Behavior, 31,* 566-586. DOI: 10.1002/job.646

Wong, C. & Law, D.S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly, 13,* 243–274. DOI: 10.1016/S1048-9843(02)00099-1

Work Experience Group (2002). *Work Related Learning Report*. Nottingham: DFES Publications.

Yorke, M. (2004). Employability in the Undergraduate Curriculum: some student perspectives. *European Journal of Education, 39*(4), 409-427. DOI: 10.1111/j.1465-3435.2004.00194.x

Yorke, M. (2006). *Employability in higher education: what it is – what it is not*. April 2006. York: The Higher Education Academy.

Yorke, M. & Knight, P. (2002). *Skills plus: Employability through the curriculum*. June 2002. York: The Higher Education Academy.

Yorke, M. & Knight, P.T. (2006). Curricula for economic and social gain. *Higher Education, 51,* 565-588. DOI: 10.1007/s10734-004-1704-5

Yorke, M. & Knight, P. (2007). Evidence-informed pedagogy and the enhancement of student employability. *Teaching in Higher Education*, *12*(2), 157-170. DOI: 10.1080/13562510701191877

Zajonc, R.B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist, 35,* 151–175. Cited in J.D. Mayer (2000). Emotion, Intelligence and Emotional Intelligence. In J.P. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp 410 – 431). Mahwah, NJ: Lawrence Erlbaum & Associates.

Zeidner, M., Matthews, G., & Roberts, R.D. (2004). Emotional Intelligence in the Workplace: A Critical Review. *Applied Psychology: An International Review, 53*(3), 371–399. DOI: 10.1111/j.1464-0597.2004.00176.x

Zeidner, M., Matthews, G., Roberts, R.D. & MacCann, C. (2003). Development of Emotional Intelligence: Towards a Multi-Level Investment Model. *Human Development, 46,* 69–96. DOI: 10.1159/000068580

Zeidner, M., & Olnick-Shemesh, D. (2010). Emotional intelligence and subjective well-being revisited. *Personality & Individual Differences, 48,* 431-435. DOI: 10.1016/j.paid.2009.11.011

Zeidner, M., Roberts, R.D., & Matthews, G. (2002). Can Emotional Intelligence Be Schooled? A Critical Review. *Educational Psychologist, 37*(4), 215–231. DOI: 10.1207/S15326985EP3704_2

Zeidner, M., Roberts, R.D., & Matthews, G. (2004). The emotional intelligence bandwagon: Too fast to live, too young to die? *Psychological Inquiry, 15,* 230-248. DOI: 10.1207/s15327965pli1503_04

Zeidner, M., Roberts, R.D., & Matthews, G. (2008). The Science of Emotional Intelligence. Current Consensus and Controversies. *European Psychologist, 13*(1), 64–78. DOI: 10.1027/1016-9040.13.1.64

Zeidner, M., Shani-Zinovich, I., Matthews, G., & Roberts, R.D. (2005). Assessing emotional intelligence in gifted and nongifted high school students: outcomes depend on the measure. *Intelligence, 33,* 369 – 391. DOI: 10.1016/j.intell.2005.03.001

Zimmerman, B. J. (2000). Self-Efficacy: An Essential Motive to Learn. *Contemporary Educational Psychology, 25,* 82 – 91. DOI: 10.1006/ceps.1999.1016

# APPENDICES

## Appendix A

### EMPLOYABILITY – CONCEPTUAL CLARIFICATION

**Introduction**

At this stage it is pertinent to discuss some other concepts sometimes confused with employability – the terms 'enterprise' and 'entrepreneurship'. It has become increasingly evident that the word 'employability' is often used carelessly and interchangeably with 'enterprise', which in turn is confused with 'entrepreneurship'. Watts and Hawthorn (1992) acknowledged the confusion between enterprise and entrepreneurship some years ago when they proposed that it was possible to distinguish between: (1) 'business entrepreneurship' – encouraging students to set up their own businesses; (2) 'working in enterprises' – using enterprise as a noun meaning business; and (3) 'being enterprising' – being innovative, recognising/creating opportunities and taking risks/responding to challenges.

The authors suggested that at the time, a certain ambiguity surrounding the terminology may have been quite useful, as it gave HEIs the freedom to implement the Enterprise in Higher Education policy, in ways that matched their needs. Indeed, this ambiguity was expected to encourage debate in HEIs about the meanings of these terms. The term 'enterprise' was used for a number of years within HE to describe many activities that we now subsume under the term 'employability'. However, since the term

'employability' has become used more widely in the HE sector, the scope for confusion has become greater and the need for clarity more pressing.

**Enterprise**

Enterprise is a widely-used term that appears to have a number of different meanings. For some, it is all about starting new businesses; for others it is about a certain set of skills. For example, 'enterprise skills' are defined by Rae (2007) as, *'the skills, knowledge and attributes needed to apply creative ideas and innovations to practical solutions'* (p. 611), which would include skills such as '*initiative, independence, creativity, problem solving, identifying and working on opportunities, leadership, acting resourcefully and responding to challenges*' (p. 611). Enterprise is also used as a noun, which means a business, usually a new business. There is further the adjectival use of the word within 'enterprise parks' which usually means a collection of businesses. The CareerEDGE model acknowledges that 'enterprise skills' as defined by Rae (2007) are an important element of graduate employability. It is suggested that these skills sit comfortably within the 'Generic Skills' element of the model, as they would be valuable attributes for any student to develop, whether they plan to work within an organisation or become self-employed.

**Entrepreneurship**

It is very important to recognise the distinction between 'enterprise skills' and entrepreneurship. Entrepreneurs want to engage in establishing new businesses. In order to do this, they need a particular and distinctive set of personal qualities and skills. Not

all students and graduates would need to or even want to develop these to the same extent. Being entrepreneurial seems to involve many of the enterprise skills, but also something extra – the ability to generate creative ideas, take risks in implementing them and be motivated to get them off the ground. For some students this would be their passion, and it is quite right that they should be given support and advice to encourage such ventures. However, entrepreneurship is not for everybody. In fact, some employers would not want employees with entrepreneurial flair – they don't want graduates taking risks with their businesses and ultimately their profits. The term *intrapreneur* has been applied to describe such individuals, who are recruited into or develop within existing businesses to perform the entrepreneurial role. Intrapreneurship has been defined by Antoncic and Hisrich (2003) as '*entrepreneurship in existing organisations*' (p. 7). But once again this is a somewhat specialised role, which includes the risk-taking element and according to a number of theorists (see Antoncic & Hisrich, 2003, p. 19) competitive aggressiveness towards rivals, which would be appropriate for some but not all graduates.

**Employability, Enterprise and Entrepreneurship – Definitions**

There is a need for clarity about how these different concepts – employability, enterprise and entrepreneurship – may overlap but are quite distinct in meaning. The reason why this is a critical issue is that different people use the words for different purposes, which results in the words themselves losing meaning. For example, when people talk about 'enterprise', it is not clear what they mean by the term. Are they talking about creating new businesses or developing sets of skills, or getting a job in a business? They could be talking about any or all of these things - the point being, it is

unclear. Most importantly, if enterprise is used synonymously with employability, key aspects of employability development as defined by the CareerEDGE model (Dacre Pool & Sewell, 2007), such as 'Career Development Learning' or 'Work-related Experience', may be overlooked. The following definitions may be helpful to ensure that these terms are used consistently and with clarity.

*Employability* – as defined by the CareerEDGE model (see Chapter 3, Figure 6) and something that would be essential to all graduates. Generic employability skills (including enterprise skills) would include: imagination/creativity, adaptability/flexibility, willingness to learn, independent working/autonomy, working in a team, ability to manage others, ability to work under pressure, good oral communication, communication in writing for varied purposes/audiences, numeracy, attention to detail, time management, assumption of responsibility and for making decisions, planning, coordinating and organising ability (Pedagogy for Employability Group, 2006, p. 4).

Also included would be the following two skills which employers have consistently named as important in graduate recruits: ability to use new technologies and commercial awareness. The 'enterprise skills' suggested by Rae (2007) would also be included here: initiative, problem solving, identifying and working on opportunities, leadership, acting resourcefully and responding to challenges. Enterprise skills are included within the Generic Skills element of the CareerEDGE model of Employability.

Nabi and Holden (2008) suggested another useful way of viewing the enterprise/entrepreneurship definitions debate. They see graduate enterprise/entrepreneurship as a dimension ranging from broad and generic (relevant to

most students) to specialised and specific training (required for business start-up). It could be suggested that the enterprise end of this dimension sits comfortably within the employability domain. However, when people venture to the other extreme of the continuum, into entrepreneurship territory, they may be talking about traits and attributes that may not be helpful and could even be detrimental to a graduate's employability.

*Enterprise* – a business.

*Entrepreneurship* – the desire, motivation and skills necessary to start and manage a successful business. Becoming an entrepreneur is not just about having the right set of skills, but requires particular personal characteristics, including risk-taking propensity (Moreland, 2006), which cannot be taught but can be encouraged and supported. It is this 'risk taking' element that goes beyond what might be desirable graduate attributes for all, to something one might only expect in a small number of graduates, who could be described as having entrepreneurial flair. This characteristic may be useful for graduates intent on setting up their own businesses, but may not be so for those intending to work in other people's businesses. As Watts and Hawthorn (1992) pointed out some years ago, "*some employers are suspicious of students who show too much 'enterprise' and are more concerned with recruiting people who will 'fit in' and conform to the organisation's culture and mores*." (p. 14). It could be suggested that for most employers, a graduate showing 'enterprise skills' as defined by Rae (2007) would be welcomed and valued, but a graduate intent on 'being entrepreneurial' within somebody else's business may well not be.

## Appendix B

Employability Framework (McQuaid & Lindsay, 2005, p. 209).

| Individual Factors | Personal Circumstances | External Factors |
|---|---|---|
| | | |
| • **Employability skills and attributes** | • **Household circumstances** | • **Demand factors** |
| *Essential attributes*<br>Basic social skills; honesty and integrity; basic personal presentation; reliability; willingness to work; understanding of actions and consequences; positive attitude to work; responsibility; self discipline | *Direct caring responsibilities*<br>Caring for children, elderly relatives, etc. | *Labour market factors*<br>Level of local and regional or other demand; nature and changes of local and regional demand (required skills levels; occupational structure of vacancies; sectors where demand is concentrated); location, centrality/remoteness of local labour markets in relation to centres of industry/employment; level of competition for jobs; actions of employers' competitors; changing consumer preferences, etc. |
| *Personal competencies*<br>Proactivity; diligence; self-motivation; judgement; initiative; assertiveness; confidence; act autonomously | *Other family and caring responsibilities*<br>Financial commitments to children or other family members outside the individual's household; emotional and/or time commitments to family members or others | *Macroeconomic factors*<br>Macroeconomic stability; medium- to long-term business confidence; level and nature of labour demand within the national economy |
| *Basic transferable skills*<br>Prose and document literacy; writing; numeracy; verbal presentation | *Other household circumstances*<br>The ability to access safe, secure, affordable and appropriate housing | *Vacancy characteristics*<br>Remuneration; conditions of work; working hours and prevalence of shift work; opportunities for progression; extent of part-time, temporary and casual work; availability of 'entry-level' positions |
| *Key transferable skills*<br>Reasoning; problem-solving; adaptability; work-process management; team working; personal task and time management; functional mobility; basic ICT skills; basic interpersonal and communication skills | • **Work culture**<br>The existence of a culture in which work is encouraged and supported within the family, among peers or other personal relationships and the wider community | *Recruitment factors*<br>Employers' formal recruitment and selection procedures; employers' general selection preferences (for example, for recent experience); employers' search channels (methods of searching for staff when recruiting); discrimination (for example, on the basis of age, |

| | | |
|---|---|---|
| | | gender, race, area of residence, disability, unemployment duration); form and extent of employers' use of informal networks; demanding only appropriate qualifications or credentials |
| *High level transferable skills*<br>team working; business thinking; commercial awareness, continuous learning; vision; job-specific skills; enterprise skills | • **Access to resources** | • **Enabling support factors** |
| *Qualifications*<br>Formal academic and vocational qualifications; job-specific qualifications | *Access to transport*<br>Access to own or readily available private transport; ability to walk appropriate distances. | *Employment policy factors*<br>Accessibility of public services and job-matching technology (such as job search/counselling); penetration of public services (for example, use and credibility among employers/job seekers); incentives within tax-benefits system; existence of 'welfare to work'/activation and pressure to accept jobs; accessibility and limitations on training; extent of local/regional development policies; measures to ease the school-work transition and address employability issues at school and university |
| *Work knowledge base*<br>Work experience; general work skills and personal aptitudes; commonly valued transferable skills (such as driving); occupational specific skills | *Access to financial capital*<br>Level of household income; extent and duration of any financial hardship; access to formal and informal sources of financial support; management of income and debt | *Other enabling policy factors*<br>Accessibility and affordability of public transport, child care and other support services. |
| *Labour market attachment*<br>Current unemployment/employment duration; number and length of spells of unemployment/inactivity; 'balance' of work history | *Access to social capital*<br>Access to personal and family support networks; access to formal and informal community support networks; number, range and status of informal social network contacts | |
| • **Demographic characteristics**<br>Age, gender, etc. | | |
| • **Health and well-being** | | |
| *Health*<br>Current physical health; current mental health; medical history; psychological well-being | | |
| *Disability*<br>Nature and extent of: physical disability; mental disability; learning disability | | |

| | | |
|---|---|---|
| • **Job seeking**<br>Effective use of formal search services/information resources (including ICT); awareness and effective use of informal social networks; ability to complete CVs/application forms; interview skills/presentation; access to references; awareness of strengths and weaknesses; awareness and location and type of opportunities in the labour market; realistic approach to job targeting | | |
| • **Adaptability and mobility**<br>Geographical mobility; wage flexibility and reservation wage; occupational flexibility (working hours, occupations, sectors) | | |

**Appendix C**

Aspects of employability, with elaborative comments (Knight & Yorke, 2004 developed from a questionnaire prepared by Dr Ray Wolfenden of the University of Manchester)

**A. Personal qualities**

1. Malleable self-theory: (belief that attributes [for example, intelligence] are not fixed and can be developed)
2. Self-awareness: (awareness of own strengths and weaknesses, aims and values)
3. Self-confidence: (confidence in dealing with the challenges that employment and life throw up)
4. Independence: (ability to work without supervision)
5. Emotional intelligence: (sensitivity to others' emotions and the effects that they can have)
6. Adaptability: (ability to respond positively to changing circumstances and new challenges)
7. Stress tolerance: (ability to retain effectiveness under pressure)
8. Initiative: (ability to take action unprompted)
9. Willingness to learn: (commitment to ongoing learning to meet the needs of employment and life)
10. Reflectiveness: (the disposition to reflect evaluatively on the performance of oneself and others)

**B. Core skills**

11. Reading effectiveness: (the recognition and retention of key points)
12. Numeracy: (ability to use numbers at an appropriate level of accuracy)
13. Information retrieval: (ability to access different sources)
14. Language skills: (possession of more than a single language)
15. Self-management (ability to work in an efficient and structured manner)
16. Critical analysis: (ability to 'deconstruct' a problem or situation)
17. Creativity: (ability to be original or inventive and to apply lateral thinking)
18. Listening: (focused attention in which key points are recognised)
19. Written communication: (clear reports, letters, etc, written specifically for the reader)
20. Oral presentations: (clear and confident presentation of information to a group [also 21, 35])
21. Explaining: (orally and in writing [see also 20, 35])
22. Global awareness: (in terms of both cultures and economies)

**C. Process skills**

23. Computer literacy: (ability to use a range of software)
24. Commercial awareness: (understanding of business issues and priorities)

25. Political sensitivity: (appreciates how organisations actually work and acts accordingly)
26. Ability to work cross-culturally: (both within and beyond the UK)
27. Ethical sensitivity: (appreciates ethical aspects of employment and acts accordingly)
28. Prioritising: (ability to rank tasks according to importance)
29. Planning: (setting of achievable goals and structuring action)
30. Applying subject understanding: (use of disciplinary understanding from the HE programme)
31. Acting morally: (has a moral code and acts accordingly)
32. Coping with ambiguity and complexity: (ability to handle ambiguous and complex situations)
33. Problem-solving: (selection and use of appropriate methods to find solutions)
34. Influencing: (convincing others of the validity of one's point of view)
35. Arguing for and/or justifying a point of view or a course of action: (see also 20, 21)
36. Resolving conflict: (both intra-personally and in relationships with others)
37. Decision making: (choice of the best option from a range of alternatives)
38. Negotiating: (discussion to achieve mutually satisfactory resolution of contentious issues)
39. Teamwork: (can work constructively with others on a common task)

## Appendix D

Measure of perceived employability (Berntson & Marklund, 2007)

1. My competence is sought-after in the labour market.
2. I have a contact network that I can use to get a new (equivalent or better) job.
3. I know of other organisations/companies where I could get work.
4. My personal qualities make it easy for me to get a new (equivalent or better) job in a different company/organisation.
5. My experience is in demand on the labour market.

**Appendix E**

Self-perceived employability scale items (Rothwell & Arnold, 2007)

1. Even if there was downsizing in this organisation I am confident that I would be retained. (I)

2. My personal networks in this organisation help me in my career. (I)

3. I am aware of the opportunities arising in this organisation even if they are different to what I do now. (I)

4. The skills I have gained in my present job are transferable to other occupations outside this organisation. (E)

5. I could easily retrain to make myself more employable elsewhere. (E)

6. I have a good knowledge of opportunities for me outside of this organisation even if they are quite different to what I do now. (E)

7. Among the people who do the same job as me, I am well respected in this organisation. (I)

8. If I needed to, I could easily get another job like mine in a similar organisation. (E)

9. I could easily get a similar job to mine in almost any organisation. (E)

10. Anyone with my level of skills and knowledge, and similar job and organisational experience, will be highly sought after by employers. (E)

11. I could get a job anywhere, so long as my skills and experience were reasonably relevant. (E)

(I) – internal employability items
(E) – external employability items

**Appendix F**

Student Self-perceived employability scale items (Rothwell, Herbert & Rothwell, 2008)

| | |
|---|---|
| 1a | I achieve high grades in relation to my studies. |
| 1b | I regard my academic work as top priority. |
| 2a | Employers are eager to employ graduates from my university. |
| 2b | The status of this university is a significant asset to me in job seeking. |
| 3a | Employers specifically target this university in order to recruit individuals from my subject area(s). |
| 3b | My university has an outstanding reputation in my field(s) of study. |
| 4a | A lot more people apply for my degree than there are places available. |
| 4b | My chosen subject(s) rank (s) highly in terms of social status. |
| 5a | People in the career I am aiming for are in high demand in the external labour market. |
| 5b | My degree is seen as leading to a specific career that is generally perceived as highly desirable. |
| 6a | There is generally a strong demand for graduates at the present time. |
| 6b | There are plenty of job vacancies in the geographical area where I am looking. |
| 7a | I can easily find out about opportunities in my chosen field. |
| 7b | The skills and abilities that I possess are what employers are looking for. |
| 8a | I am generally confident of success in job interviews and selection events. |
| 8b | I feel I could get any job so long as my skills and experience are reasonably relevant. |

**Appendix G**

Employability Experience Questionnaire items (Yorke & Knight, 2007)

| | |
|---|---|
| The teaching on my programme of study has encouraged discussion. | S |
| The teaching on my programme of study has helped me to think critically about my subject. | S |
| This year's work requires me to be more independent than last year's did. | S |
| Experience of the work environment has helped me to focus my academic studies. | S |
| I have a broad understanding on my subject area. | S |
| Workplace experience has enabled me to become more confident in higher education. | S |
| What I have learned in the workplace has helped me in my academic studies. | S |
| I am not sure what subject-specific skills I can claim to have. (R) | |
| I understand how I learn most effectively. | |
| In my academic work I have been able to apply skills that I have developed in work environments. | |
| I feel confident in my academic work. | S |
| Whilst in higher education I have learned some strategies that help me to succeed on novel problems. | |
| I have become skilful in my subject specialism. | S |
| The work experience I have had has made me think about what I need to do in my studies to develop a graduate-level career. | |
| I have not been encouraged to consider how the things I do outside the formal academic programme can provide evidence in support of graduate-level employment. (R) | |
| I am not sure what subject knowledge I will need for my preferred future career. (R) | S |
| I know what general skills employers expect of graduate level employees. | |
| I do not know the extent to which my current capabilities fit the expectations of graduate-level employment. (R) | S |
| I find it hard to assess my strengths and weaknesses as a competitor in the graduate labour market. (R) | |
| I have enhanced the general skills that make people effective in employment. | |
| I can provide an employer (or other interested party) with evidence of my general skills. | S |
| I have built up a portfolio of evidence of my achievements. | S |
| I expect that I will be effective in a graduate-level job. | S |

*R indicates that the scoring of this item was reversed and S indicates that the item could be used in a shortened form of the EEQ.*

**Appendix H**

Emotional Self-Efficacy Scale – original items (Kirk et al., 2008)

| Please rate how **confident** you are that**,** as of now, you can do the following<br><br>***After reading each item please indicate your response by marking the appropriate number*** | **Not at all confident** | **A little confident** | **Moderately confident** | **Quite confident** | **Very confident** |
|---|---|---|---|---|---|
| 1. Correctly identify your own negative emotions | **1** | **2** | **3** | **4** | **5** |
| 2. Help another person change a negative emotion to a positive emotion | **1** | **2** | **3** | **4** | **5** |
| 3. Create a positive emotion when feeling a negative emotion | **1** | **2** | **3** | **4** | **5** |
| 4. Know what causes you to feel a positive emotion | **1** | **2** | **3** | **4** | **5** |
| 5. Correctly identify when another person is feeling a negative emotion | **1** | **2** | **3** | **4** | **5** |
| 6. Use positive emotions to generate novel solutions to old problems | **1** | **2** | **3** | **4** | **5** |
| 7. Realise what causes another person to feel a positive emotion | **1** | **2** | **3** | **4** | **5** |
| 8. Change your negative emotion to a positive emotion | **1** | **2** | **3** | **4** | **5** |
| 9. Correctly identify your own positive emotions | **1** | **2** | **3** | **4** | **5** |
| 10. Generate in yourself the emotion another person is feeling | **1** | **2** | **3** | **4** | **5** |
| 11. Know what causes you to feel a negative emotion | **1** | **2** | **3** | **4** | **5** |
| 12. Regulate your own emotions when under pressure | **1** | **2** | **3** | **4** | **5** |
| 13. Correctly identify when another person is feeling a positive emotion | **1** | **2** | **3** | **4** | **5** |

| | |
|---|---|
| 14. Get into a mood that best suits the occasion | **1 2 3 4 5** |
| 15. Realise what causes another person to feel a negative emotion | **1 2 3 4 5** |
| 16. Help another person to regulate emotions when under pressure | **1 2 3 4 5** |
| 17. Notice the emotion your body language is portraying | **1 2 3 4 5** |
| 18. Use positive emotions to generate good ideas | **1 2 3 4 5** |
| 19. Understand what causes your emotions to change | **1 2 3 4 5** |
| 20. Calm down when feeling angry | **1 2 3 4 5** |
| 21. Notice the emotion another person's body language is portraying | **1 2 3 4 5** |
| 22. Create emotions to enhance cognitive performance | **1 2 3 4 5** |
| 23. Understand what causes another person's emotions to change | **1 2 3 4 5** |
| 24. Help another person calm down when he or she is feeling angry | **1 2 3 4 5** |
| 25. Recognize what emotion you are communicating through your facial expression | **1 2 3 4 5** |
| 26. Create emotions to enhance physical performance | **1 2 3 4 5** |
| 27. Figure out what causes you to feel differing emotions | **1 2 3 4 5** |
| 28. Regulate your own emotions when close to reaching a goal | **1 2 3 4 5** |
| 29. Recognize what emotion another person is communicating through his or her facial expression | **1 2 3 4 5** |
| 30. Generate the right emotion so that creative ideas can unfold | **1 2 3 4 5** |
| 31. Figure out what causes another person's differing emotions | **1 2 3 4 5** |
| 32. Help another person regulate emotions after he or she has suffered a loss | **1 2 3 4 5** |

**Appendix I**

# THE EMOTIONAL INTELLIGENCE TEACHING INTERVENTION FOR UNIVERSITY STUDENTS DESIGNED, DELIVERED AND EVALUATED IN STUDY 3.

## Introduction

This chapter describes a theoretically grounded teaching intervention for undergraduate students. It is designed around the Mayer and Salovey (1997) four-branch ability model of EI, which emerged from many years of research into cognition and affect (see Mayer, 2000 for details).

The intervention was developed for delivery to groups of between six and twenty students who attend classes for two hours over eleven weeks. The classes consist of mini lectures to introduce theory and group discussions, group activities and individual activities aimed at helping the students to learn about EI as an area of academic research and develop their own levels of EI and ESE.

Students elect to take the module as part of their degree studies and, as such, it is formally assessed as an academic course. The assessment strategy consists of an EI journal (50%), a 1500-word essay (30%) and a 1000-word case study report (20%). The EI journal provides the students with an opportunity to fully reflect on the class activities and gain the maximum benefit from their learning experiences. Writing a traditional academic essay encourages the students to engage with the literature in relation to EI and

graduate employability, developing their skills in terms of research and critical analysis. By writing a case study report, the students are able to put what they have learnt about EI from the classes into practice by using their knowledge, understanding and skill to analyse the emotional experiences of somebody else.

**Design of the Module 'Emotional Intelligence'**

Class 1 is designed as an introductory class. The students are given the opportunity to complete the MSCEIT online and a pen and paper version of the ESES. In addition to providing data that enables evaluation of the effectiveness of the module, this activity also provides the students with information about their own levels of ability EI and ESE. A detailed MSCEIT report is generated and feedback given to each student in a one-to-one meeting with the class tutor. During class, issues concerning appropriate disclosure of information and confidentiality are discussed, together with a summary of the module content and assessment strategy. The students are also introduced to the CareerEDGE model of graduate employability (Dacre Pool & Sewell, 2007) which includes EI as a vital component. For homework, students are asked to discuss the feedback from their MSCEIT report with a trusted other and then write about this in their EI journal. The purpose of this is to encourage engagement with the feedback and enhance their self-awareness in relation to their own levels of EI. They are also asked to read an article by Salovey and Grewal (2005) which provides a good introduction to the four-branch ability model of EI.

Class 2 is designed to give the students a better understanding of EI as a subject of empirical research and academic interest. The mini lecture covers the history of EI, the

development of the four-branch model, ability EI and trait EI distinctions and the work of Goleman (1995). The students are also introduced to the idea of ability EI being measured through performance tests and trait EI being measured through self-report tests. Empirical research into EI outcomes, particularly in relation to the workplace (e.g. Lopes et al., 2006), is also discussed. A small group activity involves students generating as many 'emotion' words as possible. This enables them to develop their emotional vocabulary, a crucial element of EI as without the words to describe emotions, it is difficult for people to show they perceive and understand what they and others might be feeling. The vocabulary generated is then used for an individual activity, whereby the students are asked to think about the events so far that day and identify the emotions that they may have experienced in relation to these events (see Appendix J for worksheet). The homework activities include reflecting on and writing about their experiences in class that day and exploring Daniel Goleman's website, particularly the video clips of some of his talks.[6] The students are also directed to read and make notes on the article by Mayer, Roberts and Barsade (2008) which provides a comprehensive review of research into EI. Personal correspondence with J. Mayer established this as an article he has successfully used with American undergraduate students.

In Class 3 the intention is for the students to develop their knowledge, skill and understanding of perception, identification and expression of emotions (branch one of the four-branch model). The mini lecture includes discussion of body language, voice tone and facial expressions. Activities include identifying emotion from facial expressions and body language in actors which encourages the students to consider how much

[6] http://www.danielgoleman.info/blog/

emotional information we have available to us without the need for words. Emotion in music is also explored with the students sharing emotive pieces of music with the class. They are also encouraged to think about how music can affect our emotions and how they might be able to use this knowledge in future, for example if they want to either motivate or calm themselves. Mayer and Cobb (2000) propose that when students discuss what emotion a piece of music conveys, they are actively using and perhaps developing emotional perception and understanding. Homework activities include reflection on the class activities in the EI journals and reading of the Dacre Pool and Sewell (2007) article which discusses the role of EI in graduate employability.

Class 4 is designed to introduce the students to perception and identification of emotion in art (branch one of the four-branch model). It takes place out of the classroom at a local museum and art gallery. The students are asked to select works of art that they feel drawn to and then analyse the emotional content. For example, they are encouraged to think about whether the artist is trying to convey some emotion to them and how they feel when they look at it (see Appendix K for worksheet). The class then meets together for a discussion about the activity. The students share their thoughts and feelings about their chosen artwork with the class. This encourages the use of emotional vocabulary and enables the students to appreciate the different viewpoints of others, which they might not agree with. They may also discover that spending time appreciating art can be a useful strategy for managing emotions, particularly stress and anxiety. For homework the students reflect on the class activities in their journals and complete the academic essay for submission the following week.

Class 5 is designed to encourage the students to explore the idea of emotion and the written word. Activities in this class are relevant to perceiving, using and understanding emotions (branches one, two and three of the four-branch model). The students are asked to bring to class a piece of writing they feel is emotive (this can be a passage from a book, poetry or a newspaper/magazine article). Working in small groups, they discuss and analyse the literature, identifying particularly emotive words or phrases. There is also discussion about how authors of classical and contemporary literature use the written word to evoke emotion in their readers. The students are encouraged to think about how the media uses the written word, for example to evoke anger and motivate people to take action. Modern communication methods that use the written word, for example email and text messaging are discussed. The importance of effectively expressing emotion is also included in this class with an 'emotional charades' activity. For homework the students reflect on the class experiences in their journals and are given an article to read about the use of reading groups to support people with emotional difficulties.

Class 6 is concerned with how emotions can be used to facilitate thought and help with problem solving (branch two of the four-branch model). The mini lecture covers empirical work in this area by Damasio (e.g. 1994), Seo and Feldman Barrett (2007), Isen, Daubman and Nowicki (1987) and Amabile, Barsade, Mueller and Staw (2005). The students are introduced to the work of James Pennebaker and expressive writing (e.g. Pennebaker, 1997) together with other authors who have researched this area (e.g. Burton & King, 2004, 2008; Wing, Schutte & Byrne, 2006). For homework, the students complete their journal and are encouraged to try a positive writing activity (see Burton &

King, 2008). Positive writing has been shown to enhance mood (Burton & King, 2004, 2009) and could be used either as a way of eliciting positive emotions to help with creative tasks or as a useful emotion management strategy (branch four of the four-branch model).

Class 7 concentrates on the third branch of the four-branch model, 'understanding emotion'. In particular, the students are introduced to the idea of cognitive appraisal and how different people can experience different emotions in response to the same event (e.g. see Niedenthal, Krauth-Gruber & Ric, 2006). There are activities to encourage the students to recognise the difference between information received through sensory data and appraisal of that information. Homework includes reflection on the class activities in the EI journal.

Class 8 continues with a focus on 'understanding emotion' and starts with a discussion about what it means to understand emotion and how we might see a difference between people skilled or not-so skilled in this ability (e.g. Caruso & Salovey, 2004). Then, as a way of increasing understanding about emotions, small group work involves the students identifying some events that evoke particular emotions in themselves (anger, happiness, sadness and fear). This gives the students an opportunity to recognise that often the typical events that evoke these emotions in themselves have similar effects on others. The emotion of anger is commonly experienced whilst driving and the work of Parkinson (e.g. 2001) is discussed in relation to this. There is also an activity involving sequencing emotions from low to high intensity which enables the students to consider how emotions develop. The class are provided with an emotions diary to be kept over the following two weeks. In here they rate how they are feeling on a number of different

emotions (e.g. happy, afraid, calm, and nervous) twice daily and note what experiences may have lead to these emotions. At the end of the two weeks they are asked to reflect on this activity in their EI journals, commenting on any patterns in their emotional experiences or behaviours they might have noticed. This helps the students to achieve a greater understanding of their own emotions. During this class the students are also given details of the case study assignment, which involves interviewing somebody they know about a negative emotional experience they have had in the workplace. This is then written up as a case study and analysed, using the theory covered on the module. This assignment enables the students to start to put what they have learnt about EI into practice by applying this knowledge and understanding to enable them to analyse an emotional event experienced by somebody else.

Class 9 of the module is concerned with 'managing emotion', the final branch of the four-branch model. Examples of poor emotional management are provided for analysis and working in pairs, students share some of their own experiences. The purpose of these activities is to encourage the students to think about ways they have dealt with emotional experiences in the past and identify if there are better ways to deal with such events in the future. This should help to develop more strategies for problem-based coping, which is related to better emotion management and higher academic achievement (MacCann, Fogarty, Zeidner & Roberts, 2011). Newspaper articles reporting on empirical research into anger are discussed and critically analysed.

Class 10 continues with discussion and activities in relation to 'managing emotion'. Some strategies for emotion management are discussed with particular attention paid to managing anger. Volunteers from the class take part in a role play

exercise, demonstrating how to effectively manage a difficult emotional situation. The students are also introduced to the idea that expressing gratitude can be a useful strategy for emotion management, particularly for increasing positive affect (e.g. see Lyubomirsky, Dickerhoof, Boehm & Sheldon, 2011).

In the final class the students complete the MSCEIT and ESES for a second time. The module as a whole is discussed, including the students experiences of completing their reflective journals. The students are offered one-to-one feedback on their EI tests and individual appointments arranged.

**The Teaching Intervention within a Theoretical Framework**

The teaching intervention is designed around the Mayer and Salovey four-branch model of EI. It is also consistent with the tripartite framework of EI proposed by Nelis et al. (2009) and Mikolajczak et al. (2009) as it incorporates activities aimed at helping students to increase their ability in relation to two elements, specifically i) knowledge of emotions and strategies to deal with emotional situations and ii) actual abilities in relation to emotional functioning. The third element of this framework refers to 'personality traits in dealing with emotions' and although the teaching intervention does not aim to bring about changes in personality, some of the strategies may encourage people who score low on traits such as happiness or optimism to try different ways of dealing with situations.

The EI module also fits the recommended practices which were found to influence positive student outcomes in the U.S. based meta-analysis of Social and Emotional Learning (SEL) programmes in schools (see Durlak, et al., 2011). These are represented by the acronym SAFE (Sequenced, Active, Focused and Explicit). In more

detail, ‘Sequenced’ (does the intervention use a connected and coordinated set of activities to achieve objectives?), ‘Active’, (does the intervention use active forms of learning to help the development of new skills?), ‘Focused’, (does the intervention have a least one component devoted to developing personal or social skills?) and ‘Explicit’ (does the intervention target specific SEL skills rather than skills or positive development in general terms?)

There are also a number of activities included that enable the students to practice emotion management strategies and then reflect on their experiences in a safe and supportive environment. These, together with the other activities aimed at developing the abilities to perceive, use and understand emotions, provide the mastery experiences essential for the development of self-efficacy specifically in relation to emotional functioning (Bandura, 1995).

**Appendix J**

Example (1) of activity from EI teaching intervention

| Emotional Intelligence<br>Class 2 |
|---|

What emotions have you felt today?

The first step in trying to develop your emotional intelligence is to become adept at identifying our own emotions. Try to think back to the events of today and identify some of the emotions you have felt. You can use the emotion words given to help you but don't feel restricted by these. Remember for a word to be a feeling word, it has to go with 'I feel/felt…' and be the next word in the sentence. When you have identified some emotions felt today, write them down together with a brief explanation of the situation.

| |
|---|
| Today this happened……<br><br>I felt …… |
| Today this happened……<br><br>I felt …… |
| Today this happened……<br><br>I felt …… |

Discuss today's emotions with a partner. How do you feel about these situations now? What behaviours went with the emotions?

**Appendix K**

Example (2) of activity from EI teaching intervention

Emotional Intelligence
Class 5

## Emotion and Art

The Fine Art Collection is on the 2nd floor and there is other work displayed on the stairs and landings. Spend the first 15 minutes or so walking around the gallery. Get a real feel for the place and the works of art displayed here. Make a note of any that you find particularly striking in any way (try to jot down where they are so you can return easily to them). Then select at least three works of art in any medium, so they can be paintings, drawings, sculptures, textiles, photographs, ceramics, or any other you would like to analyse.

Use the pages overleaf to record your thoughts and emotions. You will probably find this task easier to do alone without distractions – we will meet up later to discuss the experience.

**Use this space to jot down the works of art you are interested in.**

**Artwork – Artist and name of work (if given).**

**What do you see?  Describe the piece of work.**

**Do you think the artist is trying to convey some emotion to you?**

**How does the art make you feel?  Do you like it?**

**Further comments**