

Models and Measures of Emotional Intelligence



DR BENJAMIN R. PALMER,
Director of Research and Development, Genos Pty Ltd

With so many models and measures of emotional intelligence available it is becoming increasingly difficult to determine which approach may best suit the intended application. In this article emotional intelligence model and assessment characteristics that may best be suited to recruitment and development initiatives are proposed. Practical and academic criteria are presented to define 'best-practice-approaches' to the application of emotional intelligence in these areas. The article does not compare and contrast various models and measures of EI. Rather, recently defined categories of emotional intelligence approaches are outlined, along with the model and measurement characteristics that define them. The article is intended to help human resource professionals make timely and informed decisions about which type of emotional intelligence model and measure to use in various human resource applications.

Keywords: Emotional intelligence, learning and development, recruitment, psychological assessment

During the last 10 years the business case for applying emotional intelligence (EI) in the workplace has been mounting. A global body of research studies have been confirming many of the early claims associated with the construct. For example, EI has been shown to relate to leadership effectiveness (Gardner & Stough, 2002); employee retention (McClelland, 1999); occupational stress (Gardner & Stough, 2003); job satisfaction (Thomas, Tram & O'Hara, 2006); sales performance (Hay & McBer, 1997), and effective teamwork (Jordan & Askkanasy, 2006). Research studies exploring the value of applying EI in recruitment and development initiatives are also emerging. L'Oreal is reported to have achieved net revenue increases over \$2.5 million dollars following the selection of a cohort of sales professionals based on EI. L'Oreal was also reported to have found a 63% reduction in the turnover of these employees during their first year (Cherniss, 2004). A study by Boyatzis (1999) found that experienced partners in a multinational consulting firm high in EI, delivered \$1.2 million more profit from their accounts than their less emotionally intelligent peers. These findings, and others like it, have been met

with healthy scepticism; academic debate concerning their validity (e.g., Zeider, Matthews & Roberts, 2004); and increased attention from the business community. However, these findings are seemingly speaking louder than the words of debate. Human resource practitioners around the world are being asked to source, implement and track the return on investment of emotional intelligence selection and development programmes (Tatton, 2005).

The last 10 years has also seen the proliferation of a wide number of EI models and measures. A Google search at the time of writing listed over 17,500 web pages containing the search words "emotional intelligence assessment". This work has been useful in that it has provided a number of different approaches to applying EI in the workplace. However, it has also led to questions concerning the nature and boundaries of the construct, and which approach offers the most utility in workplace applications. Variables ranging from emotional abilities and competencies, to so-called 'non-cognitive' capabilities and skills have been placed under the banner of EI. Furthermore, a number of different assessment approaches have been developed

ranging from performance-based IQ type assessments to self-report and informant-rated or 360-degree type assessments. This has added complexity to the task of deciding which model and measurement approach to utilise in recruitment and development initiatives.

Towards clarifying this ambiguity a number of leading authors in the area have theoretically contrasted different models of EI and placed them into coherent categories. Models of EI have been categorised into three main theoretical approaches (Caruso, 2004). These include:

1. Ability Models, which define EI as a conceptually related set of mental abilities to do with emotions such as the ability to perceive and understand one's own emotions (e.g., Mayer & Salovey, 1993; 1997).
2. Trait Models, which define EI as an array of socio-emotional traits such as Assertiveness (e.g., Bar-On, 1997).
3. Competency Models, which comprise a set of emotional competencies defined as learned capabilities based on EI (e.g., Influence, that is, wielding effective tactics for persuasion, Goleman, 2001).

Measures of EI can also be categorised into three main approaches. These include:

1. Performance Based Measures of EI. Performance-based measures, like intelligence (IQ) tests, comprise a series of questions for which there are more and less correct answers. These measures are purported to index individual differences in people's actual emotional abilities (Mayer, Salovey, Caruso & Sitarenios, 2003) or emotional knowledge.
2. Self-Report Trait Measures of EI. Like personality measures, self-report trait measures of EI comprise a series of statements pertaining to behavioural preferences (e.g., "It's fairly easy for me to express my feelings"), and styles (e.g., "I'm sensitive to others feelings"). Respondents typically answer on anchored rating scales (e.g., from 1 to 5) where a response of 1 might indicate that the statement is "very seldom or not true of me" and a response of 5 might indicate that the statement is "very often true of me or true of me". These measures of EI index individual differences in people's behavioural preferences and styles relating to emotions. These measures may also provide insight into individual differences in emotional self-efficacy (e.g., self-confidence in expressing how one feels), which like the broader concept of self-efficacy may be an important characteristic of psychological well-being (Zimmerman, Bandura & Martinez-Pons, 1992).
3. Behavioural Measures of EI. These measures typically comprise a series of statements relating to emotionally intelligent behaviours (e.g., "Demonstrates an understanding of others feelings"). Respondents typically answer on anchored rating scales, however, response scales relate to how often the behaviour is

displayed (e.g., 1 = almost never and 5 = almost always). Like competency or 360-degree capability assessments, these measures of EI index individual differences in how often people display emotionally intelligent behaviour. Authors of such assessments argue that the frequency with which individuals display emotionally intelligent behaviours is a manifestation of their actual EI (Boyatzis, Goleman & Rhee, 2000).

In attempting to provide insight into which approach offers the most utility, researchers have been examining which measurement approach is more predictive of outcome variables such as social functioning (Brackett, Rivers & Shiffman, 2006) and coping styles (Goldenberg, Matheson & Mantler, 2006). To-date these studies have typically been comparing one or more self-report trait measures of EI against a performance based measure. So far the results of these studies have been somewhat inconclusive with the performance based measures being more predictive in some studies (e.g., Brackett et al., 2006) and the reverse being the case in others (e.g., Goldenberg, 2006). This may be due to different measurement properties (i.e., one assessment type offering greater predictive validity than the other), or it could be due somewhat distinct predictive qualities these different approaches offer. Indeed research has only found moderate positive correlations (e.g., $r = .39$, Palmer 2003) between the different EI measurement approaches supporting this argument (see also Mayer, Salovey & Caruso, 2000).

Performance based measures of EI may measure the extent to which one's emotional ability or knowledge underlies or predicts social functioning. In contrast, a self-report trait measure of EI may measure the extent to which one's emotional self-efficacy underlies or predicts social functioning. When pitted against each other, one approach may appear more predictive than the other. Yet collectively a battery of different measurement types may explain greater variance in outcome variables such as social functioning. More research of this type is needed. However, research also needs to examine the predictive qualities of different measures within a single assessment category (e.g., a comparison of the predictive qualities of various behavioural measures of EI). Research of this type will further inform practitioners of which approach offers the most utility. It is most likely that an approach involving a battery of EI measures comprising the different measurement categories will prove to be "best practice". However, factors such as time, costs, face validity, participant buy-in and specialist qualifications required to interpret results often constrain the opportunity to apply such best practice approaches. These factors often manifest the need to choose one approach over another. They also highlight the potential utility of practical and academic criteria to assist in determining which approach may best suit the intended application.

Academic criteria: Evidence of psychometric reliability and validity

There are a number of general properties that a measure of EI should comprise. Firstly, the model upon which it is based should be theoretically well-grounded. This is typically evident where a model has been conceptualised through the distillation of existing research findings and other well established theories. A good example of this is Salovey and Mayer's (1990) seminar article on EI and a later revision of their model (Mayer & Salovey, 1997). Secondly, the measure of EI should comprise the following psychometric properties: 1) Internal consistency reliability; 2) Factorial validity, showing that the various components of the model the measure has been designed to assess exist in population data (e.g., emotional self-awareness, expressing emotions etc); and 3) Criterion-related validity, that is, a body of research studies that have shown that scores on the assessment are: meaningfully related to other similar measures; can predict variance in other theoretically related variables (e.g., the quality of interpersonal relationships); can distinguish between groups (e.g., leaders who may be more prone to emotional outbursts); and are sufficiently distinct from measures of other constructs (e.g., sufficiently distinct from measures of personality).

Staunch critics of the area argue that these properties still need to be substantiated for most if not all measures of EI (Zeidner, Matthews & Roberts, 2004). There are hundreds of EI measures on the market that do not meet these standards, some offered by seemingly reputable companies at considerable cost. Unpublished research findings described in technique manuals or so-called company 'white papers' do not suffice as evidence of these properties. The findings of research on the psychometric properties of an instrument should be subject to scientific peer review and published in peer-reviewed journals. Practitioners should be aware of claims on internet sites (e.g., "...extensively researched, norm-tested and statistically reliable"), and ask for copies of peer-reviewed research articles that back up such claims. Peer-reviewed criterion-related validity studies showing evidence that the measure of EI can predict theoretically related criteria (e.g., leadership effectiveness) over and above other widely used constructs such as personality assessments (e.g., Palmer, Gardner & Stough, 2003a) could be considered the gold standard. Most of the well known measures of EI have substantiated psychometric properties published in peer-reviewed journals, albeit to varying degrees (e.g. the Bar-On EQ-I, Bar-On, 1997; MSCEIT, Mayer et al., 2003; ECI, Boyatzis et al., 2000; Genos EI Assessment Scales, Palmer & Stough, 2006; EIQ-Managerial, Dulewicz & Higgs, 2000). Here the amount and meaningfulness of the published research findings, particularly those involving workplace samples and outcome variables, can be used to differentiate. Collectively these well-known measures offer various approaches to the measurement of EI. As such a set 'practical-use' criteria may also be useful in helping to determine which approach may best suit the intended application.

Practical criteria: Applying EI in recruitment and selection

If implemented in the right way, current research findings suggest EI may add significantly to the prediction of successful candidates. To put this statement in perspective consider that a large number of research studies on intelligence (IQ) suggest that on average IQ predicts between 20-25% of the variance in workplace performance (Schmidt & Hunter, 1998). Similarly, research studies suggest personality predicts between 10-15% of the variance in workplace performance (Barrick & Mount, 1991), albeit this figure varies depending on the job function (Hogan, 2005). Research on EI suggests that EI can predict between 36-12% of the variance in workplace performance variables depending on the outcome variable measured (Palmer, Gardner & Stough, 2003b). However, current measures of EI have not been designed to be utilised in recruitment and selection. As such, particular care is needed when using measures of EI in this context.

Prior to selecting a measure of EI to utilise, a thorough job analysis of the work role and its various functions should be performed. This will help a-priori, in selecting the measure of EI to utilise. Irrespective of the measurement type used (i.e., Performance, Self-Report or Behavioural), at face value the measure of EI should appear to assess abilities, traits or behaviours aligned to functions of the role. Existing research findings suggest EI may add significantly to the prediction of successful candidates in roles that require finely tuned intra-and-interpersonal skills such as leadership, customer service, and sales roles. A thorough job analysis will also help in determining potential weightings to place on other assessment mediums being utilised (e.g., IQ, personality, interview and role-play simulation results). In recruitment and selection the results of EI assessments should never be utilised in isolation; rather they should be used in conjunction with other findings. It is recommended that a behavioural interview and role play simulation specifically on EI be utilised in conjunction with EI assessment results and other measures (IQ, personality, motivation fit etc).

The EI assessment should provide insight into the candidates: underlying EI ability and knowledge (if a Performance-type measure is used); emotion-related traits and level of emotional self-efficacy (if a trait-type measure is used); and how often they may display emotionally intelligent behaviours (if a Behavioural-type measure is used). An EI behavioural interview should provide insight into what experience the candidate has had in applying their EI in previous roles. Similarly, the EI-based role play simulation (if designed properly), should provide insight into how the candidate may apply their EI in a function of the role being recruited for. The findings from these three assessments (underlying level

of EI; previous experience in applying it at work; potential success in applying it in the role) should be aggregated to provide an overall result. This overall result should then be blended with other assessment findings (IQ, personality etc).

Different types of EI measures each offer potentially different insights on candidates applying for the role (i.e., emotional abilities, preferences and styles, and behaviour). As such a best practice approach may be to apply a measure of all three. However, given that other psychological measures should also be used along with interview and simulation data this luxury may seldom exist. As such the following practical criteria may serve as a guide in selecting one approach over the other:

- **Face validity.** The EI measure that has the most apparent overlap with the variables it assesses and the attributes required to perform the role successfully may be the best suited (if the measure meets the academic criteria aforementioned). In addition, measures of EI that measure a broad number of variables associated with emotions may offer more insightful data. However, the greater the number of variables measured the more complex interpretation can become. Measures of EI that measure a small number of core emotional intelligence variables may be easiest to interpret and align with role competency models.
- **Costs.** Obviously the lower the cost the better particularly where large numbers of candidates are being assessed.
- **Time to complete.** Short well-validated measures of EI may offer the best utility in recruitment and selection given that a battery of other measures should also be utilised.
- **Ease of use.** Online assessments are typically the most utilised medium in recruitment and selection as results are typically computer generated reducing costs and time associated with scoring and interpretation. Many of the more established measures of EI have on-line administration systems. However, they vary in complexity and ease of use.
- **Interpretation reports.** Reports that are easy to interpret and allow for quick candidate comparisons may be of most value. Also those that can integrate with other systems to report findings against other assessment results may be particularly useful.
- **Support products and services.** A measure that has well established support products and services may be particularly useful. For example, accreditation programmes on how to use the measure in recruitment and selection; behavioural interview guides and interpretation dictionaries; role-play based simulation scripts and scoring templates; and peer support networks.

Finally, although the different types of EI measures may each offer different insights (i.e., emotional abilities, preferences and styles, and behaviour) there are a number of

considerations that should be taken into account when using them in recruitment and selection.

Performance-based measures of EI in recruitment and selection

Performance based measures of EI (e.g., MSCEIT, Mayer et al., 2003), typically comprise a number of items for which there are more and less correct answers providing insight into candidates' underlying level of emotional ability and knowledge. These assessments do not rely on candidates self-reporting their emotional traits or behaviours. As a result performance measures of EI may be much less susceptible to so-called "faking good" where candidates choose seemingly more desirable responses rather than responses that truly reflect themselves. However, with the exception of measuring an individual's ability to perceive emotions in others, existing performance measures an index of an individual's understanding of emotions and emotional knowledge rather than their ability to apply emotional intelligence—for example, an individual's knowledge that more and more anger can lead to rage, or which emotional management technique may best solve a conflict situation. The issue here is that some individuals may have a high level of knowledge but not know or have any experience in applying that knowledge in real life. For example, knowledge and theory on how to effectively motivate subordinates does not necessarily mean that one knows how to effectively do so.

Assessment centre research by Development Dimensions International found a clear disconnect between individuals emotional knowledge and how they applied that knowledge in role-play based simulations defining five distinct categories (Tatton, 2005).

1. **The Emotionally Intelligent**, those that had high levels of emotional knowledge and demonstrated effective use of that knowledge in the role play.
2. **The Emotionally Intuitive**, those that had low levels of emotional knowledge yet effectively applied EI in the role play (e.g., demonstrated sensitivity to interpersonal cues and positive interpersonal behaviours).
3. **The Emotionally Negligent**, those that had high levels of emotional knowledge yet could not effectively apply that knowledge in the role play (e.g. missed others emotional cues). Interestingly, on reflection these people were able to discuss what they should have done or what would have been a better approach in the role play.
4. **The Emotionally Manipulative**, those that had high levels of emotional knowledge and chose to use it in a nefarious way in the role play (e.g., lowering others' self-esteem to enhance their own position or dismissing others feelings so as not to validate them).
5. **The Emotionally Unintelligent**, those that had low levels of emotional knowledge and did not demonstrate effective use of EI in the role play (e.g., missed others emotional cues etc).

This issue (and the associated categories) may be detected in behavioural interviews and role play simulations and point to the importance of including the results from these other assessment mediums in recruitment and selection. Indeed, where there is an opportunity for candidates to fake good on self-reports this performance based approach coupled with EI behavioural interviews and role-play simulations may be the best approach to measuring EI. This may particularly be the case in the recruitment and selection of external candidates. However, 360-degree behavioural measures of EI may offer a better approach in the selection of internal candidates and there are several techniques that can be applied to limited faking good in recruitment and selection. The use of self-report and behavioural measures of EI in recruitment and selection should not be overlooked, just more carefully considered.

Self-report trait and 360-degree behavioural measures of EI in recruitment and selection

Irrefutably self-report measures of EI can be faked good in recruitment and selection. Some self-report measures of EI have attempted to circumvent this issue by placing social desirability measures (i.e., lie detector questions such as “I have never told a lie”), and consistency indexes (that report on how consistently someone has responded to the questions of the assessment) within the EI measure. Here scores on the assessment are either: a) reduced if social desirability scores are high; or b) a social desirability score and consistency score is provided and if high, a word of caution in interpreting scores is presented in the report. There are several issues with this method of circumventing faking good. Firstly, those who fake good on self-report measures are typically seasoned test-takers. They are often aware of social desirability questions, how to fake them and how to consistently answer to assessment questions. Secondly, it could be argued that the emotionally intelligent person may in-fact be socially desirable (as originally described by Salovey & Mayer, 1990), and innocently reduce their chances by responding in a socially desirable fashion. As such it could be argued that these methods offer little utility in overcoming the issue of faking good in recruitment and selection. Indeed at the time of writing there were no published studies on the incremental validity these indices provide. There may be other methods of reducing the opportunity for candidates to fake good on self-report measures of EI which may include:

- Completing the test under supervision and within a set time period. This may stop so-called “phone-a-friend” or candidates looking up the meaning of EI and completing free on-line assessments a-prior.
- Not informing the candidate of what “type” of assessments they will be completing prior to doing so. Rather, more generally telling them they will be completing a set of behavioural-based measures. This may stop people from getting on the internet and becoming “informed” test takers.

- Informing the candidate that it is in their best interest to be as honest as possible about themselves because faking good will limit their chances and they will be interviewed and have to complete role-play based simulations on the basis of their results.

These techniques in combination with behavioural interviews and role-play based simulations may help reduce the opportunity for candidates to fake good and increase the validity of overall assessment results. Research on the efficacy of such approaches is needed. A final criticism of self-report measures of EI is that they rely on the individual’s self-perception of their emotional preferences and styles and that people (particularly with low EI) may not have enough self-insight to accurately report as such. This is a particularly naive criticism that has failed to take into account what is actually being measured. Self-report instruments are not a measure of accuracy, that is, a measure of how accurately one can report on their EI. In contrast they are a measure of an individual’s beliefs about their emotional preferences and styles. It is this very variable that predicts important workplace outcomes. An analogy would be to say that asking employees to rate their level of job satisfaction provides no insight into staff morale. Organisations around the world use staff satisfaction and engagement surveys because staff satisfaction and engagement predict levels of productivity and organisational performance.

Behavioural 360-degree measures of EI provide insight into the frequency with which people display emotionally intelligent behaviour (e.g., Genos EI Assessment Scale, Palmer & Stough, 2006). Behavioural measures that comprise emotionally intelligent workplace behaviours (e.g., “demonstrates an understanding of colleagues’ feelings at work”) may offer greater face and predictive validity than those that do not measure workplace specific behaviour. This notion needs to be assessed in research. Informant rated or 360-degree measures of EI typically require a manager, peers and others e.g., direct reports or clients to rate how often they observe the person they are rating (the candidate) to demonstrate the behaviours in the questions. This can be difficult to achieve in recruitment and selection particularly with external candidates who may not want to inform their existing employer that they are looking for other work or with candidates who have not been in contact with their previous employer for sometime. However, this approach may be useful in internal recruitment, promotion and talent identification initiatives (e.g., succession management) where there is greater access to raters. When used in this context a candidate’s raters need to be selected carefully as raters can fake good on these assessments as with self-reports. However, when selected carefully 360-degree behavioural measures of EI can circumvent faking good issues and offer a viable alternative. Furthermore, 360-degree behavioural measures of EI may also circumvent many of the issues discussed with performance based assessments providing insight into how a candidate has applied their EI in the workplace.

Practical criteria: Applying EI in development initiatives

Irrespective of which measurement approach is utilised, the central purpose of using an EI assessment in a development programme is to provide participants (and the practitioners assisting them), with insight into current levels of functioning and how that is related to the outcome the business or individual is trying to achieve (e.g., more effective leadership). If showing a return on investment (either to the individual, group or organisation) is also important, a post programme assessment should also be used. Indeed best practice programmes on EI development typically comprise the follow core elements:

1. A properly branded programme that is linked to either a business strategy or objective, or the findings of a thorough needs analysis
2. Comprise clear goals, roles and responsibilities
3. Strong internal sponsorship and explicit involvement by senior executives
4. Pre and post measures of both EI and the desired outcomes of the programme (e.g., leadership)
5. Minimal competing learning initiatives
- 6 Candidates who are open to and willing to learn and be involved (where there is an absence of this, part of the programme design should be to achieve this prior to full implementation of the EI development initiative).

As in recruitment and selection, different approaches to the measurement of EI offer additive or alternative utilities in development initiatives. Where one approach needs to be taken over another, as a very first step, the practitioner should decide which type of EI insight is most needed (e.g., emotional knowledge, insight into emotional preferences and styles, or insight into the demonstration of emotionally intelligent behaviour). Drawing on the five types of individuals identified by Tatton (1995), the following may be offered as a guide.

1. **The Emotionally Intelligent** may benefit most from a 360-degree behavioural based measure providing insight into demonstrated behaviours as this may assist them in providing a role model for others.
2. **The Emotionally Intuitive** may benefit most from a performance based measure providing insight into emotional knowledge that underpins the effective behaviours they intuitively display. A greater appreciation of the 'how and why' may help shape their behaviour to be even more effective.
3. **The Emotionally Negligent** may benefit most from a 360-degree behavioural based measure. This type of measure would provide insight into the differences between their level of understanding and observed behaviour, and which EI behaviours specifically need to be display more frequently.
4. **The Emotionally Manipulative** may benefit most from a trait based measure of EI coupled with a 360-degree behavioural measure. Aimed at attitudinal

change, the trait measure would provide insight into current preferences and styles associated with emotions. The behavioural measure that would provide insight into the fact that the behaviours they display are not aligned with emotionally intelligent workplace behaviours.

5. **The Emotionally Unintelligent** may benefit most from a performance based measure coupled with a 360-degree behavioural measure. This would provide a good blend of theory and behavioural based learning to facilitate positive behavioural change.

In consideration of Tatton's (2005) types, more often than not a 360-degree behavioural measure of EI may offer the best utility in development initiatives. Indeed Tatton's research findings suggest most managers fall in the Emotionally Negligent category. There are a number of 360-degree behavioural measures of EI to choose from and some meet the academic criteria outlined in this article. There are a smaller number that have been designed specifically for use in the workplace (e.g. ECI, Boyatzis et al., 2000; and the Genos EI Assessment Scale, Palmer & Stough, 2006). These measure workplace specific emotionally intelligent behaviours and interpret the results in the context of workplace performance. They may also offer greater face validity that can be particularly important in development initiatives helping participants more clearly conceptualise the link between the assessment and the outcomes of the programme. There are a number of other criteria that may also assist in deciding on an EI measurement tool for development initiatives. These include:

- Number of EI variables assessed. The more variables an EI model measures the harder it becomes for participants to grasp, remember and interpret. Simpler models of EI that comprise a small number of variables may be more useful in development initiatives than larger more assertoric models. They may also be easier to workshop and link to business strategies and objectives. The magic number 7 (+/-2), referring to the amount of information people can typically recall (as evidenced by the seminal work of Miller, 1956) may be a good guide as to how many variables a useful model may comprise.
- Time. Assessments that take large amounts of time to complete can annoy and frustrate those involved in development programmes. This is particularly important when 360-degree measures are used as raters may have to provide ratings for several colleagues.
- Feedback reports. The quality of feedback reports can greatly enhance the efficacy of development programmes. Lengthy feedback reports with difficult to interpret scoring and graphs can dilute the focus and result in reports being put in the 'to do later tray'.

- Ease of use, costs, face validity and support products and services as previously described.

Conclusion

In summary, EI is an important attribute at work as emotions are inherent part of workplace activities at all levels, from dealing with a disgruntled customer to enhancing an organisational culture. Well validated measures of EI can offer insight into this 'always known' but until now unassessed area of intra-and-interpersonal functioning. While a growing body of EI measures are meeting strict academic and practical criteria for every one that has, there must be 10 or more that do not. I hope this article provides a stimulus for research and a guide for practitioners on how to choose an approach to the assessment and application of EI in the workplace.

REFERENCES

- Bar-On, R. (1997). Emotional Quotient Inventory: Technical manual. Toronto: Multi-Health Systems.
- Barrick, M. R., & Mount, M.K. (1991). "The big-five personality dimensions and job performance: A meta-analysis". *Personnel Psychology*, 44, 1-26.
- Boyatzis, R.E. (1999). From a presentation to the Linkage Conference on Emotional Intelligence, Chicago, IL, September 27, 1999.
- Boyatzis, R.E., Goleman, D., & Rhee, K.S. (2000). "Clustering competence in emotional intelligence: Insights from the Emotional Competency Inventory". In R. Bar-On & J.D.A., Parker, (Eds). *The handbook of emotional intelligence*. (pp.343-362) San Francisco: Jossey-Bass Inc.
- Barckett, M.A., Rivers, S.E., Shiffman, S. (2006). "Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence". *Journal of Personality and Social Psychology*, 91, 780-795.
- Caruso, D. (2004). *Defining the inkblot called emotional intelligence*. White paper prepared for the Consortium for Research on Emotional Intelligence in Organisations. www.eiconsortium.org
- Cherniss, C. (2004). *The business case for emotional intelligence*. White paper prepared for the Consortium for Research on Emotional Intelligence in Organisations. www.eiconsortium.org
- Dulewicz, S.V. and Higgs, M. (2000) *Emotional Intelligence Questionnaire: Managerial and Managerial 360 degree: User Guide*, Windsor, (ASE) NFER Nelson.
- Gardner, L., & Stough, C. (2002). "Examining the relationship between leadership and emotional intelligence in senior level managers". *Leadership and Organization Development*, 23(2), 68-78.
- Gardner, L., & Stough, C. (2003). "Exploration of the relationships between workplace emotional intelligence occupational stress and employee health". *Australian Journal of Psychology*, 55, 181-181.
- Goldenberg, R., Matheson, K., Mantler, J. (2006). "The assessment of emotional intelligence: A comparison of performance-based and self-report methodologies". *Journal of Personality Assessment*, 86, 33-45.
- Goleman, D. (2001). "Emotional intelligence: Issues in paradigm building". In C. Cherniss & D. Goleman (Eds). *The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups and organisations*. (pp. 13-26). New York: Jossey Bass
- Hay/McBer Research and Innovation Group (1997). This research was provided to Daniel Goleman and is reported in his book (Goleman, 1998).
- Hogan, R. (2005). "In defence of personality measurement: New wine for old whiners". *Human Performance*, 18, 331-341.
- Jordan, P & Ashkanasy, N.M. (2006). "Emotional intelligence, emotional self-awareness and team effectiveness". In V. Druskat, F Sala., & G Mount (Eds). *Linking emotional intelligence and performance at work. Current research evidence with individuals and groups*. (pp 145-163). Lawrence Erlbaum Associates Publishers
- Mayer, J.D., & Salovey, P. (1993). "The intelligence of emotional intelligence". *Intelligence*, 17, 433-442.
- Mayer, J. & Salovey, P. (1997). "What is emotional intelligence?" In P. Salovey & D. Sluyter (Eds.). *Emotional development and emotional intelligence: Implications for educators*. (pp3-31). New York: Basicbooks, Inc.
- Mayer, J.D., Salovey, P., & Caruso, D.R. (2000). *The Mayer, Salovey, & Caruso Emotional Intelligence Test: Technical manual*. Toronto: Multi-Health Systems.
- Mayer, J.D., Salovey, P., Caruso, D.R., & Sitarenios, G. (2003). "Measuring emotional intelligence with the MSCEIT V2. 0". *Emotion*, 3, 97-105.
- McClelland, D.C. (1999). "Identifying competencies with behavioural-event interviews". *Psychological Science*, 9(5), 331-339.
- Miller, G.A. (1956). "The magical number seven, plus or minus two: Some limits on our capacity for processing information". *The Psychological Review*, 63, 81-97.
- Palmer, B.R., (2003). *An analysis of the relationships between various models and measures of emotional intelligence*. PhD Dissertation.
- Palmer, B.R., Gardner, L., & Stough, C. (2003a). "The relationship between emotional intelligence, personality and effective leadership". *Australian Journal of Psychology*, 55, 141-148.
- Palmer, B.R., Gardner, L., & Stough, C. (2003b). *Measuring emotional intelligence in the workplace with the Swinburne University Emotional Intelligence Test*. Published in the Proceedings of the First International Conference on Contemporary Management (ICCM): Emotional Intelligence in Organisations, Sep. 2003
- Palmer, B.R., & Stough, C. (2006). *The Genos Emotional Intelligence Assessment Scale: Technical manual*. Australia: Genos Pty Ltd.
- Salovey, P. & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Schmidt, F.L., & Hunter, J.E. (1998). "The validity of utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings". *Psychological Bulletin*, 124, 262-274.
- Tatton, J. (2005). Emotional intelligence or emotional negligence? Develop Dimensions International: White paper

- Thomas, S., Tram, S., & O'Hara, L. (2006). "Relation of employee and manager emotional intelligence to job satisfaction and performance". *Journal of Vocational Behaviour*, 68(3), 461-473.
- Zeider, M., Matthews, G., & Roberts, R. (2004). "Emotional intelligence in the workplace: A critical review". *Applied Psychology: An International Review*, 53, 371-399.
- Zimmerman, B.J., Bandura, A., & Martinez-Pons, M. (1992). "Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting". *American Educational Research Journal*, 29, 663-676.

BIOGRAPHICAL NOTE

Dr Ben Palmer, is Director of Research and Development at Genos Pty Ltd, Melbourne. He completed his PhD with the Organisational Psychology Research Unit at Swinburne University. From his PhD project, Ben and Professor Con Stough designed the first and only Australian developed test of emotional intelligence, the Genos Emotional Assessment Scale. Ben has made a significant contribution to the application and measurement of EI in the workplace. He has published several key articles on EI in internationally peer reviewed scientific journals and presented key lectures at international conferences.

Genos is proud to be a contributor to this special *Organisations and People* journal on Applications of EI in the Workplace.

genos

connecting hearts and minds

- Who we are—One of the world's leading providers of EI assessment tools and programs, focusing on practical EI applications in the areas of employee selection, development, and transition.
- What we do—With global partners around the world, we can help you connect the 'hearts and minds' of your people with proven methodologies to leverage positive EI behaviours in the workplace.
- Find out more—Visit our website for more information on our products and services. To become a Genos EI certified practitioner, contact us at our Worldwide headquarters in Sydney, Australia.

www.genos.com.au

Genos—Global Headquarters

Phone: +61 1300 443 667 Fax: +61 1300 720 658