



Distinguishing high-performing European executives

European executives

The role of emotional, social and cognitive competencies

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Abstract

Purpose – The purpose of this paper is threefold. First, to add to the empirical literature related to the validity and practical utility of emotional, social, and cognitive competencies in the workplace. Second, using data from two different European samples, to demonstrate the methods for validating competency models for applied use. Third, to discuss the impact of role demands and culture on the manifestation of competencies most predictive of performance.

Design/methodology/approach – The basic design used in both studies is to compare data from outstanding performers against data from typical or average performers in order to determine competencies which predict performance. The data presented here are based on operant assessment of competencies using critical incident interviews, which are then systematically coded using thematic analysis to yield behavioural evidence of specific competencies.

Findings – The results indicate that, while some competencies such as achievement orientation and team leadership are consistently linked to performance in both studies, the correlation of other specific competencies with performance varies among the samples. Moreover, the relative importance of specific competencies in terms of the amount of variance in performance explained also varies across the two samples.

Research limitations/implications – The criterion measures available, i.e. client ratings of performance, did not provide the continuous objective performance data that are generally considered preferable so as to provide a clearer picture of the value added by superior performance. A further limitation was that there was no opportunity to evaluate the effectiveness of the various initiatives which were put in place to improve managers' competencies after their initial assessment.

Originality/value – This is one of the few articles that explore the validity of competencies within the European Union across different organizations using a common competency framework and methodology. Both studies were originally initiated as applied consulting projects and the findings of the research applied to human resource practices within each organization. Although competencies are ubiquitous in today's global workplace, the number of published studies with data to support the validity of competency-modelling techniques has been limited. The current research adds to the growing literature in this area and adds to one's confidence in the ability of emotional, social and cognitive competencies to predict performance in a variety of settings and cultures.

Keywords Emotional intelligence, Critical incident technique, Competences, Assessment

Paper type Research paper



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Introduction

As organizations become more global and integrated, the motivation to develop flexible human resource strategies based on a common understanding of specific competencies that can assist in the identification, selection, and development of talent has been seen as a source of competitive advantage. The popularity of competency-based human resource applications has continued to grow both inside and outside the European Union (EU). However, the academic and applied research literature on competencies in the workplace has trailed application (Boyatzis, 2008). This has left the field open to criticism from some academics and left consultants and HR professionals with limited insight into how best to develop and implement competency-based applications. This is also the case in the emerging area of social and emotional intelligence competencies. However, research which has been conducted over the past 35 years (Boyatzis, 1982, 2006; McClelland, 1973, 1998; Spencer, 2001; Spencer *et al.*, 2008; Spencer and Spencer, 1993) has highlighted the validity and utility of competencies in predicting workplace performance across a variety of settings. Our objective in this article is thus threefold, first to add to the empirical literature related to the validity and practical utility of emotional, social, and cognitive competencies in the workplace. Second, using data from two different European samples, demonstrate the methods for validating competency models for applied use. Third, discuss the impact of role demands and culture on the manifestation of competencies most predictive of performance in diverse cultures.

Competencies, in both research and applied practice, have been defined in multiple ways which has led to several competing theories and methods which now exist under the generic title of competency. In our own applied work, we have found that the theory of competency originally put forward by David McClelland (1973) and then later refined by Boyatzis (1982) and Spencer and Spencer (1993) to be especially well suited for research and applied practice. In this tradition, competencies are defined as “underlying characteristics of the person that lead to or cause effective or superior performance” (Boyatzis, 1982). Competencies are thus framed as abilities related to motive and personality constructs that influence the frequency and intrinsic affective value associated with the execution of specific behaviours and cognitive-affective processes. In this way, competencies not only imply what an individual is capable of doing but what they want to do. Effective prediction of work performance would seem to require that both of these factors be taken into account. In this way, competencies differ significantly from abilities, because motives form a critical element of the theoretical framework. In other words, abilities inform you about what a person can do, while competencies provide insight into what a person can and will do.

As research on the biology of the brain and the neuropsychology of emotion has progressed, the term emotional intelligence competencies has often been used to describe the more intra and interpersonal aspects of competencies in the workplace. The concept of emotional intelligence, and more recently social intelligence, provide an accessible and convenient framework for describing human dispositions as well as offering a theoretical structure for the organization of personality and linking it to a theory of action and job performance (Boyatzis, 2008). Organized around the four major domains of self awareness, self management, social awareness, and relationship management, emotional competence is defined by Goleman (1998b) as an a “learned

capability based on emotional intelligence which results in outstanding performance at work”.

Research across hundreds of different companies and roles was synthesized into a generic competency dictionary (Spencer and Spencer, 1993) which gave researchers and practitioners a “guidebook” to the specific behaviours associated with competencies that have consistently predicted performance in previous studies. While open to the possibilities that new competencies might emerge, the Spencer and Spencer framework has provided us with a consistent and validated framework from which to conduct our own applied research. While the majority of competencies in this framework can be classified as primarily related to emotional or social intelligence competencies, more cognitive competencies are also included. Competencies such as analytical thinking, conceptual thinking, and expertise, represent important competencies that serve to characterize cognitive and technical abilities that are also key to providing a more comprehensive picture of work performance. In this way, the Spencer and Spencer framework serves to integrate social, emotional, and cognitive competencies into a parsimonious framework which provides an excellent starting point for applied competency research.

Other frameworks for predicting workplace performance

The growing interest in competencies comes from a growing dissatisfaction with traditional measures of cognitive intelligence and more traditional personality constructs to account for large amounts of the variance in job performance, especially among professional samples and among those in senior leadership positions. For example, a measure of cognitive intelligence, the scholastic aptitude test (SAT), was found to be unrelated to occupational success in law, medicine, teaching and business (Whitla, 1975). The conclusion of the authors of a more recent meta analysis of 151 empirical studies looking at the literature on the relationship between intelligence and leadership effectiveness was that “... results suggest that the relationship between intelligence and leadership is considerably lower than previously thought” (Judge *et al.*, 2004, p. 542). However, such findings seem in opposition to the conclusion of Schmidt and Hunter which found that “... the research evidence for the validity of general mental abilities for predicting job performance is stronger than that of any other method” (Schmidt and Hunter, 1998, p. 264). While IQ and technical skills are often core requirements for entry into a given profession, once within the profession, such abilities may have limited utility in predicting superior performance due to range restriction (Emmerling and Goleman, 2003). In other words, in a land where everyone is relatively smart, being smart may not provide employees with a competitive advantage relative to their peers.

Traditional personality measures have also been put forward as an alternative to IQ when it comes to the prediction of work performance. In a recent meta-analysis of the role of Big 5 personality characteristics, personality had a multiple correlation of 0.48 with leadership, with extraversion having the strongest overall relationship (Judge *et al.*, 2002). However, like research on general intelligence, this research often uses ratings or estimates of performance rather than the actual performance metrics themselves. The tendency to equate “performance” with other constructs theorized, or correlated with leadership performance (e.g. leader emergence, psychometric ratings of “leadership effectiveness”, assessments of transformational leadership, etc.) has also

obscured the issue of the true relationship of these constructs to actual performance in the workplace. In addition, like cognitive intelligence, personality assessments because of their broad application to a wide variety of domains, represent a more general theory of psychological functioning versus a specific theory of work performance. Unlike cognitive intelligence and more general personality constructs, competencies, from their inception, have been primarily framed to be applied specifically to practical issues in the workplace.

As research continues to accumulate, what is becoming more clear is that research on traditional aspects of personality and cognitive intelligence leave much of the variance in work performance unexplained (Cherniss, 2001). Moreover, the theoretical orientation of these constructs would seem to frame them as static entities that are relatively stable over time. If this is the case, their applied utility would seem to limit their application to the realm of selection, as development of personality traits like Extraversion or aspects of IQ would seem difficult, if not impossible to achieve. Thus, their suitability as an organizing framework for human resource applications in applied settings would seem limited.

Measuring competencies using the critical incident interview

Central to any construct is the issue of measurement. One of the key tools in competency research has been the critical incident interview. The Critical Incident Interview is a flexible data collection protocol with a well-established research which supports its reliability and validity (see Boyatzis, 1982, 1998; Spencer and Spencer, 1993). As an operant measure of competencies, the critical incident interview allows researchers the ability to code competencies against established frameworks and dictionaries as well as discover and code new competencies. In our own work, this interviewing methodology has consistently shown good concurrent and predictive validity (Spencer, 2001; Spencer *et al.*, 2008). Critical incident interviewing asks interviewees about the most critical situations they have faced on their job: peak high points and peak low points. Probes are very specific but nondirective and attempt to determine specific competencies and how they were deployed as employees faced their most critical situations on the job. Interviews are recorded, transcribed and coded against established competency dictionaries with established behavioural indicators. The major drawback of this approach is that it requires skilled interviewing and reliable coding which requires extensive training to establish acceptable levels of reliability.

The fact that critical incident interviewing represents an operant, and not a respondent measure, is a defining feature of the methodology, and one that adds to its predictive validity. Assessments that rely on operant measures assess the behaviours people spontaneously exhibit, as opposed to respondent measures that ask individuals, or others, to respond to stimuli such as rating scales. Attempts over the last 35 years have attempted to construct self-report measures of motives, a core foundation of competencies, however research has consistently found operant and respondent measures of motives to be orthogonal constructs (McClelland *et al.*, 1989; Wilson, 1983). Operant measures of motives and competencies have been shown to be more predictive of what people will actually do than what they say they will do when asked to respond to a test item (McClelland, 1998). Moreover, competency models constructed using empirical research based on Critical Incident Interviews have previously demonstrated

greater predictive power when compared against models constructed using expert panels or respondent measures (McClelland, 1998; Spencer, 2003). “Twenty years of research have shown that at best, focus groups and expert panels are 50 percent accurate – but competencies they identify are not defined specifically enough to be reliably assessed” (Spencer, 2003, p. 17). However, in applied practice, models based on such methods often provide a starting point and opportunity to employ competency research to improve the validity and practical utility of models.

We now turn our attention to two separate research projects that took place within the context of multi-year consulting engagements within the European Union. In each case, two separate validation studies of competency models were conducted. We will also discuss the process of consultation and how the client organizations were able to develop interventions and programs as a result of research findings.

Background to case study 1: leadership development and succession planning

The client organization was a professional knowledge worker Firm experiencing high rates of growth in the European Union. This growth required that the Firm be able to identify a pool of managers who were considered to have the potential to be promoted to greater levels of responsibility within a time period of approximately one to three years. As part of this evaluation process, the firm wanted to assess managers’ competencies in relation to the more senior role they would be required to fill.

Establishing the initial model. In response to the needs of the Firm, the parent Headquarters had developed a global competency model/framework. In an effort to make this model more applicable to the intended Critical Incident Interview assessment, it was mapped on to the competencies with their corresponding behavioural indicators as described in competence at work (Spencer and Spencer, 1993), as well as other examples from the literature, e.g. the competent manager (Boyatzis, 1982) and the emerging area of emotional intelligence, as documented in working with emotional intelligence (Goleman, 1998). This step was necessary, as some of the original behavioural descriptions in the model were more akin to statements of job tasks. The existing model contained statements which referred to what had to be done, for example “facilitate meetings effectively”, but did not include specific behavioural descriptions of how to facilitate a meeting effectively. Also there was a tendency to mix several competency indicators together in one competency, when previous competency studies would support separating specific behaviours into different competencies along theoretically sound lines. Both of these factors, if not addressed, would have made reliable and valid assessment of competencies more difficult.

Competencies were also behaviourally scaled with specific behavioural indicators that represent the specific thought process or behavioural indicator that could then be reliably coded by expert raters. As the level of the competency increases the behavioural complexity also tends to increase. Table I shows how the teamwork and collaboration competency is scaled. Each competency is given a general definition to distinguish it from other competencies. In addition to the definition, specific behavioural indicators are given so that judgements can be made regarding what level of that competency managers have demonstrated by a specific behaviour or series of behaviours. As can be seen, while general cooperation or simple sharing of information

Table I.

Example of a scaled competency which demonstrates how increases in understanding and behavioural complexity related to a competency translate into higher levels of that competency

Level	Behavioural description of level
1	Cooperates: participates willingly and supports team decisions, is a "good team player," does his/her share of the work
2	Shares information: keeps people informed and up-to-date about the group process, shares all relevant or useful information
3	Expresses positive expectations: expresses positive expectations of others in terms of their abilities, competence, expected contributions or speaks of team members in positive terms
4	Solicits input: genuinely values others' input and expertise, is willing to learn from others (especially subordinates). Solicits ideas and opinions to help form specific decisions or plans. Invites all members of a group to contribute to the process
5	Empowers others: publicly credits others who have performed well. Encourages and empowers others, makes them feel strong or important
6	Builds the team: acts to promote a friendly climate, good morale and cooperation (e.g. holds parties and get-togethers, creates symbols of group identity). Protects/promotes group reputation with outsiders
7	Resolves conflicts: brings conflict within the team into the open and encourages or facilitates a beneficial resolution of conflicts

Notes: Adapted from *Competence at Work*, Spencer and Spencer (1993); Teamwork and cooperation: implies the intention to work cooperatively with others, to be part of a team, to work together, as opposed to working separately or competitively. For this competency to be effective, the intention should be genuine. Teamwork and Cooperation may be considered whenever the subject is a member of a group of people functioning as a team. "Team" broadly defined as any task or process-oriented group of individuals

are relatively basic behaviours, resolving team conflicts is believed to be a more complex behaviour and thus evidence of a higher level of teamwork and cooperation.

The mapping process consisted of taking each statement in the original model and mapping it on to the particular competency and level that it seemed to best fit. This process revealed that 12 competence at work competencies were the most frequently represented in the client's original model. A benchmark target level was set, based on expert opinion, for each of the 12 competencies that were thought to be appropriate given the nature of the senior manager role in question. As the number of managers passing through the programme increased, benchmarks were also provided for competency frequency based on initial examination of data from managers' critical incident interviews. These were based on the average of the total cumulative number of managers for whom data was available in the particular year that a manager entered the programme. Ultimately an ideal frequency level (i.e. the number of times a given competency should be demonstrated during the interview) was also set based on the ongoing statistical analyses of data from critical incident interviews that were conducted. In an effort to better validate the current version of the competency model, the client sanctioned a formal analysis of data from the critical incident interviews as outlined in the next section.

Research design and methods

Study number 1A

This empirical study utilized a criterion sample design and involved the collection and analysis of data using critical incident interviews. The study was conducted as part of

an ongoing consultation related to assessing and developing leaders at the firm. The study was designed specifically with the aim of validating and improving the predictive validity of the leadership competency model as it related to key performance measures important to the firm.

Sample

The sample comprised those managers that the firm had identified through its internal nomination procedure as being suitable for consideration for promotion at some point in the future, i.e. from one to three years. Of these managers, $n = 17$ were selected based on the fact that they had actually been promoted. A group of $n = 30$ managers that were not promoted served as a comparison group for this validation study.

Measure

Critical incident interviews were conducted with each nominated manager prior to their formal appearance at the firm's promotions board. Each interview was approximately 1.5 hours in length and each interview was tape recorded and professionally transcribed verbatim for later coding and analysis. During the interview managers were asked to describe between three to four specific incidents in which they felt they were especially successful. Interviews were coded against the specific competencies and competency levels for all the competencies in the revised version of the firm's model which had been modified to reflect several of the competencies as defined by Spencer and Spencer (1993).

Analysis and results

The first analysis used T-tests to determine which of the competencies in the model would differentiate those who had been promoted $n = 17$ as opposed to those who had not been promoted $n = 30$. A priori target levels had been established based on expert opinion and qualitative data from previous interviews as to the desired maximum level to be demonstrated. The results of this analysis showed that 5 of the 12 *a priori* target levels differentiated the promoted group from the not promoted group at significance levels ranging from 0.03 to 0.08 two tailed. These results are shown in Table II. As can be seen below, in three cases, impact and influence, initiative, and customer service orientation the level above the a priori target level positively differentiated the two groups. Similarly in the case of achievement orientation and self-confidence the level below the target level positively differentiated the two groups. The level of relationship building that positively differentiated the two groups were two levels less than the hypothesised level. There were no significant relationships found for any level of conceptual thinking.

Study number 1B

At a later point in the consultation with the professional knowledge worker firm, performance rating data were made available by the firm for a small sample of managers who had been promoted and had been in their new position for approximately one year. The intention for the second study was to determine if competencies measured using critical incident interviews could predict performance ratings at a future time. In this sense, Study 1B can be considered a predictive validity study.

Table II.

Actual competency indicator level differentiating promoted versus non-promoted managers compared with hypothesized target level

Competency	Target level hypothesized	Differentiating level – actual	Significance level
Achievement orientation	7	6	0.08
Concern for order	5	5	0.05
Initiative	7	8	0.05
Interpersonal understanding	3	3	0.08
Customer service orientation	8	9	0.10
Impact and influence	6	7	0.07
Relationship building	6	4	0.08
Developing others	8	8	0.03
Team leadership	6	6	0.03
Teamwork and cooperation	7	7	0.05
Conceptual thinking	4	NA	NA
Self-confidence	5	4	0.03

Sample

The sample for study 1B was comprised of managers (n = 15) which had recently been promoted and had been in their new position for 1 year or more. This sample included 5 females and 10 males.

Analysis and results

As in the previous study, competencies were measured using the critical incident interview procedure. Due to the small sample size a simple correlation study was conducted to determine the strength of the relationship between the competencies in the original model using the average level as the independent variable with the performance rating after their promotion as provided by the firm. Average level was calculated by averaging various levels of a specific competency demonstrated by an individual during the critical incident interview. In this second analysis, the firm's own performance management metrics that were currently being used to assess performance in the senior manager role were used as the dependent variable. This measure consisted of a four factor evaluation using a five-point rating scale filled out by the manager's boss.

The four factors covered financial performance, management of people, customer focus, and a fourth factor of interest to the client. These four factors combined to give an overall rating of performance. The post promotion performance data supplied by the firm were analysed in several ways. First the performance ratings for each of the four factors were analysed to determine the extent to which they themselves were correlated with each other. Exploratory factor analysis showed that the first three factors loaded strongly on the overall rating. Whereas the fourth factor loading was less strong. For the purposes of the analysis, it was decided to drop this factor. A new dependent variable factor that combined financial, people, and customer data was introduced which correlated strongly with the overall rating. These relationships are shown in Table III.

The next step was to determine the extent to which the 12 competencies in the model were associated with the various performance ratings. These results are presented in Table IV. The competency score used was the average level demonstrated during the critical incident interview. For example, if an individual demonstrated Interpersonal understanding twice at level 2 and twice at level 4, their average level demonstrated during the interview would be 3 for Interpersonal understanding.

The strongest relationships have been plotted for the average level of each competency in the model against each of the performance measures. Given the small sample size and the exploratory nature of this analysis, correlations equal to or greater than 0.20 were considered relevant. As can be seen, various patterns of the competencies average levels were associated with the different performance measures. For example, for the financial measure, it was found that the average levels coded from the critical incident interviews for achievement orientation, teamwork and cooperation, team leadership and self-confidence each had relatively strong correlations with this outcome measure. From this analysis it can be seen that initiative and developing others would appear to be important competencies in relation to measured performance. A possible explanation is that since the firm was operating in a high growth environment, initiative, in the sense of recognizing and acting to exploit opportunities was therefore a valued competency. Similarly, in a high growth environment, retention of key staff was also an important issue. Managers demonstrating behaviours related to developing others were likely able to positively affect retention and thus deliver better overall performance.

Subscale	1	2	3	4	5
1. Financial	–	0.25	0.31	0.61	0.75
2. Client	0.25	–	0.48	0.67	0.71
3. People	0.31	0.48	–	0.68	0.79
4. Overall	0.61	0.67	0.68	–	0.87
5. F + P + C + (1,2,3 above)	0.75	0.71	0.79	0.87	–

Table III.
Intercorrelations between performance measures. Managers ($n = 15$)

Competencies	Performance outcome measures				FCP
	Financial	Client	People	Overall	
Achievement orientation	0.22	0.36	–	–	–
Concern for order	–	–	–	–	–
Initiative	–	0.61	0.64	0.75	0.60
Interpersonal understanding	–	–	–	–	–
Customer service orientation	–	–	–	–	–
Impact and influence	–	0.32	–	–	–
Relationship building	–	–	–	–	–
Developing others	–	0.59	0.34	0.50	0.39
Teamwork and cooperation	0.25	–	–	–	–
Team leadership	0.44	–	–	–	0.29
Conceptual thinking	–	–	0.38	0.21	–
Self-confidence	0.47	–	–	–	0.20

Table IV.
Competencies that correlate with performance outcome measures. Managers ($n = 15$)

These findings need to be considered tentative given the small sample size and the exploratory nature of the analysis. However, the analysis did serve as a limited validation of certain aspects of the competency model and allowed the organization to continue to focus selection, recruitment and training related to those specific competencies. In the case of the Firm, the most pressing need was to use this data to help with their on-going succession planning efforts and the development of the next generation of senior leaders in the firm. How this was accomplished will now be discussed.

Discussion of applications of the competency model

Since the firm was experiencing rapid growth within the European Union, the development of additional leadership capacity was seen as a strategic imperative by the firm. Managers being considered for promotion to more senior positions within the firm were assessed using the critical incident interview. This was done one to three years prior to when the individual manager would be considered for promotion. The idea being that if the critical incident interview assessment revealed any major gaps in a manager's profile, compared to the competency model, then remedial action could be taken before meeting with the promotions board.

Managers being considered for promotion were assessed against the benchmarks in the model and provided with a feedback report that showed the results of their critical incident interview in both chart and narrative form. The charts showed the maximum level reached for each of the 12 competencies as coded in their critical incident interview as well as the average level for each competency. The total frequency for each of the 12 competencies was compared to a benchmark and the distribution of frequency by level plotted so that participants could see the relative frequency of occurrence across the various levels of each competency.

Finally for each piece of behaviour coded, categorised by competency and level from the critical incident interviews, the task being worked upon was also identified. This was done to show the context within which the behaviour occurred and was presented in narrative form in a written assessment report for the managers to review. The tasks that had been coded from the interviews were then grouped under a series of headings where it was thought that the tasks were similar. A task competency matrix was then prepared so as to indicate the frequency of occurrence of the various competencies in relation to the task groups. It was thought that this would be of benefit to the firm in terms of understanding which competencies showed up most frequently in relation to different task areas of the job and also to provide a source of development activities in the sense that participants could be assigned to areas requiring performance on tasks in the task group so as to allow them the opportunity of developing the related competencies.

The feedback of competency data was conducted by the client HR personnel and development plans were written, agreed upon, and implemented to close any gaps. A development coach or mentor was also appointed by the client to help participants with the implementation of their development programme.

A resource guide was made available by the client's HR department as part of this process which included examples of the target levels as well as the level or levels immediately below the target. These examples were taken from actual job behaviour captured in the critical incident interview. Participants could then see what the ideal

behaviour would look like in real job situations. In addition, participants could enrol in appropriate courses offered within the Firm or could take on a project or assignment which called for the particular competency they wished to develop. This is where the information in the task competency matrix referred to earlier was able to be used. In this way, participants had several months to try to close any gaps in their competency profile before appearing in front of the promotions board.

Members of the promotions board, who were themselves senior leaders in the Firm, were given familiarisation training by the consultants in a one-day workshop which covered topics related to how to recognise the competencies in the model and how to use probing questions to elicit information about a manager's behaviour with respect to a specific competency. This was done to help the promotion board in making their final assessment of a particular candidate. They were also provided with various other materials to help them with the assessment/selection task. These were designed and prepared by the client's own Human Resource team members.

Case study 2: high potential assessment

Background to case study 2

The second client organization, a fast moving consumer goods company, was also operating within the European Union. The background to the study described below was that the client had introduced a high potential programme and required that critical incident interviews be conducted with each participant so as to provide input into their individual development plans. Similar to the process in the previous case, a first draft of a competency model was developed based upon expert opinion and data from critical incident interviews conducted on early participants in the organization's high potential program. After the program had been running for approximately three years it was decided to evaluate the high potential group's competency results against another group of managers, for whom critical incident interview data was available but who were not in the high potential programme. This empirical study utilized a criterion sample design and involved the collection and analysis of data using critical incident interviews. The study was conducted as part of an ongoing consultation related to the assessment and development of high potential leaders at the company.

Research design and methods

Sample and procedure: study 2A

The sample comprised a group of managers ($n = 44$) who had been nominated by the client to participate in their high potentials programme. The comparison group ($n = 62$) comprised those managers who had participated in other programmes but were not in the high potential programme. Individual critical incident interview data was available for each of these groups. Similar to the previous case study, managers were asked to describe in detail three to four success stories. Interviews were tape recorded and transcribed verbatim for analysis by expert coders. The study compared the two groups to see which competencies differentiated them. Comparisons using t-tests were made on the basis of average level of competencies, frequency of occurrence as recorded in the critical incident interviews, and a measure called value which was computed by multiplying average level by \times frequency. For example, a manager whose interview was coded for initiative 2 times at level 2, one time at level 4, and 2 times at level 5 would have a value score of 18 for Initiative.

Results

Study number 2A

T-tests were conducted comparing average level, frequency and value of the top 12 competencies assessed through the use of the critical incident interview for the high potential group n = 44 and a comparison group of managers n = 62 for whom critical incident interview data was available from other programmes in which they had participated. However, these managers were not in the high potential group. The results of this study are shown in Table V.

Of the top 12 competencies in the initial model, nine were found to differentiate the high potential group from other managers on two or more of the three calculations made on the critical incident interview data. In addition, it was found that two other competencies also differentiated the two groups. The competencies directiveness and conceptual thinking had not been included in the original model. The analysis shows that achievement orientation, initiative, teamwork and cooperation, and team leadership best differentiated the two groups on all three measures. This seems reasonable given that the client was attempting to grow and expand its penetration of its markets that called for goal setting and opportunity identification. Additionally, the fact that most operational groups were comprised of both expatriates and local staff who were less experienced could help explain the need for direction setting and team building behaviours.

Discussion of applications of competencies within the organization

Because the initial need of the client organization revolved around performance management, prior to conducting the study mentioned above, a 3-day workshop was designed for managers. Incorporated into this was a planning process model which allowed the managers to first develop an appropriate vision for their unit as well as an outline of their strategy. The managers then were able to break this down into the key tasks, and then the behaviours that would be required to implement their strategy as planned. The objective being that if a manager was to conduct an effective performance appraisal then this should cover both performance upon key tasks, that is what had to be done in relation to meeting the strategic objectives and goals for their

Competency	Avg. Level	Frequency	Value
Achievement orientation	X	XXX	XXX
Concern for order	XX	X	X
Initiative	XXX	XXX	XXX
Information seeking	X	XX	XX
Impact and influence		XX	X
Developing others	X		X
Directiveness		XX	X
Teamwork and cooperation	XXX	XXX	XXX
Team leadership	XXX	XXX	XXX
Analytical thinking		XXX	XXX
Conceptual thinking		XXX	X

Note: X = Significant at 0.10; XX = Significant at 0.05; XXX = Significant at 0.01

Table V.
Competencies which differentiate high potential managers (n = 44) from typical managers (n = 62)

unit, as well as how performance on tasks should be delivered, which was covered by the behavioural aspects of competencies.

In order to familiarise the managers with this process, a Critical Incident Interview was conducted with them prior to the workshop and the results fed back to them, in a fashion similar to the previous case. This gave them an indication of how, with respect to their own job, their own behaviour led to successful accomplishment of key tasks, which in turn led to the attainment of their own key objectives. It was thought that by experiencing feedback in this manner they would be better equipped to deliver similar feedback via the performance appraisal system to their subordinates.

These workshops were conducted over a period of approximately three years at a central location within Europe to which managers from various countries within the European Union came for training. As the programme continued to be rolled out, it became apparent that the competency-based approach could be applied within other areas which were of interest to the organisation. One of the first of these was to develop and run a series of top team workshops that were conducted within the countries themselves. The content was based on the same planning process model used in the performance appraisal programme, but in this instance one member of the consulting team would visit senior managers within their countries prior to the workshop to collect information based on what the individual senior managers saw as their primary objectives and key tasks. This information was compiled into a matrix following the balanced scorecard format (Kaplan and Norton, 1996), and the numbers of tasks within each of the 4 major balanced scorecard perspectives were listed. The intent here was to see if in fact the scorecards were balanced prior to the workshop and the extent to which there was common agreement. The results of this exercise was presented in each case to the managing director of the particular country in which the workshop was to be held so that he or she had a clearer understanding as to the extent of agreement or disagreement among his or her senior functional managers prior to the workshop. The workshops then ran for three days in which the senior managers attending were given feedback regarding their own competencies, particularly as they related to the performance of their key tasks and attainment of objectives. A key feature of these workshops was to debate any differences among the senior management team about the allocation of tasks within the balanced scorecard format and where there was a need to identify and assign responsibility for additional tasks in order to ensure that the strategic objectives as laid down within the overall strategic plan were met. Throughout the workshop consultants attempted to link specific competencies to the successful implementation of strategic objectives being established during the workshop by senior management.

Several projects arose from these workshops that then had to be addressed and implemented by nominated members of the senior management team. One feature was to assign a functional head responsibility for organising a project not necessarily in his or her own function and report results back to the top team. This was thought to have been of value in broadening the outlook of some of the functional heads. In order to help them further develop their cross-functional leadership competencies which would then enable them to become more effective in their role as top team members where the need was to be more concerned with general management decisions than with those specifically related to the function for which they were responsible.

A further extension of the competency-based approach was to assess the competencies of the managers in the company's high potential group. Each year a number of managers entered this group and participated in a critical incident interview from which their competencies were assessed. Participants were given feedback on each competency utilising a four-point strength scale. For example, where the participant met or exceeded the target frequency and average level target then this was rated as a strength. Where the participant was two or more units of measurement under the targets then this was rated as an area where development was required. Individual development plans and programmes were then prepared by the client to address development needs.

Sample study 2B. As the consultation process with the consumer goods company progressed, a second study was then undertaken to determine which competencies would best predict membership in a group identified by the client as proven "star" performers, i.e. their managerial job performance had been consistently rated as being superior over a number of years. Information provided by this study would help the client with decisions regarding future promotions. At a later point in the programme, the client provided information regarding a sample of those managers ($n = 9$) in a particular senior job grade that they considered to be star performers, six of these managers had been through the high potential programme designed around the firm's competency model. All managers in the "star" group were male. This group of star performers was to be compared to another group of managers ($n = 68$) in the same senior job grade, but who were not considered "star" performers, so as to determine which competencies best differentiated star performers in order to plan for the future. The comparison group was made up of 60 males and eight females.

Analysis study number 2B. A structural equation model was produced using the value statistic (competency level \times frequency demonstrated during the critical incident interview) for the competencies as the independent variable. This analysis, as displayed in Figure 1, showed that a combination of six competencies could explain 35 percent of the variance in the dependent variable, which in this case was star performer rating. Five of these six competencies had also been found to differentiate high potentials from other managers within the company as described in the previous study. This provided further support for the model as being an appropriate framework upon which to evaluate promotion and selection decisions.

A noteworthy point from this analysis is that the critical incident interview assessments were spread over a one to five year period prior to the year in which the study was conducted. This was felt to demonstrate, to a certain extent, the effectiveness of competencies to predict or provide valid information over extended time periods. Additionally, this analysis also demonstrates that competencies from all major competency domains, i.e. emotional and social intelligence competencies as well as more cognitive and technical competencies, can potentially contribute to our understanding of workplace performance. In this sense, it is important to ensure that research methodologies and data collection procedures used in competency research are capable of capturing the full range of competencies.

Limitations of the studies

The criterion measures available, i.e. client ratings of performance, did not provide the continuous objective performance data that is generally considered preferable so as to

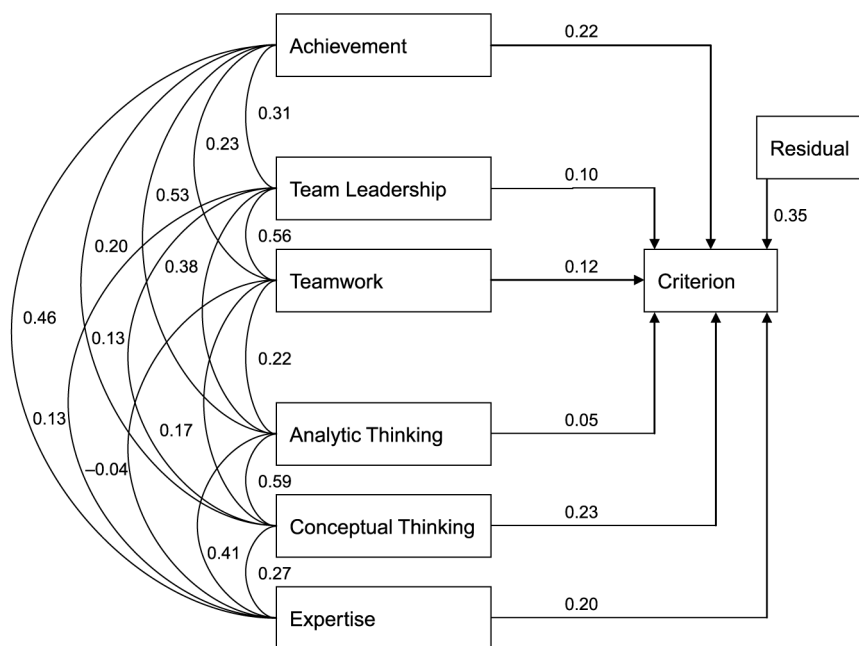


Figure 1.
Structured equation model
showing competencies
that predict star
performance ratings

provide a clearer picture of the value added by superior performance. This issue has been reported by Boyatzis (2006) and Spencer (2001). Also in some cases the sample sizes were smaller than normally would be expected for accurate results.

A further limitation was that there was no opportunity to evaluate the effectiveness of the various initiatives that were put in place to improve managers' competencies post their assessment. Future research should try to address these issues. Additionally, the real world demographics of today's multinational organizations makes cultural comparisons somewhat challenging. In the studies outlined above, participants came from a variety of geographic locations in the EU, and in some cases outside the EU, even though they were currently assigned to EU countries when data was collected from them. In this sense, it is not possible to make definitive statements regarding specific cultural differences related to the manifestation of specific competencies based on the data in these studies.

Conclusions

The studies described in this article show how competency models were initially developed in order to meet the immediate needs of clients, which of necessity were then based on the limited information available at the time. From a consulting standpoint it also demonstrates the "traction" that consulting projects can achieve when the contribution of competencies can be more meaningfully linked quantitatively to variables of interest to clients. These models were put into applied use and then when the data had accumulated to a sufficient level, further validation of the model became possible. These analyses confirmed much of the original models' capacity to differentiate superior performers from others as well as explaining a meaningful

amount of the variance in their future performance. As such, the studies hopefully show how even when under commercial pressure to develop competency models quickly, it is still possible to apply statistical analyses/techniques to validate and refine competency models retrospectively.

While much has been written about potential cultural differences and their impact on the expression of certain competencies in the workplace, our own data and experience would seem to suggest that, at least in the case of large multinational organizations, such differences might be overshadowed by the culture of the organizations themselves.

The studies outlined in the article serve to strengthen our confidence in the ability of emotional, social and cognitive competencies to be meaningfully applied and validated using empirical methods and that such methods have a fair degree of cross-cultural validity. These studies also serve to highlight the need to employ applied research methodologies capable of capturing a wide range of potential factors, while at the same time being flexible enough to capture the nuance of how emotional, social and cognitive competencies relate to specific tasks.

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