Confounded by Competencies? An Evaluation of the Evolution and Use of Competency Models

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Competency models are a key tool in human resource systems and practice. This article examines the origins and development of the competency concept, identifying three main approaches, the claimed benefits of implementing competency models, and their actual application in a sample of New Zealand organisations. The relationship of the competency construct to areas of research in I/O psychology is discussed. The claims made by some authors and the widespread support of generic competency models in HR information systems are not supported by independent research. There is scant evidence as yet to suggest that such models provide any incremental predictive validity over existing cognitive and personality measures for overall job performance. Inappropriate use of competency models is likely to confound their purpose. I/O psychologists must play a greater role in informing evidence-based practice in their implementation. An urgent research agenda is suggested.

Over the last ten years there has been a world-wide expansion in the use of competency models as a major underpinning of Human Resources (HR) strategy. The use of the competency approach is promoted by consultants and software vendors on the basis that this will improve both individual job performance and organisational effectiveness. Yet there is a substantial, and largely unquestioned, gap between the many claims and the actual benefits measurably delivered by competency initiatives. Industrial and Organisational (I/O) Psychologists are often involved in developing and implementing competency models, yet there is little research validating the approach. As scientist-practitioners, we should be concerned about this.

This article will review the theoretical perspectives that have informed the competency movement, review our experience of the use of competency models in New Zealand, and critically examine the assumptions that underpin their use. The research that exists is reviewed with particular reference to the outcome measures used to substantiate the value of competency models. Finally we identify various research areas and questions that should clearly be investigated by I/O psychologists if they are to be involved in the promotion, development and implementation of competency models in an organisational setting.

What is a competency? - Three main approaches

The numerous published definitions can be grouped into three distinct approaches: educational standards, behavioural repertoires, and organisational competencies.

1. The Educational Approach (The development of skills, achievement of standards, award of credentials)

The modern competency movement originated from the educational discipline. In the US 'competencies' were based on functional role analysis and described either *role outcomes,* or *knowledge, skills and attitudes,* or both*,* required for role performance, and assessed by a criterion, usually a *behavioural standard*. In the UK, industry bodies especially those requiring trades and technical skills, developed standards of occupational competence based on expected work outcomes (Fletcher, 1992). A 'competence' was defined narrowly as *an action, behaviour or outcome* to be demonstrated, or *a minimum standard*, with different levels of mastery defined by different statements (Bourke et al., 1975, Elam, 1971).

2. The Psychological Approach – (Behavioural repertoires)

In 1973 David McClelland, working in the educational field in the US, wrote a paper suggesting that personal competencies, which he defined as *motives* and *personality traits*, are a better means of predicting occupational success than traditional psychometrics such as IQ and aptitude tests.

McClelland's work was to be enormously influential. Of particular interest was the idea that the factors or inputs associated with individual success could be identified, and then taught to others. McClelland and Boyatzis

(1980) developed a methodology for identifying competencies, based on the skilled behavioural repertoires of recognised star performers within particular organisations. They defined competencies as "a generic body of *knowledge, motives, traits, self images* and *social roles and skills* that are causally related to superior or effective performance in the job." (p.369, italics added).

3. The Business Approach (Organisational competencies for competitive advantage)

The concept of competencies was taken up by business strategists in the late 1980s. Hamel and Prahalad (1989) advanced the idea of "Core Competencies" and "Capabilities". Their definition of core competencies as the "collective learning" of the organisation has been much cited, and contributes to the current interest in "competencies" (Shipmann et al., 2000). Thus Sparrow (1995) suggests that practitioners should aim at defining "higher level" future oriented organisational competencies.

What are the potential benefits of the Competency approach?

Performance benefits are promised by the various definitions which include the causal or instrumental relationship of competencies and job performance (Boyatzis 1982) and competencies and organisational performance. (Organ, 1988; Hamel & Prahalad, 1989).

In addition, Sparrow (1995) has observed that the competency literature includes a huge range of claimed benefits specific to HR processes in organisations. In summary, these are:

- improved recruitment and selection practices through a focus on required competencies;
- improved individual, organisational and career development programmes;
- improved performance management processes due to improved assessment; and lastly
- improved communication on strategic and HR issues through a common language.

What is a competency model?

Organisations adopting a competency approach must create or utilise a competency model, at minimum a simple list or catalogue, specifying desirable competencies. The structure of this model must support the use of competencies across the selected HR functions.

Models designed for selection and educational purposes usually describe technical competencies in terms of their antecedent skills and knowledge, at a detailed level. Those designed to promulgate behavioural repertoires and citizenship behaviours or organisational competencies typically describe competencies at a much higher level. Regardless of approach, a competency model should provide an operational definition for each competency and sub-competency, together with measurable or observable performance indicators or standards against which to evaluate individuals.

How do competencies link to other constructs used in I/O Psychology?

As pointed out by Shippmann et al. (2000) competency modelling is a huge trend in HR. While job analysis focuses mainly at the individual level, examining the specific knowledge, skills, abilities and other attributes required for individual job performance, much competency modelling represents an attempt to identify dimensions of performance applicable to many different roles and situations. Relevant to this is the extensive literature in I/O psychology representing many decades of research into factors associated with both job performance and organisational effectiveness.

O' Reilly and Chatman (1986) suggested that two distinct variables relate to job performance; firstly the in-role behaviours required in the job, and secondly prosocial behaviours which are not specifically prescribed in a particular role. Brief and Motowidlo (1986) identified 13 aspects of prosocial organisational behaviour (POB) defined as behaviours aimed at promoting the welfare of other individuals or groups within the organisation. Prosocial

behaviour is hypothesised to improve communications, job and customer satisfaction, and therefore organisational effectiveness. Aspects of both in-role and prosocial behaviours may be included within competency models. Organisational Citizenship Behaviour (OCB) is a similar construct which has spawned a considerable literature. Organ (1988) defined OCBs as individual behaviours, beyond that required in the role or job description, which, *in the aggregate*, contribute to organisational effectiveness.

Similar to O' Reilly and Chatman's model (1986), Motowidlo et al. (1997) have identified two elements of overall job performance: task performance, and contextual performance. The latter is essentially the socialisation, application and effort required to facilitate task performance, and is equivalent to OCB (Organ, 1997). Motowidlo et al. suggest that the activities involved in task performance are most likely to vary between roles, while those involved in contextual performance are often similar. Further, they propose that the antecedents or predictors of task performance are more likely to involve cognitive ability, while personality is more likely to affect contextual performance. Task performance includes the application of technical and task knowledge, and task habits, defined as characteristic responses to task situations (Borman et al 2001). Contextual performance includes behaviours and traits such as persistence and effort, volunteering, helping and co-operation, loyalty, policy and procedural compliance, endorsement and promotion of organisational objectives, initiative and self development (Borman & Motowidlo 1997). The many generic competency models and catalogues emphasise aspects of contextual rather than task performance.

Personality has also been related to job performance. The Five Factor Model of Personality includes a multidimensional factor of Conscientiousness, which describes aspects of effort and application (Anastasi 1997). This factor has been found to correlate with contextual performance, particularly in the aspect of Job-Task Conscientiousness, with overall performance across a wide range

of jobs, (Tett and Burnett 2003), and with career advancement (Viswesvaran & Ones 2000). This raises the question of whether investment in extensive competency models, addressing primarily contextual performance, provides any incremental utility.

The literature on organisational commitment distinguishes between three types of commitment, attitudinal commitment; belief in the organisation, instrumental commitment, given on the basis of perceived costs and benefits, and normative commitment, the result of socialisation procedures. (Mathieu & Zajac, 1990). This is relevant to the use of competency models to promote and reward behaviours which exemplify desired organisational values and core competencies.

Perceived organisational support (POS) is the extent to which employees believe that they are valued by the organisation. It is related to organisational commitment, and job performance. Rhoades and Eisenberger (2002) found fairness to be the most important factor in POS, followed by supervisor support. Colquitt et al (2001) summarise the elements of organisational justice as consistency of treatment between individuals and over time, the absence of bias, the accuracy of information, conformance to current ethical standards, a voice for affected individuals and groups, and a mechanism to review and correct flawed decisions. It is therefore important that competency models used for assessment and performance appraisal purposes are perceived by employees as fair.

How should competency models be implemented?

In an attempt to quantify the quality of competency models, Shippman et al. (2000) proposed a 10 point level of rigor scale in establishing competency taxonomies from job or competency analysis. This covered effective data collection methods, competency descriptor development procedures and quality requirements, links to business strategy, validation procedures, and documentation.

Attempts at model definition often canvas ideas from the wider organisation in order to create buy in.

Since there are potentially many ways of defining and phrasing competencies, this can lead to a long drawn out costly process, with results subject to the Abilene effect – you get what no–one disagreed with, not necessarily the best definitions.

The alternative, buying an off-the-shelf system, is likely to be cheaper up front, but may require ongoing effort from users to adapt it to fit their situation. Either way, once implemented, the competency assessment process carries a significant administrative burden, and organisations need to be assured that such investments are worthwhile

Yet there are major validity issues with the use of competency models, and as yet little evidence to support their claimed benefits.

Issues with the Competency approach

1. Construct validity – What is a competency – can a competency be operationalised so that it can be observed and measured?

The aim of construct validity is to assess whether a measure of an individual trait or characteristic actually measures what it is meant to. As with many psychological constructs, there is no real world aspect of competencies (Cronbach & Meehl, 1955). Establishing construct validity therefore requires finding a suitable proxy criterion of the construct (Ghiselli, Campbell, & Zedeck, 1981). This is clearly a problem for competencies, with a number of studies documenting disagreement between managers, staff and even experts asked to categorise operational definitions of competencies, usually example behaviours (American Management Association, 2003; Horton et al., 2002). This also illustrates the difficulty in using competency models to communicate, promote and reward organisational norms.

1a. *Content and Face validity – are competencies credible in organisations?*

A major problem with the use of competency models is the lack of agreement on what is meant by the term 'competency'. Sparrow (1995) has suggested that the interchangeable use of the various competency approaches

encourages organisations to "build and integrate HRM systems on a bed of shifting sand" (p.168).

So what should competency models comprise – that is, how can we be sure of their content and face validity? Content validity means that the descriptors of competencies are a representative sample of the universe of interest. Face validity means that the competencies themselves feel accurate and appropriate, as judged by their users. For any particular competency model, content and face validity are essentially subjective judgements. All those to whose roles they are applied are in a position to judge whether the competencies match their role. Thus content and face validity issues may arise despite the use of subject matter experts and regardless of how systematic information gathering methods may be.

Hayes et al. (2000) argue that it may be impossible to break down a competency into an exhaustive list of elements. This suggests that competency models will always be incomplete. They cite examples of studies where managers have not been able to describe all the competencies required for a role. Certainly the few behavioural statements in most generic competency models could not be regarded as exhaustive.

Associated with this is the difficulty in arriving at a suitable structure for a competency model. In defining competencies, Stuart (1983) highlights the trade off between universality and specificity, the bandwidth – fidelity problem, and between complexity and simplicity (see Table 1). Universal or generic competencies are those which are applicable across roles and organisations, whereas specific competencies are those particular to roles and organisations. Universal or generic competencies run the risk of being so broadly defined that they are not perceived by individuals as relevant. Competencies can be defined simply, as a headline plus a few sample behaviours, or they can be designed to cater for multiple levels of detail and mastery. While complex models permit more accurate communication of requirements, and evaluation, they can become an administrative burden.

In practice, the universal or generic approach is the most commonly adopted. As an example Tett et al. (2000) attempted to identify and validate a "hyper dimensional taxonomy of managerial competence". The many proprietary generic competency catalogues, also corresponding to Stuart's (1983) universal competencies, typically include management and OCB factors. Many of these competencies are so broadly defined that they subsume a mix of personality factors, motivation and cognitive abilities (Bartram, 2004). In a recent international survey, of the 28% of larger firms which had a competency catalogue, almost half were using proprietary software with generic competency libraries (Metagroup, 2004). Yet the one size fits all approach of generic competencies is unlikely to be appropriate for organisations working with different settings, different products and different customers (Chiabaru, 2000). As Stuart (1983) suggested, the more simple and the more universal the competency model, the less the perceived relevance at the individual level.

1b. Criterion validity - Can competencies be accurately measured?

An associated issue is that many competencies, especially those related to contextual performance, are defined in very broad terms, and with few performance indicators. In these cases it is unlikely that accurate evaluation is possible. This has implications for perceptions of organisational justice (Colquitt et al 2001), and perceived organisational support (Rhoades & Eisemberger 2002) which impact employee commitment to the organisation.

Apart from the inadequacy of measurement criteria, competencies are usually evaluated using self and supervisor ratings, and sometimes by peers as well. Thus, the assessment of competencies is likely to suffer from all the same reliability problems, such as rater bias, that the extensive literature records for performance appraisal in general (Fletcher, 2001).

Yet accurate measurement of competencies is a key issue, especially when evaluations are used in pay for performance schemes. A major pre-occupation of organisations is to accurately discriminate between different levels of success in order to ensure that "top talent" feels valued and is rewarded appropriately. For example, Hunter et al. (1990) found that in complex roles such as professional services, individual output can vary by a factor as much as 12 to 1 between best and worst performers.

Table 1. An illustration of competency modelling options using Stuart's (1983) framework

		Definitions	
		Simple	Complex
Competencies	Universal	*Quadrant 1* • High level • User-friendly • May not be perceived as relevant • Allows comparison across roles • Evaluation less accurate • Off-the-shelf purchase possible	*Quadrant 2* • High level • Complex structure, potentially difficult to use • More relevant to role • Allows comparison across roles • Evaluation more accurate • Customised solution
	Specific	*Quadrant 3* • Role specific/technical • User-friendly • No comparison across roles/ organisation • Evaluation accurate • Customised solution	*Quadrant 4* • Role specific/technical • Multilevel, complex structure, difficult to use • No comparison across roles/ organisation • Evaluation accurate • Customised solution

2. Validation of the competency model

A second major issue is the way that organisations have implemented competency models; that is adoption without validation (Shippman et al., 2000). Validation is important because competencies describe normative behaviours, behaviours the organisation wishes to promote and develop to enhance organizational effectiveness.

3. Predictive validity – do improved competencies predict improved individual job performance and/or improved organisational performance?

The third and major issue is the lack of evidence for benefits that result from adopting a competency approach. The underlying assumption of all competency initiatives is that individual skill development, exemplified by particular behaviours, will lead to improved job performance and, in turn, organisational performance. Barrett and Depinet's (1991) review of the research into competency measurement provided little empirical support for McClelland's (1980) claim that competencies are better predictors of job performance than traditional psychometric tests of mental ability.

Later Laber and O'Connor (2000) highlighted the lack of empirical research into the effectiveness of competency models. Our search of the literature reveals only a handful of studies investigating the link between competencies and objective job performance, leaving the situation largely unchanged four years later.

One of the many criticisms of the competency movement is the implicit confusion of competency and job performance. We suggest that this confusion has arisen through the language associated with the competency movement; the confusion of behaviours, knowledge and personality traits which are *inputs* to the job, with results or *outcomes*, objective job performance. Thus competencies are assessed by "performance" of behaviours deemed to be criteria of competence/competency. Illustrating this confusion, Campbell (cited in Bartram, 2004, p.5) states "Performance is behavior. It is something that people

do and is reflected in the actions that people take... Performance is not the consequence(s) or result(s) of action; it is the action itself" (see also Hackett, 2002).

This confusion of terminology has created an inherent circularity in the use of competency models. Competencies are identified using a variety of information gathering methods, behavioural criteria are defined, and then in the absence of objective measures of job outputs or performance, the subjective evaluation of the occurrence of these behaviours is assumed to equate to (job) performance and validate the competency construct itself. As an illustration, Mayer (2003) reports on a study examining whether health workforce competencies are predictive of essential service performance. He measured the relationship of self-assessed core competency levels and self-assessed service performance, defined as *frequency of performance of public health job tasks*, at a US metropolitan health department. He found that competency level had only a very modest association with what are essentially service performance *inputs*.

Hunter and Schmidt (1996) point out that there is little correlation between OCBs and *objective output-based* measures of individual job performance. However when supervisors estimate job performance, there is a high correlation between ratings of OCBs and their *subjective ratings* of overall job performance. They suggest this is because supervisors tolerate poor task performance in people with high levels of OCBs. Thus any association of generic competencies with job performance may be due to the weighting given by supervisors to OCBs (Johnson, 2001).

Last, Smith and Rutigliano (2003) provide evidence that different competencies predict performance across individuals in the same role. Surveys of top performing salespeople, assessed on performance outputs - sales results, show that most rate highly on only one or two generic sales competencies, which are not the same for all successful salespeople. In fact some successful salespeople rated very

poorly on some sales competencies. This indicates that the use of simple models of generic/universal competencies across individuals and organisational units may severely limit the benefits to be gained.

At the organisational level, Sparrow (1995) reports that most of the claimed benefits of competency models for HR systems and processes are based on anecdote or case studies where research methodology lacked rigour or was not reported at all. Currently the lack of validation studies means that the actual benefits are unknown.

The underlying assumption of competency models is, similar to OCBs, that individuals' outputs can be aggregated to represent the organisation (Borman & Motowidlo, 1997). Schnake and Dumler (2003, p. 295) point out that "aggregating individual measures to the group level for analysis changes variance, and may artificially inflate the correlations among variables, especially if these correlations are interpreted to reflect relationships at a different level".

Podsakoff and McKenzie (1997) have summarised the very limited research, four studies using small samples, into the association of OCB and objective measures of organisational effectiveness. Correlations between individual OCB factors and objective outcome measures, at the group level, ranged from .15 to .29.

Last, the competency approach assumes that causation flows from the individual to the organisation. However the reverse is also possible (Schneider et al., 2003). People may have higher competency levels *because* the organisation is more effective. Longitudinal and multiple baseline studies examining the effect of implementing competency models over time would help to clarify their effectiveness.

Research Aim

Given the concerns we have that competency models can be adopted without due consideration of structure or validity, we believe that, as I/O psychologists and scientist-practitioners, we should be taking a critical view of the use of competency

models in New Zealand. The first and third authors have consulted extensively with organisations to improve their performance management systems, working with numerous competency models. What follows is a summary of all the organisations that we have worked with and their use of formal competency models. Thus, while it is not a representative sample of NZ businesses, it has validity by being a total sample of our clients. We also include comments made by the NZ State Service Commission in their (2002) report on the use of competencies within public sector organisations.

Clients are attracted through limited marketing activity and client referrals. Over the past 10 years we have worked with a total of 54 clients, of which 40 are private companies and 14 are in the public sector. We have worked with a small number of clients for only a few months on a particular project, with most for between 1 and 3 years, and with others over the whole period. The average period being 2.4 years. Most of these organisations are larger employers, 39 (72%) employ more than 100 staff including 13 (25%) with more than 500 staff. 5 companies (9%) employ between 50 and 100 staff, 8 businesses (15%) between 20 and 50 staff and 2 (only 4%) have less than 20 staff. This sample clearly does not reflect the predominance of small business in New Zealand and is biased toward larger organisations which tend to have more structured human resource systems and processes.

How is the Competency Concept used in NZ?

1. Prevalence and approach

Overall within our sample 16 organisations, (30%), use formal competency models. This is consistent with international research. A recent international survey of 252 workforce management decision makers across small, medium and large businesses, found 28% had some kind of competency catalogue (MetaGroup 2004).

In our sample all but two of the firms using competency models are larger employers (100+), including all the firms with 500 or more employees, and, with the exception of the two

smaller firms, all have one or more HR staff. The two smaller firms are both in the hi-tech industry sector, and have no dedicated HR function. Of the 14 larger organisations almost all (11) are public sector or crown-owned enterprises. Thus of the 40 NZ private sector organisations with whom we have worked in the last 10 years, only 5 or 12.5% have, or are developing, any sort of competency model. The industry sectors represented in this group are primarily technical, financial services and manufacturing.

The other 87.5% of the private companies, those who are not using formal competency models, are firms of all sizes, over a range of industry sectors, including those sectors listed above. As might be expected none of the smaller organisations, with less than 100 staff, have dedicated HR staff. However there are also some larger organisations in this group with no HR staff. The biggest influence on the adoption of a competency model, then, in this private sector sample, appears to be the knowledge and approach of the organisation's HR personnel.

In our sample, of 14 public sector firms all but three, (85%), were using a competency model. This is consistent with the State Services internal stock-take in 2001 which established that 86% of Government departments use some kind of competency model (State Services Commission, 2002). The three organisations which are not using a competency model are all engaged in academic and/or research based activity.

2. Competency models

The New Zealand private organisations using competency models, consistent with overseas firms, emphasise generic management competencies and citizenship behaviours. Thus, in spite of their involvement in technology and complex service processes, with one exception (where a matrix of technical competencies was developed in-house), these businesses do not define specific technical and professional competencies.

The number of generic competencies in the competency lists of the private organisations varies from five to twelve. Many examples

of high level competencies are broad inclusive concepts. For example in the category of interpersonal citizenship behaviours, C*ommunication* is the most frequently cited competency, with T*eam working* and *Leadership* or *People/Performance Management* close behind. Organisational citizenship behaviours such as *Service, Integrity* and *Compliance* also appear frequently, and the Job-Task Conscientiousness performance factors such as *Executional Excellence, Disposition to Action, Productivity, Results Orientation, Functional Excellence, Leadership, Initiative* and *Personal Development* are frequently observed. These competency catalogues correspond to Stuart's (1983) category of simple and universal.

The same pattern is apparent in the public sector organisations. Although some of the public sector organisations have established more extensive competency models than the firms in our private sector sample, corresponding to the complex on Stuart's (1983) dimensions, competency lists are all heavily weighted with universal competencies. There is again particular emphasis on citizenship behaviours, for example *Communication*, *Teamwork*, and *Problem Solving*. Exactly as in the private sector we found a minimum of 5 and a maximum of 12 generic competencies. In the public sector four organisations also described some unit-specific competency requirements.

3. Implementation and validation of competency models

Generic competencies have been defined or selected as the result of suggestions from staff or consultants, adoption from other generic models, and a process of often extensive group participation, discussion and consensus. Organisational competencies or values, if in use, are identified through a similar process.

In the one case where the model comprised technical competencies, this was the result of a limited job analysis project undertaken by the organisation.

In the private sector, competencies are typically listed in catalogue form as headings. In one firm there is no elaboration; in the other four organisations competencies are elaborated by the use of descriptors,

sample behaviours or performance criteria. Samples of such descriptors demonstrate the common problem with competency definitions, namely the tendency to construct a smorgasbord of high level behaviours, knowledge, "to dos", abilities and characteristics that makes validation almost impossible:

"People Management
 Implement performance development systems .....
 Ability to get diverse groups working toward a common goal...."

"Functional excellence
 Demonstrate ability to build and manage relationships.......
 Negotiation skills......"

"Teamwork
 The ability to recognise the value of teamwork and to work co-operatively........
 Creates strong morale in the team
 Proactively identifies when others need assistance.........

Often competency lists include performance criteria or example behaviours that overlap with other competencies or that do not fit the category:

"Communication
 Follows departmental and organizational policies, procedures and practices"

These examples from New Zealand organisations illustrate the difficulty in effectively operationalising competencies, and the New Zealand State Services Commission (2002) noted in their report that the quality of the descriptors and the behavioural criteria used to assess competencies in the public sector was very variable.

Definitions of competencies are more complex in the Public Sector. While the headline competencies are similar to those in the private sector, there may be up to six sub-competencies, each with up to twelve associated behavioural criteria. Some systems also incorporate career steps or levels, so that desirable competencies vary according to levels in the hierarchy, either in the range of competencies required, and/ or in the descriptors.

"Results Orientation (Level X)
 People who demonstrate this competency organise their work or that of others to get results with

available resources ..... at this level skill in following up or control is important …...

In some models there are performance indicators for different levels of performance or mastery;

"Communication and Interpersonal skills… (performance indicators)

 Needs to develop skills in dealing with people in difficult situations

 Remains positive when dealing with people, even in difficult situations

 At all times remains positive when dealing with people, even in very difficult and frustrating situations.

In one case we observed 43 criteria, at varying levels, for one competency.

At the maximum level of complexity, in some models we have observed up to twelve competencies, each with three or four elements and up to twelve behavioural criteria. This results in a possible total of over four hundred criteria to assess per individual for a single role, a substantial administrative burden.

These systems fall into Stuart's (1983) second category of competency models (see Table 1) being universal and complex. Although potentially more accurate for evaluative purposes, they may be perceived as too complicated and impractical to use, an observation made recently by one organisation which discontinued the use of competency models in favour of role-specific outcome-based assessment. The NZ State Services Commission survey found that respondents viewed competency systems as "bureaucratic", and that the mix of technical and core or relationship (citizenship) focused competencies was found to be problematic (NZ State Services Commission 2002, p.4)

The tendency to define competencies by example behaviours (Hogan et al., 1998) is very evident in our sample. In fact 50% of those organisations using competencies defined them this way with no headline operational definition.

None of the private or public organisations in our sample have gone beyond the definition stage of the competency model. In other words neither the assessment criteria themselves,

if they exist, nor the hypothesised relationships to skill development, job performance or HR processes have been validated. Moreover, in most cases little or no objective job performance data is collected at the individual level. Thus, in the absence of such outcome-related data, competency assessments are accepted without question as valid and reliable measures of individual job performance.

4. Use and perceived benefits of competency models

Sparrow (1995) set out four key ways in which competencies are used: for recruitment and selection, performance management, development and for communication. The States Services Commission (2002) reports that, in Government departments, competency models were used for recruitment, for performance management and for the development of individuals and the organisation. Anticipated benefits were in establishing and communicating common standards to provide improved focus.

In our sample only 4 (25%) of the organisations with competency models actually referred to these competency definitions consistently in the recruitment and selection process. In most cases this is because the competencies are so broadly defined that they cannot be evaluated in the selection process. Despite all the research showing cognitive ability as an important predictor of overall job performance, in practice most hiring decisions across all these organisations are still based on informal, unstructured interviews, one of the least valid selection methods (Schmidt & Hunter, 1998).

All but one of the, mostly public sector, organisations with competency lists use them as part of a performance appraisal process. In our sample there is a strong emphasis on the appraisal of universal competencies for contextual job performance. 11 of the organisations using a competency model also appraise achievement of individual objectives, including those for personal development. In only two cases is there appraisal of outcome-based measures of task-specific job performance. The States Services Commission (2002) report notes that

most (63%) agencies combined the performance appraisal and individual development processes, thus making managers simultaneously judge and coach. In our client sample all but one (94%) combined performance management and formal individual development planning in the same process. Thus the major use of competency frameworks is a normative one, designed to shape behaviours towards organisational priorities.

With two exceptions, all the organisations in our sample using any kind of competency list used these only as a very general guide to planning staff development. The exceptions were one small private organisation and one large public sector organisation with well developed competency models addressing job specific skill requirements. The NZ State Services Commission (2002, p.6) reports that, despite the extensive use of competency models, processes for the internal identification of talent are "largely intuitive and ad hoc".

Lastly the promised benefits of strategic alignment and clarity of communication have not been objectively measured in any of our private sector sample. The NZ State Services Commission (2002, p.4) survey results indicate that respondents found the competency approach to "lack cohesive application across a diverse audience". Thus the use of competency appraisal as a mechanism to achieve instrumental and normative commitment to organisational values and core competencies may not be effective. There is also evidence that employees see the use of such models as "prescriptive and formula based" (NZ State Services Commission, 2002).

Clearly all of the utility and validity issues in using competency models that we identified earlier are present in our New Zealand sample.

Is it all worth it? The future of competencies - Where to next?

One of the key factors sustaining the interest in competencies in NZ, as well as elsewhere, is the fact that, as the nature of work is becoming more complex, skill requirements are overtaking the traditional distribution of ability in the workforce and creating a talent shortage. In a survey canvassing opinions of senior executives, 80% believed that the ability to attract, select and retain the best people will be the primary driver of business strategy by the end of this decade (Chiabaru, 2000). Yet most competency models do not address role specific and technical competencies at all.

From a strategic perspective Sparrow (1995) and Chiabaru (2000) have questioned the validity of the traditional retrospective methods of identifying competency models outlined by McClelland and Boyatzis (1980). Competency models must be forward looking to reflect the changing operational requirements of the workplace, yet making such models more technical in focus and more adaptive risks adding to their complexity.

As yet there is no evidence-based link between either task specific or citizenship competencies and performance measured by outputs, other than through the antecedent factors of General Mental Ability (GMA) and the personality factor Conscientiousness. Behavioural patterns expressed as a result of such enduring personal attributes are relatively difficult to change. It is clear that if competencies are to be used as a tool to promote, develop and assess behaviours associated with job performance, then there is an urgent need to improve the validity of the competency models in use.

Schmidt and Hunter (2004) have shown that the link between GMA and job performance is job knowledge. Job knowledge is a powerful predictor of job performance, and GMA facilitates the rapid acquisition of job knowledge. This implies that knowledge as an antecedent of competency needs to be given more prominence in competency models in order to better inform training, development and assessment decisions and resources. Competency models use a standards-based assessment methodology. Recent press items in New Zealand (e.g., Dye, 2005) have highlighted the difficulties in achieving accurate evaluations using standards-based assessment in education, especially in knowledge intensive domains, despite a massive investment in the system.

Apart from financial cost-benefit considerations, the impact of the competency approach on staff must be considered. Poorly implemented competency models are likely to have a significant cost in terms of their effects on organisational commitment, job performance and staff retention. A recent international survey (Aberdeen Group, 2004) found that the majority of employees find their performance appraisals are not constructive, do not help their performance or their capability development, and have no faith in the fairness of the evaluation.

I/O psychologists are well placed to establish the validity or otherwise of the competency approach, so that New Zealand organisations are able to assess and reap the expected benefits, or alternatively invest in more effective HR strategies. We propose that there are a number of steps I/O psychologists must take to improve the use of competencies in New Zealand.

Firstly, there is an urgent need to research the validity of the major assumptions that underlie both generic and specific competency initiatives. Does the use of competency models result in improved task specific and citizenship skills within the organisation? Do elevated levels of competency lead to improved job performance? Do improved competency levels in the aggregate lead to improved organisational effectiveness?

Secondly to investigate the credibility of competency models for employees and managers within organisations, their relationship to perceived organisational support, especially fairness, the supervisor relationship, and satisfaction with the performance management process.

Thirdly to critically evaluate and improve the construct and criterion validity of competency models in use within each organisation, so that competency information is more relevant, more role specific, more consistent and more accurate.

Conclusion

Our own experience in New Zealand matches the evidence here and elsewhere that competencies are a popular but often misused concept. While there is a generally acknowledged need for productivity and workforce skill development, the current use of competency models appears to be strongly weighted towards citizenship rather than technical competencies, and towards promotion of behaviours seen as furthering organisational values and core competencies rather than the assessment and development of technical skills.

We believe that the current approach to competencies has been confounded by over-simplified generic models. Instead of supporting capability development through diversity, the competency approach is being used to promote standardisation through prescription. We suggest that technology can now enable managers to do what has previously been too complex, that is to identify, acknowledge and capitalise on individual differences, thus building credibility, capability, and commitment within the organisation.

I/O psychologists, with their understanding of the complexities of variables affecting individual, group and organisational performance, must take a more prominent role in promoting a research-based approach to the HR use of competency models.

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