Managerial and Leadership Competencies: A Behavioral Approach to Emotional, Social and Cognitive Intelligence

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Abstract
Development of competencies needed to be effective managers and leaders requires research and theory that can drive future scholarship and application. Competencies are defined and an overview is provided on research on competencies, their link to performance in various occupations, and their development. Emotional, social and cognitive intelligence competencies predict effectiveness in professional management and leadership roles in many sectors of society. In addition, these competencies can be developed in adults.

Key Words
Emotional Intelligence, Social Intelligence, Cognitive Intelligence, Competencies, Competency Development, Outcome Assessment

Competency research and applications arrived in 1970 in the quest for understanding the talent of people who are effective. It built upon earlier work on skills, abilities, and cognitive intelligence (McClelland, Baldwin, Bronfenbrenner, and Strodbeck, 1958; Campbell, Dunnette, Lawler, and Weick, 1970) and preceded the work on emotional and social intelligence (Salovey and Mayer, 1990; Goleman, 1998, 2006). Currently, the emotional and social intelligence competencies account for a substantial and important amount of the variance in predicting or understanding performance in competency studies (Boyatzis, 2008).

A competency is defined as a capability or ability (Boyatzis, 1982, 2008; McClelland, 1973, 1985). It is a set of related but different sets of behavior organized around an underlying construct called the ‘intent’. The behaviors are alternate manifestations of the intent, as appropriate in various situations or times. For example, a person can demonstrate these behaviors for multiple reasons or to various intended ends. A person can ask questions and listen to someone to ingratiate him or herself or to appear interested, thereby gaining standing in the other person’s view. Or a person can ask questions and listen to someone because he or she is interested in understanding this other person, his or her priorities, or thoughts in a situation. The latter we would call a demonstration of empathy. The underlying intent is to understand the person. Meanwhile, the former underlying reason for the questions is to gain standing or impact in the person’s view, elements of what we may call demonstration of influence.

This construction of competencies as requiring both action (i.e., a set of alternate behaviors varying according to the situation) and intent called for measurement methods that allowed for assessment of both the presence of the behavior and inference of the intent. In the first 20 years of this research, the competencies were documented from behavioral work samples, videotapes of simulations, or direct observation.

To identify, define and clarify each competency, an inductive method was used (Boyatzis, 1982, 2008). Work performance or effectiveness criteria were developed for many job studies. A sample of outstanding or superior performers was identified. Another sample of ‘average’ or ‘poor’ performers was also identified from the remaining population depending on the objectives of the study. The criterion sampling was crucial for this inductive method to work. While work output data was best, like sales, profits, waste reduction, or new products launched, often jobs need something else.

For many management and staff jobs, nominations were developed to add to any output measures available.

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Nominations were collected from multiple perspectives: from boss’s (i.e., people in jobs one or two levels about the target job being studied); from peers which included the people who would be in the eventual sample; and subordinates. Nominations have been shown to be better predictors of performance than ratings (Lewin and Zwany, 1974) or performance appraisal results (Luthans et al., 1988). Typically, three or more sources of effectiveness are collected to obtain a consensual determination of distinctively effective people.

In most competency studies, the sample of ‘outstanding’ or ‘superior’ performers is developed, people are identified by multiple individuals from each of multiple sources of nominations and output data or morale climate scores (Boyatzis, 1982, 2008; Spencer and Spencer, 1993). They are typically the top 5–7 per cent of the population. In other competency validation studies, the output and/or nomination criteria were collected and analyzed against competency data for everyone with continuous statistics. This was easier once 360, informant-based surveys were used rather than the Behavioral Event Interview, direct observation, or videotapes of simulations.

To collect the behavioral data, a modification of the critical incident interview (Flanagan, 1954) was adapted using the inquiry sequence from the Thematic Apperception Test and the focus on specific events in one’s life from the bio-data method (Dailey, 1975). The method, called the Behavioral Event Interview (BEI), is a semi-structured interview in which the respondent is asked to recall recent, specific events in which he or she felt effective (Boyatzis, 1982; Spencer and Spencer, 1993).

The contention that these interviews were getting an accurate recording of the person’s behavior (and internal thoughts while doing it), came from multiple sources. First, the critical incident methodology is well established to record behavioral details of events. Second, autobiographical research (Rubin, 1986) has shown the accuracy of recall of events is increased dramatically when the events are: (1) recent; (2) have a high valence or saliency to the person; and (3) the recall involves specific actions. Third, by keeping the events recent and of high saliency (i.e., effective or ineffective), and to solicit action details by the interview protocol were believed to maximize accuracy. The interviewers were trained with repeated practice, supervision and review of audiotapes. They were trained to ask for behavioral details and occasionally ask what the person was thinking or feeling. All of these conditions were incorporated into the BEI.

The responses are audiotaped and transcribed and interpreted using a thematic analysis process (Boyatzis, 1998). Thematic analysis is a process for ‘coding’ raw, qualitative information, whether in written, video or audio form. Through the use of a ‘codebook’ articulating specific themes and how to identify them, the researcher is able to convert open-ended responses or unstructured responses and behavior into a set of quantified variables for analysis. The method has been used in numerous studies showing predictive validity of the competencies demonstrated by the person during the events as coded from the interviews (Boyatzis, 1982; Spencer and Spencer, 1993; McClelland, 1998). Later, informant assessment through 360 or assessment centre and simulations coded by reliable ‘experts’ are essential.

Because the competencies are derived from performance inductively, they reflected effective job performance. Since they were identified and articulated in terms of the actions and intent, they are a behavioral approach to a person’s talent.

A theory of performance is the basis for the concept of competency. The theory used in this approach is a basic contingency theory, as shown in Figure 1. Maximum performance is believed to occur when the person’s capability or talent is consistent with the needs of the job demands and the organizational environment (Boyatzis, 1982). The person’s talent is described by his or her: values, vision, and personal philosophy; knowledge; competencies; life and career stage; interests; and style. Job demands can be described by the role responsibilities and tasks needed to be performed. Aspects of the organizational environment that are predicted to have important impact on the demonstration of competencies and/or the design of the jobs and roles include: culture and climate; structure and systems; maturity of the industry and strategic positioning within it; and aspects of the economic, political, social, environmental, and religious milieu surrounding the organization.

Outstanding leaders, managers, advanced professionals and people in key jobs, from sales to bank tellers, appear to require three clusters of behavioral habits as threshold abilities and three clusters of competencies as distinguishing outstanding performance. The threshold clusters of competencies include:

1) expertise and experience;
2) knowledge (i.e., declarative, procedural, functional and meta-cognitive); and
3) an assortment of basic cognitive competencies, such as memory and deductive reasoning.

There are three clusters of competencies that differentiate outstanding from average performers in many countries of the world (Bray, Campbell, and Grant, 1974; Boyatzis, 1982; Kotter, 1982; Thorton and Byham, 1982;
Luthans et al., 1988; Howard and Bray, 1988; Campbell, Dunnette, Lawler, and Weick, 1970; Spencer and Spencer, 1993; Goleman, 1998; Goleman, Boyatzis, and McKee, 2002; Koman and Wolff, 2008; Dreyfus, 2008; Williams, 2008).

They are:

1) Cognitive competencies, such as systems thinking and pattern recognition;
2) Emotional intelligence competencies, including self-awareness and self-management competencies, such as emotional self-awareness and emotional self-control;
3) Social intelligence competencies, including social awareness and relationship management competencies, such as empathy and teamwork.

Competencies can be considered to be a behavioral approach to emotional, social, and cognitive intelligence. They are defined in Table 1, as used in the ESCI and ESCI-U. To understand this, their empirical development must be understood in greater detail.

Competencies as Behavioral Manifestations

Emotional Intelligence, Social Intelligence, and Cognitive Intelligence (i.e., EI, SI, and CI) are convenient phrases with which to focus attention on the underlying emotional and social components of human talent. Sharma (2008) reviewed the history beginning with Spinoza and other philosophers before getting to Thorndike. Gardner (1983) conceptualized this arena as constituting intrapersonal and interpersonal intelligence- two of the seven intelligences. Salovey and Mayer (1990) first used the expression ‘emotional intelligence’ and described it in terms of four domains: perceiving, using, understanding and managing emotions. Other conceptualizations have used labels such as ‘practical intelligence’ and ‘successful intelligence’ (Sternberg, 1996), which often blend the capabilities described by other psychologists with cognitive abilities and anchor the concepts around the consequence of the person’s behavior, notably success or effectiveness. The major criticism of the EI concept is found in Matthews, Zeidner and Roberts (2002), but it often confuses the theoretical distinctions and the measurement issues.
Boyatzis and Sala (2004) claimed that to be classified as an ‘intelligence’, the concept should be:

1) Behaviorally observable;
2) Related to biological and in particular neural-endocrine functioning. That is, each cluster should be differentiated as to the type of neural circuitry and endocrine system involved;
3) Related to life and job outcomes;
4) Sufficiently different from other personality constructs that the concept adds value to understanding the human personality and behavior; and
5) The measures of the concept, as a psychological construct, should satisfy the basic criteria for a sound measure, that is show convergent and discriminant validity (Campbell and Fiske, 1968).

As a theory of emotional intelligence, we believe that there should be a link to neural (or possibly neuro-endocrine) functioning. If the theory claims that there are multiple components of this emotional intelligence, then these different components should have different neuro-endocrine pathways.

An integrated concept of emotional, social, and cognitive intelligence competencies offers more than a convenient framework for describing human dispositions (Boyatzis and Sala, 2004). It offers a theoretical structure for the organization of personality and linking it to a theory of action and job performance. Goleman (1998) defined an ‘emotional competence’ as a ‘learned capability based on emotional intelligence which results in outstanding performance at work’. In other words, if a competency is an ‘underlying characteristic of the person that leads to or causes effective or superior performance’ (Boyatzis, 1982), then building on McClelland’s (1973) earlier argument about the limits of traditional views of intelligence:

(a) an emotional intelligence competency is an ability to recognize, understand, and use emotional information about oneself that leads to or causes effective or superior performance; (b) a social intelligence competency is the ability to recognize, understand and use emotional information about others that leads to or causes effective or superior performance; and (c) a cognitive intelligence competency is an ability to think or analyze information and situations that leads to or causes effective or superior performance. (Boyatzis, 2009).

The Emotional Competency Inventory, version 2 (ECI-2) (i.e., the forerunner to the current ESCI) and the closely related university version (ECI-U) showed desired levels of convergent validity in confirmatory factor analyses.
for both the theoretical clusters (Goleman, Boyatzis, and McKee, 2005; Wolff, 2005) and empirical clusters (Boyatzis and Sala, 2004) in studies by Battista (2005) as well as Battista, Boyatzis, Guillen, and Serlavos (in press). In addition, a wide variety of validation studies showed strong and consistent validity in predicting or explaining life and job outcomes (Boyatzis and Sala, 2004; Wolff, 2005).

The latest version of the ESCI attempts to address the difference between coded behavior from Behavioral event Interviews and informant based 360 surveys. Construction of the ESCI (i.e., the informant, 360 survey of behavior) dropped the inclusion of all behavioral manifestations found in the earlier indicative validation studies. Some of the items are reflective of the competency, and some are formative, or as they were earlier called, alternate manifestations. To address the lack of context from the 360 informant (that the coded of interviews would have), a statement of the intent was incorporated into each item in the ESCI.

Meanwhile, Guillen, Saris, and Boyatzis (in press) revealed no statistically significant relationship between personality dimensions as measured by the NEO-PR and EI or SI competencies. Burkle (2000b) and Murensky (2000) showed small but significant correlations between selected personality dimensions as measured by the Myers Briggs Type Indicator and selected clusters of EI and SI competencies. These findings suggest that this behavioral, competency approach to EI and SI satisfy the third criteria mentioned earlier in this article.

In contrast, the model of EI offered through the MSCEIT (Mayer et al., 2003) has a total score of a person’s EI, two area scores of Experiential and Strategic, and branches within each area of: (a) Perceiving (with sub-tests of Faces and Pictures) and Facilitating (with sub-tests of Facilitation and Sensations); and (b) Understanding (with subtests of Changes and Blends) and Managing (with subtests of Emotional Management and Emotional relationships). It does not address the SI nor CI aspects of a person’s comportment. Although data from studies comparing these tests are underway, conceptually we would expect small correlations between these two different measures. The MSCEIT assesses a person’s direct handling of emotions, while the ESCI which is intended to assess the EI, and SI competencies described earlier assesses how the person expresses his or her handling of emotions in life and work settings.

**Competencies as Part of an Holistic Theory of Personality**

Even though competencies are being described as a behavioral and functional approach to EI, SI, and CI, they are part of an integrated, holistic theory of personality. The specification of a competency comes from the personality theory on which this approach is based. McClelland (1951) originally described a theory of personality as comprised of the relationships among a person’s unconscious motives, self-schema, and observed behavioral patterns. Boyatzis (1982) offered this scheme as an integrated system diagram that showed concentric circles, with the person’s unconscious motives and trait dispositions at the center. These affected, and were affected by, the next expanding circle of the person’s values and self-image. The surrounding circle was labeled the skill level. The circle surrounding it included observed, specific behaviors.

The synthesis of Goleman (1995) in developing the concept of emotional intelligence and Goleman (2006) into the concept of social intelligence provided yet another layer to this integrated system view of personality. In particular, Goleman’s synthesis introduced the physiological level to this model by relating findings from neuroscience, biology, and medical studies to psychological states and resulting behavior. The result is a personality theory, as shown in Figure 2, that incorporates and predicts the relationship among a person’s: (a) neural circuits and endocrine (i.e., hormonal) processes; (b) unconscious dispositions called motives and traits; (c) values and operating philosophy; (d) observed separate competencies; and (e) competency clusters.

This conceptualization of personality requires a more holistic perspective than is often taken. When integrating the physiological level with the psychological and behavioral levels, a more comprehensive view of the human emerges. The evidence of the causal sequence predicted in this personality theory is emerging but is slow due to the disparate nature of the different fields studying parts of the model. For example, arousal of a person’s power motive both causes and is affected by arousal of his or her sympathetic nervous system (i.e., SNS) (Boyatzis, Smith, and Blaize, 2006). When a person’s power motive is aroused, he or she is more likely to show behavior associated with a group of competencies called Influence, Inspirational Leadership, or Change Catalyst (Winter, 1973; McClelland, 1985). Boyatzis and Sala (2004) showed that these competencies form an empirical cluster of emotional and social intelligence competencies as assessed through the Emotional Competency Inventory and now Emotional and Social Competency Inventory (ECI, Boyatzis and Goleman, 1996, 2006). These competencies are shown more frequently when a person is operating from a Humanistic versus a Pragmatic Operating Philosophy (Boyatzis, Murphy, & Wheeler, 2000). When the power motive is aroused along with a person’s self-control at the trait level (McClelland & Boyatzis, 1982; McClelland, 1985), the stressful effects of inhibiting one’s urges add to the arousal of the SNS. The result is elevated blood pressure and
decreased levels of both immunoglobulin A and natural killer cells (i.e., basic indicators of the immune system). Relatively recent research has shown that arousal of the SNS is associated with neural circuits passing predominantly through the Right Prefrontal Cortex (Boyatzis, Smith and Blaize, 2006).

Further, it is now the contention of leading researchers in affective neuroscience and genetic expression that experience overtakes genetic dispositions in determining the biological basis of behavior once in adulthood (Williams, 2003). This would suggest that a person’s experience, and his or her arousal affects or rewires neural circuits and tendencies to invoke certain neuro-endocrine pathways. This offers support for the observation, or prediction in the proposed personality theory, that use of one’s competencies (i.e., behavior in specific settings in life) becomes an arousal that over time creates different dispositions, even at the biological level. Therefore, even the neuro-endocrine level of functioning can be captured in the definition and measurement of competencies as a form of EI.

Today’s Challenges in Competency Research

The competency or behavioral approach to EI, SI, and CI is derived inductively from performance. As a result, when competency validation studies were first conducted in various countries in the 1970s and early 1980s, it was observed that the same or quite similar competencies appeared as valid predictors of performance regardless of the country or culture (Spencer and Spencer, 1993). Further
research will help to reveal as to whether these are cultural differences emerging or they are merely the function of specific organizational samples. People conducting competency validation studies in many countries claim that the important, distinguishing competencies tend to be generic (Wolff, 2008).

Cultural relativism would suggest that specific items or certain behaviors may be reflective of the competency in a particular culture, but that other actions may reflect the competency in a different culture. The growing body of research on EI, SI, and CI would support the notion of the relationship to performance as universal (see collection of articles on EI in the special issue of Psicothema, 2006; and special issues of the Journal of Management Development in 2008 and 2009 on competencies), more research is needed to test the universality of competencies, the possibility of specific behavioural manifestations being different, and the universality of EI/SI/CI. In the midst of validation studies and the possible conceptual distinctions across cultures, one study has revealed a different challenge in cross-cultural research. The 5 or 7 point response scale typically used in the US, UK, Latin America and Asia does not seem to be as reliable as an 11 point scale in Europe (Batista, Saris, Guillen, Serlavos, and Boyatzis, in press).

A major advancement in understanding the effect of competencies on performance came from complexity theory. Instead of only asking the typical question, “Which competencies are needed or necessary for outstanding performance?” David McClelland, in a paper published posthumously in 1998 posed the question, “How often do you need to show a competency to ‘tip’ you into outstanding performance?”

Using this method, Boyatzis (2006) replicated significant findings regarding tipping points in an international consulting firm. The profits from accounts of senior partners were analyzed for seven quarters following assessment of their competencies. Senior partners using competencies above the tipping point more than doubled the operating profits from their accounts as compared to the senior partners below the tipping point. The measure of competencies was the average perceived frequency of use of each competency by others around the senior partner, using a 360 degree competency questionnaire. He showed that this method was superior to a simple median split or continuous analysis of the relationship between the frequency of competencies shown and financial performance of the senior partners, leaders, of this firm.

Knowing the point at which a person’s use of a competency tips them into outstanding performance provides vital guidance to managers and leaders. It helps those coaching others know which competencies are the closest to added value in stimulating outstanding performance. The tipping point is sometimes referred to as a trigger point.

The tipping point for each competency would be a function of the organization environment. For example, the manager of an office of a strategy consulting company would have a tipping point of Adaptability at the maximum level. To show sufficient Adaptability to be outstanding, he/she would have to be using it ‘frequently and consistently’. Their business, projects, and clients change each year. They typically have high turnover in consulting staff as well. Meanwhile, the manager of a basic chemical processing plant may have a tipping point of only ‘occasional or often’ of Adaptability. The certainty of their product line and predictability of their production processes does not create as much uncertainty as the consulting business. They probably have less turnover in the chemical plant as well, requiring even less adaptation to new staff. Analysis of tipping points should become a standard feature of competency assessment studies in the future.

Boyatzis (2006) also confirmed the earlier argument about the importance of clusters. It was shown that the dramatic increase in profit contributed to the company occurred when senior partners were using an assortment of the competencies from each cluster above the tipping point. It did not seem to matter which of the competencies were being used above the tipping point from each cluster. This allows for the differences in style observed from outstanding leaders while confirming the importance of competencies as predictors of performance.

One of the benefits of the behavioral approach to EI/SI/CI is that we enter a domain of human talent that can be developed in adulthood. Although the understanding of competencies themselves has been extended, perhaps the most important contributions in the last thirty years, have come about primarily in the last 15 years. The ‘honeymoon effect’ of typical training programs might start with improvement immediately following the program, but within months it drops precipitously (Campbell et al., 1970). Only fifteen programs were found in a global search of the literature by the Consortium on Research on Emotional Intelligence in Organizations to improve emotional intelligence. Most of them showed impact on job outcomes, such as number of new businesses started, or life outcomes, such as finding a job or satisfaction (Cherniss and Adler, 2000), which are the ultimate purpose of development efforts. But showing an impact on outcomes, while desired, may also blur how the change actually occurs. Furthermore, when a change has been noted, a question about the sustainability of the changes is raised because of the relatively short time periods studied.

The few published studies examining improvement of more than one of these competencies show an overall...
improvement of about 10 per cent in emotional intelligence abilities three to eighteen months following training (Goleman, Boyatzis, and McKee, 2002). More recent meta-analytic studies and utility analyses confirm that significant changes can and do occur (Morrow, Jarrett, and Rupinski, 1997). But they do not show the impact that the level of investment would lead us to expect nor with many types of training.

The results appear no better from standard MBA programs, where there is no attempt to enhance emotional or social intelligence. The best data comes from a research project by the American Assembly of Collegiate Schools of Business. They found that graduating students from two highly ranked business schools behavior, compared to their levels when they began their MBA training, showed only improvements of 2 per cent in the skills of emotional intelligence (Boyatzis, 2008). In fact, when students from four other high-ranking MBA programs were assessed on a range of tests and direct behavioral measures, they showed a gain of 4 per cent in self-awareness and self-management abilities, but a decrease of 3 per cent in social awareness and relationship management (Boyatzis and Saatchioglu, 2008; Boyatzis, Stubbs and Taylor, 2002).

A series of longitudinal studies underway at the Weatherhead School of Management of Case Western Reserve University have shown that people can change on this complex set of emotional and social intelligence competencies that distinguish outstanding performers in management and professions (Boyatzis, Stubbs, and Taylor, 2002). And the improvement lasted for years. Behavioral samples showed improvements of 60–70 per cent during the 1–2 years of the full time MBA program, 55–65 per cent improvement during the 3–5 years of the part time MBA program, and then leveling off at about 50 per cent improvement 5–7 years after entry into the part time MBA program. This was achieved by MBAs taking a course designed on the basis of Intentional Change Theory (Boyatzis, 2001, 2006).

The positive effects of this program were not limited to MBAs. In a longitudinal study of four classes completing the Professional Fellows Program (i.e., an executive education program at the Weatherhead School of Management), Ballou, Bowers, Boyatzis, and Kolb (1999) showed that these 45-55 year old professionals and executives improved on Self-confidence, Leadership, Helping, Goal Setting, and Action skills. These were 67 per cent of the emotional intelligence competencies assessed in this study.

**Conclusion**

The study of competencies opens the door to insights about humans and human talent, and potential applications for their development. Definitions, theory and empirical research have been reviewed and will be read in the articles in this special issue contending that a behavioral, competency approach to Emotional, Social, and Cognitive Intelligence satisfy important criteria as being forms of ‘intelligence’. Extending this into the arena of behavior competencies allows precision in observation, measurement and development of human talent and the realm of emotions. Adults appear to be able to develop competencies so vital to outstanding performance in management, leadership, and many other occupations and professions. But many more challenges remain for future research on competencies to explore, like cross-cultural relevance, tipping points and competency development.

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