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EARLY IDENTIFICATION
OF
INTERNATIONAL
EXECUTIVES

**CEO Publication
G 96-12 (306)**

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July, 1996

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Abstract

This research extends the traditional approach to the early identification of executives by introducing the notion of ability to learn from experience. Drawing on the literature, the study created a measurement tool named "Prospector" for rating the potential of aspiring international executives in terms of both end-state competencies and the ability to learn from experience. Fourteen reliable dimensions were derived from the Prospector instrument: Sensitive to Cultural Differences, Business Knowledge, Courage, Brings Out the Best in People, Integrity, Insightful, Committed, Takes Risks, Seeks Feedback, Uses Feedback, Culturally Adventurous, Seeks Learning Opportunities, Open to Criticism, and Flexibility. The research also began to assess the validity of the Prospector dimensions in terms of current performance, executive potential, on-the-job learning, and international criteria on 838 lower, middle, and senior level managers from six international firms and 21 countries. The findings suggest that Prospector may have promise for use in the early identification of international executives.

The Early Identification of International Executive Potential

The careers of successful executives might be viewed as a series of increasingly demanding transitions and experiences (not necessarily orderly or hierarchical), each of which requires significant learning (Bennis, 1989; Dechant, 1990; Hill, 1992; Kotter, 1988; Kovach, 1994). Over time, the accumulation of this learning results in the development of the knowledge and skills necessary for effective executive behavior (; McCall, Lombardo, & Morrison, 1988). These "end-state" skills, frequently called managerial or executive competencies (Boyatzis, 1982; Lobel, 1991; Macleod & Wyndham, 1991; Quinn, Faerman, Thompson, & McGrath, 1990), are the product of numerous challenging job assignments, exposure to other people, mistakes, setbacks, and training experiences (McCauley, 1986).

Yet, executive identification and selection systems based on end-state competencies alone are likely to be double-edged. When they are carefully developed and connected to the business strategy, the resulting set of defined and internally accepted competencies can be invaluable (McCall, 1992). But because the origins of competencies are based on past successes rather than future challenges, their value for the early identification of executives may be limited. We risk choosing people who fit today's model of executive success, rather than the unknown model of tomorrow. The competencies that get attention today may not be enough to ensure that a person will be an effective learner of the requisite competencies for the future. Given that future demands may include some skills that are different from the skills valued today, the ability to learn from experience may prove to be more important in the long run than a high rating in a currently valued competency. Thus, to the degree that executive leadership skills are learned from experience, any improvement in identifying people who can *learn more from their experiences* is likely to aid in the early identification of international executives.

Focus of the Research

Because the ability to learn from experience may complement the traditional end-state competency approach to the early identification of international executives, the goals of our study are two-fold. First, we seek to identify and validate a set of end-state competencies for use in the early identification of international executives. Second, we seek to develop and validate a way to measure the ability to learn

from experience and assess its incremental predictive power beyond the more traditional end-state competencies. The design of the paper is as follows. In the sections below, we define what we mean by an international executive and then draw on the literature to (1) identify a set of general end-state competencies for the early identification of international executives and (2) make the case for the incremental predictive value of the ability to learn from experience. We then discuss scale development for both the end-state competencies and the ability to learn from experience variables and describe several strategies for providing initial evidence for their validity.

Defining An International Executive

By international executive, we mean an executive who is in a job with some international scope, whether in an expatriate assignment or in a job dealing with international issues more generally (Schaeffer, 1985). While international executives may have represented only a small proportion of the executive population in prior decades (Reich, 1991), in today's global business environment, executive work is becoming more international in orientation (whether it be marketing a product or service in a different country, outsourcing work to other countries, or competing with international firms). Indeed, it is difficult to conceive of an industry that is not exposed to some global influence. Given that our focus is on the early identification of executives, we believe that a future-looking approach to assessing executive potential must assume an international orientation. Further, we believe that the ability to learn from experience is likely to be an even more significant predictor of success in a global context where the demands of job transitions are compounded by a myriad of cultural and contextual factors (Tung, 1988).

Themes of End-State Competencies

In order to identify some initial themes for the early identification of international executives, we reviewed the practitioner literature on executive/leadership potential for clues about relevant themes. We then attempted to ground the anecdotal evidence in the academic literature focused on predicting executive success. Assessment center ratings, for example, have long been associated with a number of indicators of later success (Bray & Grant, 1966; Finkle, 1976; Howard, 1974; Huck, 1973; Sorcher, 1985). A variety of predictors have been used in these and other studies, including personality,

cognitive, and behavioral measures such as general effectiveness, administrative skills, interpersonal skills, control of feelings, intellectual ability, and work-oriented motivation (Bycio, Alvares, & Hahn, 1987; Huck, 1973; Russell, 1987; Sackett & Dreher, 1982). Furthermore, research on executive potential has identified the key "lessons" taught by experience, ranging from self-confidence to technical skills (McCauley, 1986; McCall, 1994; McCall et al., 1988). Through a review of the literature, we were able to uncover several themes which would appear to underlie success as an international executive: general intelligence, business knowledge, interpersonal skills, commitment, courage, and ease in dealing with cross-cultural issues.

General Intelligence. Intelligence or analytical agility has been noted as a key characteristic of successful executives (Kotter, 1988). The practitioner literature suggested that successful executives require more specific intellectual capabilities such as conceptualization, synthetic and visionary thinking, incisiveness, and reasoning (Bennis & Nanus, 1985; Derr & Briscoe, 1995; Kouzes & Posner, 1987; Sloan, Hezlett, Kuncel, & Sytsma, 1996; Woodruffe, 1993). In the academic literature, empirical research has demonstrated the importance of general cognitive ability for job performance (e.g., Hunter, 1986), though much of the work has been conducted on students or non-supervisory employees, often in military contexts (Eyring, Johnson, & Francis, 1993; Kanfer & Ackerman, 1989; Ree, Carretta, & Teachout, 1995; Schmidt, Hunter, Outerbridge, & Goff, 1988). Two studies, however, did find similar effects for cognitive ability in higher-level employees: Borman, Hanson, Oppler, Pulakos, and White (1993) demonstrated the importance of cognitive ability for performance in first-line supervisors and Dreher and Bretz (1991) found that general cognitive ability predicted later career advancement. Similarly, assessment center research has recognized the importance of strong analytic skills for executive success (Sackett & Dreher, 1982). Thus, cognitive or analytic ability emerged as a key theme for executive success.

Business Knowledge. A thorough understanding of the business was uncovered as a second theme underlying executive success. What executive could be successful without a basic knowledge of the business, industry, and organization (McCauley, 1986)? Business knowledge encompassed notions of task competence (Gardner, 1987), broad industry and company knowledge (Kotter, 1988), breadth of

awareness (Woodruffe, 1993), and basic knowledge of the company's products, markets, and policies. It also included basic technical competence (Derr & Briscoe, 1995). The importance of business knowledge was similarly reflected in a substantial body of academic research which demonstrated the performance effects of job experience (Borman et al., 1993; McDaniel, Schmidt & Hunter, 1988a; McDaniel, Schmidt & Hunter, 1988b; Schmidt et al., 1985) and job knowledge (Borman et al., 1993; Ree et al., 1995). Thus, business experience or knowledge emerged as a second theme underlying executive success.

Interpersonal Skills. Executives, because they are not independent contributors but managers, must ultimately achieve success through the work of others (Hill, 1992). Hence, a special talent in working with people emerged as a third theme underlying executive success (McCall, 1994). This theme represented competencies in the practitioner literature including cooperativeness (Woodruffe, 1993), interpersonal skills (Kotter, 1988), handling relationships (McCall et al., 1988), team building (Barham & Oates, 1991), the ability to attract and develop talent (Sloan et al., 1996), the capacity to motivate (Gardner, 1987), and the alignment of people to the executive's vision (Bennis & Nanus, 1985). In order for successful executives to hold the respect of those who work with and for them, integrity was also a must (Kotter, 1988). Bennis (1989) labeled this "character," and Gardner (1987) emphasized the need to hold the trust of one's people. In the academic literature, people-oriented abilities such as interpersonal skills, oral and written communication, and sensitivity were represented within the criteria used in assessment centers, for predicting subsequent managerial performance and potential (Bycio et al., 1987; Huck, 1973; Russell, 1987; Sackett & Dreher, 1982). As such, people skills emerged as a third theme underlying executive success.

Commitment. A strong commitment to, or passion for, the success of the profession, work, or organization was also considered crucial to distinguishing high potential managers from managers with less potential (McCall, 1994). This fourth theme was represented in Woodruffe's (1993) personal drive and goal orientation dimensions of managerial competency, Derr and Briscoe's (1995) notions of perseverance, and Bennis and Nanus' (1985) dedication. Each of these notions implied a strong passion for, or commitment to, one's work. The academic literature indicated that commitment was found to be

related to a number of outcomes relevant to executive success: (1) high levels of willingness to share and make sacrifices for the organization (Randall, Fedor, & Longenecker, 1990), (2) reduced turnover (Lee, Ashford, Walsh, & Mowday, 1992), and (3) highly successful careers (Romzek, 1989). Thus, different literatures pointed to the importance of commitment to executive success.

Courage. A fifth theme underlying executive success that emerged was the courage to take action, to make things happen (McCall, 1994). Successful executives were labeled as being courageous, willing to go out on the limb and take a risk when they believed they were right (Gardner, 1987; Kouzes & Posner, 1987). Underlying this courage was a strong sense of self-confidence which stopped short of arrogance (McCauley, 1986; Sloan et al., 1996; Woodruffe, 1993). Successful executives had a clear action orientation, a propensity for making things happen, even when it meant "going against the grain" (Bennis & Nanus, 1985). A large body of academic literature indicated the importance of self-efficacy, or confidence in one's capabilities, for performance (e.g., Bandura & Cervone, 1986; Eyring et al., 1993) even when the effects due to underlying skills had been partialed out (Locke, Frederick, Lee & Bobko, 1984). In addition, theoretical and empirical work on leadership emphasized the importance of an action-orientation on the part of leaders, particularly those leaders who were charismatic or transformational, whose mission was to change the status quo (Bass, 1985; Conger & Kanungo, 1987; House, 1977). Thus, courage emerged as a fifth theme for executive success.

Cross-Cultural Issues. In an international arena, cross-cultural competencies have become increasing critical for executive success (McCall, 1994). Cross-cultural sensitivity, openness, adaptability, cultural familiarity, and language fluency have been found to be important for executives working in a global context (Barham & Oates, 1991; Lobel, 1991; Woodruffe, 1993). Likewise, Derr, Jones, & Toomey (1988) emphasized the ability to work across boundaries, even for managers not working in an international location but dealing with global business issues. While there was a void of academic research on the predictors of executive success in an international context, conceptual work on expatriate managers (i.e., one type of international executive) emphasized good language skills, a strong desire to work overseas, behavioral flexibility, adaptability, and open-mindedness (Black, Mendenhall,

& Obbou, 1991). Thus, a sixth theme inherent in international executive success was ease in dealing with cross-cultural issues.

In sum, drawing on the anecdotal evidence in the practitioner literature and corroborative evidence from the academic research literature, several themes emerged which appear to underlie executive success in an international context. Our attempt to operationalize and validate these themes is described in the methods section of the paper, but first we develop the case for why the ability to learn from experience may provide incremental predictive value to these end-state competency themes in the early identification of international executives.

Evidence for the Ability to Learn from Experience in Identifying Executive Potential

The fact that experience can teach a broad spectrum of important managerial competencies raises a number of interesting questions about the experiential process through which such lessons can be taught. In their important study of the developmental impact of job experiences, McCauley, Ruderman, Ohlott, and Morrow (1994) identified and defined a number of components of experience -- including job transitions, task-related characteristics, and obstacles -- that are associated with the acquisition of managerial skills. They suggested that these characteristics of experience can force a person to learn new ways of dealing with the situation:

> One reason managerial transitions are developmental is because managers are confronted
> with novel situations rendering existing routines and behaviors inadequate and requiring
> the development of new ways of coping with problems and opportunities. (McCauley et
> al., 1994, p. 545)

Because of the demands created by these various components of experience, McCauley and her colleagues. (1994) concluded that managers learn new behaviors and ways of thinking.

There is a long history of research confirming that managers learn and adapt as a result of their experiences (Keys & Wolfe, 1988; McCall et al., 1988; Morrison & Hock, 1986; Wexley & Baldwin, 1986). A number of studies of organizational entry (e.g., Ostroff & Kozlowski, 1992) have established the linkage between successful entry and adaptation and learning. McCall, et al. (1988) in the study that stimulated the McCauley et al. (1994) research, identified sixteen specific experiences and the

associated lessons that successful executives had learned from them. Nicholson and West (1988), in a study of British managers, confirmed that job mobility resulted in learning and change. Kotter's (1982) research on general managers examined the backgrounds of successful executives and documented the influence of experience on their development. Gabarro (1987), in a study of new general managers taking charge, and Hill (1992), in a study of individual contributors becoming managers for the first time, verified that the demands of these jobs led to adaptation and learning for those who were successful.

On a much broader scale, research dating back as far as Bandura (1971) has shown that learning and change are stimulated by events in the social environment. Levinson (1978) suggested that people change as a result of various life experiences that occur as they mature. So pervasive is the idea that people learn from experience, and importantly, vary in their ability to do so, that it has been identified as one of the "Big-Five" personality variables (Goldberg, 1993). In short, though certain personality traits and some measures of intelligence are quite stable over time (e.g., Campbell, Dunnette, Lawler, & Weick, 1970), there was ample evidence that people do learn and grow over the course of their careers as a result of their experiences (Bennis, 1989; Howard & Bray, 1988).

Though the literature provided evidence that job experiences could be a stimulus for learning, it also suggested that not all people learn equally well from the same kinds of experiences (Howard & Bray, 1988; McCall & Lombardo, 1983; Morrison & Brantner, 1992). As such, the identification of executive potential would likely be enhanced through knowledge of the variation in people's ability to acquire needed skills -- in their ability to learn from experience. Gabarro (1987), for example, observed that one of the differences in success and failure among new general managers was their learning or lack of learning from critical people in their environment. McCauley (1986, p. 20) in her review of developmental experiences in managerial work, concluded that

> ...events provide a stimulus to learn; the actual response of learning itself is never a sure thing. More research is also needed on individual differences among managers in what they take away from a certain event.

Thus, the research evidence suggested that the ability to learn from experience, coupled with appropriate developmental job experiences, is likely to be important in developing executive potential.

While recent research has sharpened our understanding of appropriate developmental job experiences (McCall et al., 1988; McCauley et al., 1994), we know much less about individual differences in learning ability. Some recent theoretical frameworks which looked at the interaction between learning ability and opportunity may provide important clues about the ability to learn. Kanfer and Ackerman (1989) found evidence that individual differences in cognitive ability, motivation, and opportunity were key determinants of skill acquisition. Their framework indicated that while individual differences in cognitive ability exerted an effect on performance at all stages of skill acquisition, it was particularly critical in early stages where there was much opportunity for learning. Russell and Kuhnert's (1992) "constructive/ developmental theory" drew on Kegan (1982) to extend Kanfer and Ackerman's framework to help explain why and how people varied in the learning they took away from experience (Kuhnert & Lewis, 1987; Kuhnert & Russell, 1990). According to Russell and Kuhnert, "the presence of specific skills or level of perspective taking capacity moderate the impact of developmental episodes" (1992, p. 349). They suggested that one of the reasons people varied in learning from experience was individual differences in the construction of meaning. They also suggested that there was a dynamic reciprocity between how people learned and how they influenced their environments. This conclusion was very much in line with what Mumford, Stokes, and Owens (1990) have called the "ecological" perspective of life experiences. Mumford et al. (1990) contended that individuals not only selected situations conducive to adaptation (thus, learning), they actively prepared to exploit certain situations and roles likely to emerge at a later date.

The question thus becomes how to identify those individuals who will make the most of the experiences provided, who will exploit the opportunities to learn the competencies required for future executive success. If executives develop skills through the accumulation of challenging experiences, those better able to learn from those experiences should emerge over time as more effective. Hence, we suggest that individual differences in ability to learn from experience should aid in the prediction of eventual executive success. Conspicuously absent from the literature on executive potential/success, however, is an explicit measurement of ability to learn from experience.

In the section below, we revisited the literature in order to uncover themes which may underlie the ability to learn from experience. The identification of themes is a first step in developing a measure of the ability to learn from experience.

Themes Underlying the Ability to Learn from Experience

Issues related to learning, while not explicitly measured in most competency models that distinguished successful from less successful managers, were embedded in or implied by research on executive success (McCall, 1994). Unlike the end-state competency themes identified earlier in the paper, these learning themes were in the formative stage and less well defined. In order to guide the theoretical development of the construct and the empirical construction of a measure of the ability to learn from experience, we reviewed the literature in search of clues on themes which may underlie the ability to learn from experience.

McCall (1994) suggested that successful leaders took a proactive approach to learning; they sought out opportunities to learn. Successful executives tended to have a bias for action; they did not procrastinate, but instead sought solutions to problems. Derr and Briscoe (1995) stressed the ability and willingness of a manager to learn and grow from experience in identifying high potential candidates. Similarly, Bennis (1989) noted that in the process of becoming a leader, managers sought out new and unusual experiences through which to learn. Not only did successful executives accept responsibility for their own learning, but they had a natural curiosity about how things worked (McCall, 1994). Also important, particularly in an international context, was a sense of adventure (Lobel, 1991); successful executives desired stimulation and the opportunity to experience new things (McCall, 1994). Thus, a proactive approach to seeking out growth experiences and adventure emerged as a possible learning theme underlying executive success.

Second, the literature suggested that successful managers learned from their mistakes (Kouzes & Posner, 1987). They saw mistakes as a means of learning and improving themselves, rather than as a personal failure (Bennis & Nanus, 1985). Successful executives had a sense of hardiness, where their ego was not threatened by criticism (McCall, 1994). It is through criticism and mistakes the executives

could learn from their past experiences. Thus, learning from mistakes may be another learning theme underlying executive success.

Third, the literature suggested that successful managers were adaptable (Gardner, 1987; Sloan et al., 1996), changing as necessary when the external environment changed (Kotter, 1988). This was especially true for managers operating in an international context where different practices and policies may have been dominant (Barham & Oates, 1991). Some academic research also supported the need for adaptability; Bycio et al. (1992) in some recent assessment center research included managerial flexibility as a key element of managerial potential for entry or middle-level positions. Thus, flexibility emerged as another possible learning theme underlying executive success.

Fourth, the literature indicated that successful executives must seek and use feedback to help them make sense of the work environment and keep a pulse on the organization (McCall, 1994). They pursued feedback and worked to create an environment where others felt that they could be candid. They constantly asked questions about "why things are the way they are" and were not willing to accept the status quo for its own sake. Research suggested that such information/feedback seeking was an important social learning strategy (Major, Kozlowski, Chao, & Gardner, 1995; Ostoff & Kozlowski, 1992). Proactive feedback/information seeking has been found to be critical for newcomer socialization (Morrison, 1993a) and for personal adaptation over time (Ashford, 1986). The effect of proactive feedback/information on performance can be positive or neutral (Ashford & Black, in press; Morrison, 1993b) or even negative under some circumstances (Kanfer & Ackerman, 1989). Even so, feedback-seeking has been found to be important for assessing potential for advancement and determining the adequacy of managers' basic skills and abilities (Ashford & Cummings, 1985). Thus, feedback emerged as another potential learning theme underlying executive success.

The reader should recognize that, in contrast to the literature review on the end-state competencies discussed above, most of the citations for the learning themes were drawn from the practitioner-oriented literature or from small sample qualitative work where there was little focus on construct definition (the primary exception was the feedback theme). While the learning-oriented themes are intuitively

appealing, virtually no attention has been paid to the operationalization of the ability to learn from experience, and little evidence existed on its validity in predicting executive success.

In summary, the purpose of this research was two-fold: (1) to develop operational measures of both the end-state competency and the ability to learn from experience themes and (2) to establish the validity of the ability to learn from experience in conjunction with the end-state competencies already used in the early identification of international executive talent. Thus, a key contribution of our work is the creation of an instrument which pulls together both end-state competency and learning themes for the early identification of international executives. The resulting instrument, named "Prospector" to symbolize the search for talent, was initially validated on an international sample of managers. The paper concludes with a discussion of the implications of Prospector as a tool for the early identification of international executives and with directions for future research.

<div align="center">Method</div>

<u>Scale Development</u>

<u>Item Generation.</u> The first step was to create a set of items capturing the content domains of the end-state competency and ability to learn from experience themes. No universally accepted and empirically validated measures of end-state competencies were located in the literature. To generate an initial set of items, we supplemented our review of the literature with interviews conducted with 46 experienced corporate executives (both line and staff) involved in identifying people with international executive potential. These individuals were drawn from four international U.S. corporations (one consumer products, one manufacturing, and two service firms) and included foreign nationals, executives with expatriate experience, and executives who routinely made selection decisions for international assignments. The interviews were largely unstructured and sometimes part of a longer interview on related topics. Questions asked of these people varied, but all included questions such as the following: (1) Focusing on the younger managers who will be leaders of the future, what clues do you look for in identifying those with leadership potential? and (2) Can you tell when an up-and-coming manager has the ability to learn new managerial skills and/or change in response to a changing environment? If yes, what specific clues do you pick up? As such, the interviews contained rich, comprehensive descriptions of

early identification selection criteria and of how the ability to learn from experience might be detected. From these descriptions and the review of the literature, items that reflected end-state competencies and the ability to learn from experience were written (where possible in the language used by the executives). At this generative stage of the research, the objective was to be as inclusive as possible with regard to identifying the domain of end-state competencies and the ability to learn from experience, relying on later empirical analysis to exclude any irrelevant items.

To further ensure that we had assessed the content domain (Messick, 1995) of end-state competencies and the ability to learn from experience, members attending a meeting of an international consortium on executive development research were broken into several subgroups, given the items, and asked to identify what set of dimensions of early identification were embedded in the items. The participants were asked to cluster the items according to their apparent similarity. No maximum or minimum number of dimensions was specified. As part of this process, members had the opportunity to raise issues regarding the characteristics of talented people who appeared best able to learn from experience. After completing the exercise, the consensus of the participants was that the domain of elements relating to end-state competencies and the ability to learn from experience was adequately sampled by the items. Thus, based on the insights of these human resource development experts, combined with the review of the literature, we felt confident that our initial set of items assessed the relevant content domain (Carmines & Zeller, 1979; Guion, 1978).

We also took several steps to ensure that the items were not contaminated or deficient. First, a survey instrument was created asking respondents the extent to which they agreed (on a seven-point Likert scale ranging from (1) very strongly disagree to (7) very strongly agree) that each of the almost 200 items was an accurate description of an international manager they had experience with and knowledge of. The survey instrument was pre-tested on a sample of 47 international managers attending an international business education program at a West coast university. With an average age of 34 years and an average of 11 years of experience, these managers were citizens of 12 different countries (including Argentina, China, Indonesia, Japan, Korea, Mexico, Taiwan, the United Kingdom, and the United States) and had extensive international business backgrounds. Inter-item correlations were

computed to help identify redundant items. Frequencies and univariate statistics were used to ensure that each item had adequate variance. Respondents were also asked to review the instrument for any ambiguous wording or cross-culturally inappropriate language. Problematic items were revised or deleted. For example, one item asked whether the manager was able to "think outside the dots." Several respondents did not understand the meaning of this item, and it was dropped. Second, we asked a subset of the participants in the international consortium on executive development research described above to review the survey instrument for language appropriateness in the various countries they knew or represented and to comment on the readability and clarity of the items. Based on their input, items were modified, added, and deleted. A final 116 item version of the instrument, using the same response format and anchors as the pre-test instrument, was then created and named Prospector.

Sample and Data Collection. Our goal was to obtain a sample from which generalizations could be made about the early identification of international executives. Though as described in our introduction, there is little consensus on what constitutes an "international executive," we took several steps to ensure that our sample was internationally diverse. First, we gained access to six international companies head-quartered in Australia, England, Germany, the Netherlands, and the United States. Second, we asked an executive development manager in each company to identify a sample of managers to be assessed. While not randomly sampled, we instructed the companies to select managers who were in, or targeted for, jobs international in scope, whether an expatriate assignment or a job dealing with international issues more generally. We asked that the sample be drawn from lower, middle, and senior management ranks and that it represent a range of educational and functional backgrounds. The resulting sample of about 1,100 managers to which surveys were sent came from 21 different countries.

The questionnaire was sent to the immediate boss of the target manager, who evaluated the manager on the 116 items in the Prospector instrument. Bosses were chosen because they would know the managers well and because their ratings would be less susceptible to social desirability bias than would a self-assessment (Bradburn, 1983). Bosses were asked to indicate the extent to which they agreed or disagreed that the item was an accurate description of the targeted manager. The completed instrument was returned to the researchers by mail, and the respondents were assured of complete confidentiality.

Completion of the instrument was strictly voluntary. The companies determined that the respondents had

a good understanding of the English language and that no translation was necessary. The overall

response rate weighted by each company's proportion of the sample was approximately 76% for a total

final sample of 838 managers. Response rates and final sample size for each company were as follows:

31% for Company 1 (N=283), 93% for Company 2 (N=101), 94% for Company 3 (N=141), 100% for

Company 4 (N=140), 67% for Company 5 (N=40), and approximately 95% for Company 6 (N=133).

Basic demographics on the final sample are provided in Table 1.

Table 1 about here

We also specified that each company should select a sample that included both high potential and

solid-performing-but-not-likely-to-advance individuals. Each company applied its own internal criteria

for assessing potential, with the criteria ranging from highly specific (e.g., a performance rating among

the top 4% in the company) to less specific (e.g., being chosen to participate in a highly selective

executive development program). Such a range of methods to identify high potential talent is common

(Derr et al., 1988). Because poor performing managers were not likely to be included in the sample, the

sample was likely to be somewhat range restricted.

Scale Creation and Refinement. An exploratory factor analysis was used to identify a set of

underlying dimensions from the 116 items. Unfortunately, the dataset was not large enough to permit

splitting the sample for cross-validation of factor loadings (Ford, MacCallum, & Tait, 1986). However,

the cases with external appraisal measures (N=56) from Company 5, a British service firm, were

retained as a "hold-out" sample to replicate the subsequent concurrent validity analyses. The factor

analysis was conducted on the remaining 782 cases. The case-to-item ratio for the factor analysis was

acceptable at 6.74:1; this is less than the 10:1 ratio recommended by Nunnally (1978) but exceeds the

5:1 ratio recommended by Gorsuch (1974). The correlation matrix used as input to the factor analysis

(116 x 116) is available upon request from the authors.

A principal components analysis with an oblique rotation was conducted using SPSS for Windows.

As recommended by Ford et al. (1986), we used multiple criteria to determine the appropriate number of

factors to retain: eigenvalues, interpretability, and internal consistency. First, we used the eigenvalue criterion to determine an initial set of factors (i.e., we derived all factors with eigenvalues greater than one). Second, because the eigenvalue criterion tends to overestimate the appropriate number of factors (Ford et al., 1986), we also assessed the interpretability of the factors in determining the appropriate number of factors to retain (i.e., did the items loading on a given factor make substantive sense when considered together?). And third, we calculated Cronbach alpha reliabilities to assess the reliability of the items dominantly loading on each factor. Factors were not retained if they were not interpretable or if the items making up the factor did not achieve a reliability of at least 0.70 (Nunnally, 1978).

Fifteen factors were extracted from the factor analysis using the eigenvalue criterion (factor loadings are available from the authors). Eigenvalues, percent variance explained, and one sample item are provided for each factor in Table 2. Together the 15 factors accounted for 65% of the total variance. In creating scales representing the factors, two objectives were kept in mind: (1) to retain as much richness in the scales as possible and (2) to achieve parsimony and reliability of the items measuring a given dimension. Items were not included in scale construction if they had low primary loadings (under about 0.40 which Ford et al. (1986) indicate is a common rule of thumb for considering which factor loadings should be retained) and/or strong cross-loadings on other factors. Consequently, between two and eight items were retained for each factor.

Table 2 about here

The one factor with two items was deleted due to poor reliability (alpha = .56). We examined the additional items which had lower loadings in an effort to improve the reliability of this factor but the other items did not make substantive sense (they did not deal with an interest in activities outside of work as did the two items with the strongest loadings). Reliabilities for the remaining 14 factors ranged from 0.70 to 0.92. Scale scores were created by taking the mean of the retained items for each of the factors. The scales were labeled on the substantive basis of the items comprising them and then reviewed by human resource representatives of thirteen large international corporations who recommended appropriate modifications of the labels based on cultural and content criteria.

In sum, fourteen factors with acceptable levels of reliability and substantive interpretability were retained for the validity analyses. Because the Prospector instrument was designed to assess both end-state competencies and the ability to learn from experience, we examined the items comprising each dimension to ensure that the dimensions assessed both aspects. Eight of the dimensions appeared consistent with the end-state competency themes identified in the literature review: Is Insightful (represents notions of analytic and cognitive ability), Has Broad Business Knowledge, Brings out the Best in People (captures interpersonal skills), Acts with Integrity, Has the Courage to Take a Stand, Takes Risks, Is Committed to Making a Difference, and Sensitive to Cultural Differences. Six of the dimensions appeared more consistent with the learning themes identified in the literature review: Seeks Opportunities to Learn, Seeks Feedback, Uses Feedback, Is Culturally Adventurous, Is Open to Criticism, and Is Flexible. Factor item content suggests that these dimensions were consistent with both the end-state competency and ability to learn from experience themes identified in the review of the literature and used in the item generation procedures described above.

Validity Strategies

Validity analyses were first conducted using the primary sample and then replicated on the smaller hold-out sample from Company 5. Where possible, cross-validation analyses were also conducted between the primary and hold-out samples. Given the different contexts of the two samples (i.e., one is a amalgam of managers from different countries in different industries and the other is a set of managers from one British service firm), we did not expect complete consistency in findings across the two studies. In fact, Hotelling's T^2 statistic (F = 1.98, p<.05) indicated some differences between the primary and hold-out samples. Moreover, given the small size of the hold-out sample in the regression analysis (14 predictor variables analyzed on a sample of 56), we expected a higher number of significant findings in the primary sample. However, given that both samples were composed of international managers, we expected a similar pattern of results to emerge. Both correlational and regression analyses were used to examine the relationships between the Prospector dimensions and the relevant criteria in the first, third, and fourth validity strategies; in the second strategy, discriminant analysis was used and in the fifth strategy, hierarchical regression was used.

Current Performance. The first validity strategy was general in focus, examining the relationship between the early identification dimensions and current performance. While executive potential is clearly not the same as current performance, we expected that ratings on the Prospector dimensions would be moderately associated with assessments of current performance. After all, merely adequate managers would not be considered high potential. Because in today's business environment many organizations use a competency approach to evaluating managerial performance, we hypothesized that the eight end-state competency dimensions would be related to current performance. We had no *a priori* hypotheses on how the six learning-oriented dimensions would be related to current performance because most organizations did not explicitly include "learning from experience" in their performance assessments (McCall, 1994). In sum, we expect concurrent validity between the end-state Prospector dimensions and current performance but specify no explicit relationship between the learning-oriented Prospector dimensions and current performance.

Two different types of measures were used to assess current performance. First, the manager's boss responded to a global question in the questionnaire which contained the Prospector instrument: "This person's current job performance can best be described as ...". This item was assessed on a five-point scale ranging from Less than Satisfactory (1) to One of the Best Ever (Top 1 to 2%) (5). Because this performance measure was subject to common method variance, given that it was assessed by the same person at the same time the Prospector data were collected, a second performance measure was also obtained. External performance appraisal data were available for the hold-out sample, Company 5. By external, we mean that these data were not collected through the questionnaire used to collect the Prospector data, but were collected through a different means at a different point in time.

The managers in Company 5 were assessed by their superior on nine performance dimensions: (1) achievement of results, (2) judgment and decision-making, (3) commitment and urgency, (4) flexibility and innovation, (5) planning and organization, (6) communication and influence, (7) strategic business awareness, (8) application of knowledge, (8) leadership and motivation. These measures were assessed on a 7-point scale anchored on one end by very strongly agree (7) and anchored on the other end by very strongly disagree (1). These performance appraisal data were less susceptible to common method bias

because they were collected several months after the Prospector dimensions and, for at least some of the sample who were working for a different boss, were assessed by a different person. We do not know what percentage of the appraisals were conducted by a different boss than the one who completed the Prospector instrument. However, because high potential managers tend to be moved frequently, we expect a sizable number of these appraisers to be different than the Prospector raters.

The elements of the performance appraisal dimensions were factored analyzed. A principal components analysis with an oblique rotation was conducted using SPSS for Windows. The eigenvalue criterion suggested a three factor solution: (1) leadership and motivation (ninth item listed above, no reliability calculated), (2) strategic business awareness (seventh and eight items listed above; Cronbach alpha = 0.90), and (3) achievement of results (first six items listed above; Cronbach alpha = 0.80). All primary factor loadings exceeded 0.50, and there were no high cross-loadings (a table of factor loadings, eigenvalues, and variance explained can be requested from the authors). For simplicity, we labeled the factors using the name of the highest loading item.

Assessments of Executive Potential. The second validity strategy focused on the early identification of executive potential. Specifically, how well did the bosses' ratings on the 14 Prospector dimensions help us to correctly discriminate between those who were identified by their companies as high potential and those who were been identified by their companies as solid-performing but not likely to advance much further? A discriminant analysis was used to examine the power of the 14 dimensions in distinguishing the high potential managers from the solid performing managers. The discriminant analysis computes the proportion of cases successfully predicted as either high potential or solid performing from only the information embedded in the 14 Prospector dimensions.

A measure of executive potential based on its own internal criteria was provided by each company. In the cases where performance appraisal criteria were used to assess executive potential, there might be potential for common method bias with the Prospector dimensions, but we do not believe the bias would be substantial. Even in the worst case scenario, the assessment would be made at a different point in time than the Prospector instrument making it less susceptible to bias (Crampton & Wagner, 1994). In the best case scenario (quite likely given the fact that high potential managers are frequently moved), the

boss making the appraisal would be different than the boss making the Prospector assessment. In short, all managers were classified along a dichotomous variable where a value of (1) indicated a manager who was high potential and a value of (0) indicated a manager who was solid-performing-but-not-likely-to-advance. Seventy-two percent of the managers in the sample were identified by their organizations as high potential, while 28% were identified as solid-performing-but-not-likely-to-advance.

A potential confound to this assessment of executive potential analysis was that two of the companies (21% of the sample) had one boss assess both a high potential and a solid performing manager on the Prospector instrument. In the other companies in the sample, one boss rated only one manager (whose status as high potential or solid performing manager was not made explicit) on the Prospector instrument. The results of the discriminant analysis did not significantly change when only the responses of the bosses making one rating were included in the analysis. Consequently, we felt comfortable in combining the data using both types of rating approaches for the discriminant analysis.

On-the-Job Learning. The third validity strategy focused on the boss's assessments of the person's capacity for job-related learning. After all, the initial supposition behind the research was that those with the highest ability to learn would make the most of experiences that prepare them for international executive roles. To what extent did the 14 dimensions predict the boss's perception of a manager's general capacity for learning job skills? The questionnaire which contained the Prospector instrument also contained two items which assessed on-the-job learning: job content learning and behavioral skill learning. These on-the-job learning questions differed from the items making up the learning-oriented scales because they dealt with the specific content of learning (either job content or behavioral skills) and because they asked the boss to compare the rated manager to his or her peers. To assess job content learning, the boss of the manager was asked "Relative to other managers you have worked with, how effectively does this person learn new technical, functional, service, or customer information?" To assess behavioral skill learning, the boss of the manager was asked "Relative to other managers you have worked with, how effectively does this person learn new behavioral skills -- that is, new ways of interacting effectively with people in getting the job done? Both questions used a five-point scale ranging from (1) Does Not Seem to Learn Much at All to (5) Extremely Fast Learner.

Because both of these measures were subject to common method variance given they that were assessed at the same point in time by the same person as the Prospector measures, concurrent validity with respect to learning was also examined on two skills assessments which were only available for some of the managers from Company 2, an Australian financial services firm (N=62). These skills assessments were less susceptible to common method bias than the learning criteria described above because they were collected at a different point in time than the Prospector instrument and most likely by a different assessor. Because they measure skill achievement rather than skill acquisition, they may represent more of an end-state skill competency than a measure of learning ability. The first measure, Technical Skills, is expected to reflect job content learning, while the second measure, Interpersonal Skills, is expected to reflect behavioral skill learning. An annual competency review was conducted in which the manager and his or her boss together assessed the manager's current competency level. These two measures were assessed on an 8-point scale anchored on one end by "exhibits strong evidence of this competency" and the other end by "exhibits little evidence of this competency." Because these measures were only available for Company 2, these skills assessments could not be subject to replication in the primary sample.

International Criteria. The fourth validity strategy examined the international domain of the dimensions. We hypothesized that the dimensions Sensitive to Cultural Differences and Cross-Culturally Adventurous, because they explicitly deal with global management issues, would be related to the international criteria. Thus, the fourth validity strategy sought evidence of convergent validity (due to overlapping content domains); we expected Sensitive to Cultural Differences and Cross-Culturally Adventurous to converge with the international criteria. Though we believed that each of the Prospector dimensions might be important in an international context (as indicated in the interviews described earlier), we had no *a priori* expectations about the relationships between the international criteria and the other Prospector dimensions. Three international criteria were examined: (1) archival data on whether a manager had an expatriate assignment, (2) archival data on the number of languages spoken beyond one's native language, and (3) the boss's assessment of the manager's ability to deal with international issues. The first two criteria were collected as part of the demographic information on the

managers provided by the companies. The final criterion was assessed by the manager's boss as part of the questionnaire in which the Prospector instrument was assessed: "If this person continues to develop at the current rate, and relative to other people at approximately the same level in your organization, how successful do you think he/she would be in an executive assignment dealing with international issues or problems (not as an expatriate)?" This item was assessed on a five-point scale ranging from (1) Almost Certainly Will Not Succeed to (5) Almost Certainly Will Be Successful. While this last measure was prone to common method bias, the other two measures were more objective in nature and thus not as susceptible to common method bias (Crampton & Wagner, 1994). Nevertheless, the three criteria were not completely independent of one another. For example, it would be likely that a boss would know whether a manager had an expatriate experience or spoke multiple languages. However, the correlations among the criteria (see Table 3) were quite low indicating that each was tapping a different element of the domain of international criteria.

Incremental Predictive Power of Learning from Experience Over an End-State Competency Approach. The fifth validity strategy sought to document the incremental power of the Prospector dimensions in predicting executive potential, beyond assessments of current performance. Toward this end, we calculated the additional variance explained by the 14 dimensions in predicting the rating of executive potential (described in the second validity strategy above) above and beyond Company 5's performance appraisal measures (described in the first validity strategy above). We also examined the incremental predictive power of the learning-oriented dimensions beyond the end-state competency dimensions. To examine the change in explained variance, we first regressed superior's ratings of executive potential onto the three independent performance appraisal scale scores. In the second step of a hierarchical regression analysis, the eight end-state competency Prospector dimensions were entered into the analysis. Finally, in the third step, we examined the additional variance explained by the six learning-oriented Prospector dimensions. If the Prospector dimensions, particularly the explicit learning-oriented dimensions, provide value, they should explain significant additional variance in predicting executive potential beyond the appraisal measures used by Company 5. This analysis explicitly tests the second research question described in the introduction of the paper.

Results

The Scales

Means, standard deviations, and scale intercorrelations are provided in Table 3 for both the primary and hold-out samples.

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Table 3 about here
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Validity Results

Current Performance. As shown in Table 3, all 14 dimensions were strongly correlated with the boss's general rating of current performance in both the primary and hold-out samples. The results of the regression analyses, where the measure of current performance was regressed on the 14 Prospector dimensions, indicated which dimensions remained significant when the effects of the other dimensions were controlled (see Table 4). The regressions for each sample had significant F-values and explained substantial variance. The results suggest initial support for our general hypotheses that the end-state dimensions would be related to current performance. In the primary sample, five end-state dimensions, Brings out the Best in People (β= .26, p<.001), Is Insightful (β=.24, p<.001), Has Courage to Take a Stand (β=.20, p<.001), Sensitive to Cultural Differences (=-.09, p<.05), and Is Committed to Success (β =.07, p<.10) were significantly related to current performance.

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Table 4 about here
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The findings for three of these dimensions were replicated in the hold-out sample: Brings out the Best in People (β=.40, p<.10), Is Insightful (β=.25, p<.10), and Sensitive to Cultural Differences (β =-.40, p<.05). However, the findings for Has Courage and Is Commited to Success were not supported in the hold-out sample. As noted above, some differences across the two samples were expected given their cultural and industry differences. Because the common unexpected negative coefficient on Sensitive to Cultural Differences was likely due to the moderate multicollinearity among the dimensions, we cannot draw strong conclusions on this finding. In a cross-validation analysis, where the unstandardized regression coefficients estimated for the primary sample were used to predict current performance in the hold-out sample, we found little evidence of shrinkage. The correlation between the

estimated value of the criterion derived from the primary sample's regression weights and the observed criterion value was 0.74. Squaring this correlation (0.55) and comparing it to the R^2 (.53) observed in the primary sample indicated virtually no shrinkage in the hold-out sample. In support of our hypothesis, several end-state competency dimensions, including a focus on people and insightfulness, were found to be particularly important for general performance in both samples. In contrast, only two of the more learning-oriented dimensions, Seeks Feedback and Uses Feedback, were found to be related to current performance in the primary sample but neither finding was replicated in the hold-out sample.

More specific analyses were conducted on the external performance appraisal factors available for Company 5. There were no significant findings for the Strategic Business Awareness appraisal factor (in retrospect this is not that surprising given that none of the dimensions dealt specifically with strategic awareness). The regression analysis indicated that, when the effects of the other Prospector dimensions were controlled, one end-state dimension was significantly related in an expected way to Leadership and Motivation: Acts with Integrity (β=.35, p<.05). Two other end-state dimensions, to our surprise, were found to be negative related to Leadership and Motivation: Takes Risks (β=-.42, p<.05), and Has Broad Business Knowledge (β=-.28, p<.05). In light of the positive simple correlations, these unexpected negative relationships are likely the result of the moderate multicollinearity among the predictors. Because they were not able to be examined in the more diverse primary sample, we do not draw strong conclusions from them.

In the regression analysis of the Achievement of Results factor, when the effects of the other dimensions were controlled, two end-state dimensions remained significantly related to the Achievement of Results factor: Brings out the Best in People (β=.56, p<.10) and Is Committed to Success (β=.41, p<.10). These results indicate that managers who were able to maximize the potential of their people and who were committed to the success of the business were evaluated most positively on the Achievement of Results appraisal factor.   The significant findings for the dimension Brings out the Best in People was consistent with the analysis of the general performance criteria examined earlier.

No *a priori* hypothesis was specified about the relationship between the learning-oriented Prospector dimensions and the appraisal factors. One learning-oriented dimension was found to be

significantly related to the Leadership and Motivation appraisal factor: Cross-Culturally Adventurous (r=.31, p<.05; β=.44, p<.05). While one learning-oriented dimension was significantly correlated to the Achievement of Results appraisal factor (Seeks Opportunities to Learn (r=.39, p<.01), it failed to be a significant predictor in the regression analysis. Thus, the learning-oriented dimensions were not generally found to be predictors of the external performance appraisal ratings.

On a separate note, the results indicate that the assessments of current performance were not strongly related to the three performance appraisal factors. Only the achievement of results appraisal factor was significantly correlated with the assessment of current performance (see Table 3). In addition, the regression weights derived to predict boss' current performance ratings in the hold-out sample were not good predictors of the three performance appraisal criteria (explaining 21% of the Achievement of Results factor, 2% of the Leadership and Motivation factor, and 1% of the Strategic Business Awareness). These results suggest that bosses used other criteria in evaluating current performance than these three performance appraisal factors.

In sum, partial support was found for the validity of some of the end-state competency dimensions in relation to the different criteria of current performance. With the exception of the Strategic Business Awareness appraisal factor, several end-state dimensions were found to be related to the other assessments of performance. Concurrent validity, particularly for the dimensions Is Insightful and Brings out the Best in People, was found between the end-state dimensions and current performance. In contrast, the more learning-oriented dimensions did not tend to be related to assessments of current performance. These results suggested that the managers in our sample, when evaluating their subordinates, tended to take into account several of the end-state competency dimensions while having focused little attention on the ability to learn from experience. Of course, an alternative explanation is that because the end-state competencies were moderately correlated with the ability to learn dimensions, it may be that when the end-state competencies were entered simultaneously into the regression equation, there was little additional variance left to be explained by the ability to learn dimensions (cf. Gordon, 1968).

Executive Potential. We hypothesized that the Prospector scales would differentiate high potential from solid performing managers in a discriminant analysis. The discriminant function identifies the proportion of cases correctly classified as either high potential or solid performing; it is not predicting the proportion of cases that are high potential. The 14 dimensions successfully distinguished the managers identified by their companies as high potential from those identified as solid-performing managers in 72% of the cases (66% of the solid performing managers were correctly classified and almost 75% of the high potential managers were correctly classified) (see Table 5). However, this is not an improvement ove rthe baseline prediction function (i.e., because 72% of the overall sample were high performers, the baseline function of "always predict high performance" yields a 72% success rate. On the other hand, the Wilks-Lambda was significant (lambda = .78; p < .001) with a chi-square of 199.304. As indicated in Table 5, the results were largely the same across the two sub-samples as well. The high potential managers were rated significantly higher than the solid-performing managers on all 14 dimensions.

Table 5 about here

Some end-state competency dimensions (e.g., Is Insightful, Courage to Take a Stand) and some learning-oriented dimensions (e.g., Seeks Opportunities to Learn) were important in distinguishing the two groups. The importance of both end-state competency and learning-oriented dimensions in differentiating the high potential from the solid performing managers was evident in the primary sample and then replicated in the hold-out sample; Is Insightful, Seeks Opportunities to Learn, and Courage to Take a Stand helped differentiate the high potential from solid performing managers in both the primary and the hold-out samples. Not only were these results supportive of the validity of the 14 dimensions in identifying executive potential, but they were also suggestive of which dimensions were most powerful in identifying people with potential. In sum, the findings suggested initial concurrent validity evidence for both the end-state and learning-oriented Prospector dimensions in discriminating between high potential and solid-performing-but-not-likely-to-advance managers.

On-the-Job Learning. Each of the 14 dimensions was found to be significantly correlated with the job content learning criterion in the primary sample and most remained significant in the hold-out sample (see Table 3). The regression analyses for the job content learning criterion were significant and explained substantial variance (see Table 6). The findings indicated that two dimensions were significantly related to the job content learning criterion in the primary sample and replicated in the hold-out sample: Is Insightful and Seeks Opportunities to Learn. Three additional dimensions were also significantly related to the job content learning criterion, though only in the primary sample: Has Broad Business Knowledge, Sensitive to Cultural Differences, and Seeks Feedback. Once again, we were not surprised to see additional dimensions had achieved significance in the analysis of the primary sample but we do not dwell on them because they were not replicated. Because the amount of variance explained in both samples was comparable (R^2 = .49 in the primary sample and R^2=.54 in the hold-out sample), it is likely that the smaller sample size of the hold-out sample precluded statistical significance of the other dimensions. In a cross-validation analysis, where the unstandardized regression coefficients estimated for the primary sample were used to predict current performance in the hold-out sample, we found little evidence of shrinkage. The correlation between the estimated value of the criterion derived from the primary sample's regression weights and the observed criterion value was 0.62. Squaring this correlation (0.38) and comparing it to the R^2 (.49) observed in the primary sample indicated a small degree of shrinkage.

Table 6 about here

Each of the 14 dimensions was also found to be significantly correlated with the behavioral skill learning criterion in both the primary and hold-out samples (see Table 3). Regression analyses indicated which dimensions remained significant when the effects of the other dimensions were controlled (see Table 6). The regression equations were significant and explained substantial variance. The findings indicated that one learning-oriented dimension, Is Open to Criticism, was significantly related to the behavioral skill learning criterion in the primary sample and replicated in the hold-out sample. This finding suggests that openness was particularly important in learning new ways of interacting effectively

with people in getting one's job done. Four additional dimensions, both end-state and learning-oriented, were also related to the behavioral skill learning criterion, though only in the primary sample: Brings Out the Best in People (β =.45, p<.001), Seeks Opportunities to Learn (β=.08, p<.10), Is Insightful (β=.15, p<.01), Uses Feeback (β=.11, p<.01), Cross-Culturally Adventurous (β=.09, p<.01), and Sensitive to Cultural Differences(β=-.08, p<.10). Given the comparable amount of variance explained across the two samples (R^2 = .48 for the primary sample and R^2 = .60 for the hold-out sample), the fact that fewer dimensions are significant in the hold-out sample is likely due to the smaller sample size. In a cross-validation analysis, where the unstandardized regression coefficients estimated for the primary sample were used to predict current performance in the hold-out sample, we found little evidence of shrinkage. The correlation between the between the estimated value of the criterion derived from the primary sample's regression weights and the observed criterion value was 0.69. Squaring this correlation (0.48) and comparing it to the R^2 (0.48) observed in the primary sample indicated virtually no shrinkage.

Because the above findings were susceptible to common method bias given that the two measures of learning were collected as part of the Prospector instrument, an additional set of analyses was conducted on two external skills assessments, technical skills and interpersonal skills, available only for 62 managers in Company 2, the Australian financial services company. While several dimensions were significantly correlated with the acquisition of technical skills, the overall regression equation did not achieve significance. However, this did not preclude the interpretation of significant regression coefficients (Bobko & Russell, 1994). Only one dimension, Has Broad Business Knowledge (β=.36, p<.10), was found to be marginally related to technical skills in the regression analysis. This dimension appeared to be particularly important for learning basic job knowledge as it was also found to be significantly related to job content learning in the primary and hold-out samples.

While several dimensions were significantly correlated with the acquisition of interpersonal skills, the overall regression equation was not significant. Only two dimensions, Uses Feedback (β=.35, p<.10) and Is Flexible (β=-.31, p<.10) were found to be significant. Given that these findings were only

marginally significant, given that one was contrary to expectations, and given that replication was not possible in the more diverse sample, strong conclusions could not be drawn.

In sum, modest initial validity evidence was provided for the Prospector instrument with respect to on-the-job learning. Both end-state and learning-oriented dimensions were replicated for job content learning (i.e., Seeks Opportunities to Learn and Is Insightful), but only one learning-oriented dimension was replicated for behavioral skill learning (i.e., Is Open to Criticism). Only weak evidence was found with respect to the external ratings of skill achievement; stronger support might have been found for external measures of skill acquisition.

International Criteria. We hypothesized that the explicitly international dimensions, Sensitive to Cultural Differences and Cross-Culturally Adventurous, would be related to the international criteria. As hypothesized, Cross-Culturally Adventurous was significantly correlated to all three international criteria in both samples (see Table 3): expatriate experience, speaking multiple languages, and the boss's perception that the manager could successfully manage international issues. The dimension Sensitive to Cultural Differences was correlated with two of the three international criterion, the boss's perception that the manager could successfully manage international issues and expatriate experience. Regression analyses indicated the relationships between the international dimensions and the relevant criteria when the other dimensions were controlled (see Table 7). With the exception of the prior expatriate experience criterion in the hold-out sample, all of the regression equations were significant. Although the regression equation for prior expatriate experience was not significant in the hold-out sample, that fact that more variance was explained in the hold-out sample (R^2 = .31) than in the primary sample (R^2 =.19) indicated that evidence for concurrent validity was present though the small sample obtained from Company 5 precluded statistical significance. Consistent with the correlations, Cross-Culturally Adventurous was found to have significant beta coefficients in the regression equations for each of the criteria (with the exception of the final criterion in the hold-out sample). Once again, given the comparable amount of variance explained across the two samples (R^2 = .43 for the primary sample and R^2 = .57 for the hold-out sample), the small sample size of the hold-out sample may help to explain the lack of significance on this final international criterion. In contrast, Sensitive to Cultural Differences

was only found to be positively related to speaking multiple languages. Thus, initial evidence of

concurrent validity was established for the dimension Cross-Culturally Adventurous but only marginal

evidence was found for the dimension Sensitive to Cultural Differences in predicting international

criteria.

Table 7 about here

Though, we had no *a priori* expectations regarding the other Prospector dimensions, we were

interested in exploring their relationships with the international criteria as well. Given that the items

were created from interviews attempting to capture the key dimensions for the early identification of

international executives, we were not surprised that several other dimensions were also found to be

related to the international criteria. None, however, had the degree of consistency of the dimension

Cross-Culturally Adventurous. Two dimensions, one learning-oriented and one end-state, were found to

be consistently related to one criterion, anticipated success with international issues, in both the primary

and the hold-out samples: Seeks Opportunities to Learn and Is Insightful. None of the other dimensions

were replicated.

In a cross-validation analysis on the prior expatriate experience criterion, where the unstandardized

regression coefficients estimated for the primary sample were used to predict current performance in the

hold-out sample, we found some evidence of shrinkage. The correlation between the estimated value of

the criterion derived from the primary sample's regression weights and the observed criterion value was

0.34. Squaring this correlation (0.12) and comparing it to the $\underline{R}^2$ (0.19) observed in the primary sample

indicated some shrinkage. In a cross-validation analysis of the criterion dealing with expected success

with international issues, we found less evidence of shrinkage. The correlation between the estimated

value of the criterion derived from the primary sample's unstandardized regression weights and the

observed criterion value was 0.60. Squaring this correlation (0.36) and comparing it to the $\underline{R}^2$ (0.43)

observed in the primary sample indicated little shrinkage.

In sum, these results provided initial validity evidence regarding the dimension Cross-Culturally

Adventurous, and to a lesser extent, the dimensions Seeks Opportunities to Learn and Is Insightful, for

early identification in an international arena. These findings indicate that a sense of adventure, coupled with a proactive approach to learning and insight into business issues, is particularly important for success in an international arena.

    <u>Incremental Predictive Power Beyond the End-State Competencies.</u> The final validity strategy examined the incremental predictive power of the Prospector dimensions in predicting executive potential above and beyond the performance appraisal assessments of Company 5. By themselves, the three performance appraisal factors used by Company 5 explained only one percent of the variance in the executive potential variable (see Table 8). This low level of explained variance was surprising but suggested that this firm used criteria other than current performance in their potential ratings. When the eight end-state Prospector dimensions were entered into the regression equation in the second step, the R^2 increased to 0.31. When the six explicitly learning-oriented Prospector dimensions were entered into the third step of the Regression, the R^2 increased still again by 0.06 for a total R^2 of .37. The first increment in R^2 was significant, indicating significant value in predicting executive potential through the end-state competency Prospector dimensions. The second increment in R^2 did not achieve significance. Thus, while some initial support was provided for the incremental predictive value of the end-state dimensions, questions remain about the incremental predictive value of the learning-oriented dimensions in predicting executive potential.

Table 8 about here

Discussion

    This research tries to bridge the inherent dilemma in organizational research regarding rigor and relevance. A particular strength of this research is that it is field-based. Data were collected from real managers at lower, middle, and senior levels of the hierarchy from six organizations with an increasingly global orientation. Where possible the research was grounded in the actual outcomes the companies used themselves: assessments of executive potential, performance appraisals, and skills assessments. Obtaining access to collect extensive international field-based data is not common but provides great potential for knowledge building given a firm grounding in organizational reality.

This research yielded an empirically derived factor structure for beginning to understand the dimensionality of the ability to learn from experience and the end-state competencies for the early identification of executives. Some initial evidence was provided for the psychometric characteristics of the dimensions, including their reliability and content and concurrent validity across two different samples. In the first validity assessment, several end-state dimensions were hypothesized and found to be related to performance assessments. In an exploratory analysis of the learning-oriented dimensions, few were found to have performance effects, indicating that bosses did not tend to take learning ability explicitly into account in assessing performance. In the second validity assessment, both end-state competency and learning-oriented dimensions were found to predict executive potential. Each effectively discriminated those managers identified by their organizations as high potential from those identified by their organizations as solid-performing-but-not-likely-to-move-up. In the third validity analysis, several Prospector dimensions were found to be related to job content and behavioral skill learning; however, little support was found for the dimensions in relation to the external measures of skill achievement which were available for a small sub-sample of one company. In the fourth validity analysis, strong validity evidence was found for one internationally explicit Prospector dimension, Cross-Culturally Adventurous, but only weak validity evidence was found for the other international Prospector dimension, Sensitivity to Cross-Cultural Differences.

In the final validity analysis, the end-state dimensions were found to provide incremental predictive power beyond the appraisal factors in predicting executive potential. However, the learning-oriented dimensions were not found to have incremental predictive power beyond the appraisal factors and the end-state dimensions. There are several methodological reasons why the learning-oriented scales did not contribute significant variance in predicting executive potential in the hierarchical regression analysis. One reason may have been the low power of this analyses due to the small sample size (17 predictor variables with a sample size of 56). The discriminant analysis, which did not have the same power limitations as the hierarchical regression because it used the full sample (see Table 5), suggested that several of the learning-oriented dimensions together with several of the end-state competency dimensions were strong predictors of executive potential. A second reason may have been the learning-

oriented dimensions' moderate multicollinearity with the end-state dimensions entered in step 2 (see Table 3). Because of this multicollinearity, any incremental predictive value provided by the learning-oriented dimensions may have already been assessed by the end-state dimensions.

There is also a substantive reason why the learning-oriented dimensions may have failed to explain significance variance. Company 5, the British service firm, may not take learning ability into account when identifying executive potential. Like most companies, they are likely to focus attention on the end-state competencies relevant for today's business environment. Their performance appraisal factors did not explicitly target learning ability. Clearly, the only way to know for sure why the learning-oriented dimensions did not contribute significant variance explained is to follow these managers over time to see who ultimately is successfully promoted into senior executive positions. We can then assess the extent to which the end-state and learning-oriented dimensions predict ultimate promotion.

In sum, these five validity strategies provided partial support for the concurrent validity for some hypothesized end-state and learning-oriented Prospector dimensions in relation to relevant criteria. As described in more detail in the directions for future research, subsequent research must replicate these findings (both factor analytic and criterion-related validity findings) and extend the current research by examining other mediating and moderating relationships which are suggested in the literature. While the pattern of findings suggests that we have identified some important end-state and learning-oriented dimensions, future research must determine whether the validity of the dimensions generalizes over time and whether the dimensions add incremental criterion-related validity over more traditional measures of g.

Why Some Managers Are Likely to Develop into Successful International Executives

In the this section of the discussion, we step back from the analysis and speculate on how the dimensions may ultimately contribute to international executive success in the business environment of the future. In looking across the 14 dimensions, we suggest that the dimensions may comprise four processes which have implications for the development of international executives.

Price of admission: Gets organization attention and investment. A likely pre-requisite for entry into the high potential ranks is getting attention by achieving something or behaving in ways that make a

potential executive stand out. Five of the Prospector dimensions seem to reflect such basic qualities: Is Committed to Success, Is Insightful, Has the Courage to Take a Stand, Has Broad Business Knowledge, and Takes Risks. Those individuals who have a propensity for risk taking, a passion or commitment to seeing the organization succeed, courage to go against the grain, and a keen mind are likely to stand out above others in the organization. Given the narrow functional roles of many managers, those with a broad sense of the business are also likely to stand out above others. Characteristics such as these are often the major issues discussed in succession planning and may indicate "the right stuff" or the price of admission to "the big league" (Hall, 1986).

Sense of adventure: Takes or makes more opportunities to learn. Acquiring the skills necessary for tomorrow's business environment requires exposure to new things from which to learn (Howard & Bray, 1988; McCauley, 1986). Three of the dimensions appear to capture the sense of adventure required to break out of the status quo and try new things: Seeks Opportunities to Learn, Cross-Culturally Adventurous, and Seeks Feedback. High scores on these dimensions identify individuals who proactively seek out formal and informal experiences to learn more about themselves, their work environment, their organization, and the external environment as well as how these things fit together. They indicate a curiosity about the ways things work and an enjoyment of trying new things and taking on new challenges. These dimensions all indicate greater learning through a proactive approach to learning contexts.

Responsive to learning contexts. Receptivity to learning opportunities also appears to be a key issue for the development of the competencies necessary for the business environment of the future (McCauley, 1986). The dimensions Acts with Integrity (taking responsibility for one's own actions is a prerequisite for learning from them), Brings out the Best in People (commitment to others' success promotes trust and a willingness to reciprocate), Is Sensitive to Cultural Differences (creates openness in spite of differences), and Is Open to Criticism (staying open and avoiding defensiveness are essential to hearing the feedback others are willing to share) each incorporate different aspects of receptivity to learning contexts.

Changes as a result of experience. The final critical piece reflects the need to retain current competencies but also to incorporate the competencies required for the future business environment. The two dimensions Is Flexible and Uses Feedback may identify individuals who can learn from past experiences, particularly those experiences that turned out less successful than expected. High ratings on these dimensions may tap a hardiness or resiliency in people who are able to start over after disappointments and setbacks (Kobasa, 1979).

We speculate that it is through these four processes that the 14 Prospectors dimensions may facilitate the development of future international executives. The four processes may provide a starting point for the creation of a theoretical framework which articulates how current end-state competencies, coupled with the ability to learn from experience and the right kind of developmental experiences, may facilitate the development of successful international executives for tomorrow's business environment. Some further suggestions for the development of a theoretical framework are described at the end of the next section.

Limitations and Directions for Future Research

Though this research has begun to address some important issues relevant to the early identification of executive potential, it also raises a number of issues for future research. First, while the factor structure was derived from a multi-sample design to enhance generalizability, it must now be cross-validated in a separate sample using confirmatory factor analysis. Second, longitudinal research designs are necessary to assess the predictive validity of the Prospector dimensions. Prior research and anecdotal evidence suggests that executives often derail from the fast track because they stop learning and become arrogant (Kovach, 1994; McCall & Lombardo, 1983). We anticipate tracking these managers over time to be able to examine predictive validity in the future.

Third, though the measures were developed to tap leadership potential in international executives and were pre-tested on managers from across the globe, the dimensions were validated on managers from primarily the U.S., Europe, and Australia with only a small number from Asia. Future research must address the validity of the dimensions for managers from other parts of the world. It is certainly worth testing whether certain dimensions, such as Takes Risks, play a less important role or take on a

different meaning in a culture such as Japan where the maintenance of relationships and harmony are valued so strongly (Ouchi, 1981; Wakabayashi, Graen, Graen, & Graen, 1988). Future research must also assess how some cultures may create a context that suppresses learning by their norms on things like feedback and criticism. A primary implication is that global firms operating in certain cultures may have to create unusual conditions or literally move their talented people to other cultures if needed development is to take place.

Fourth, several of the validity criteria were susceptible to common method bias. However, in each case, additional criteria that were less susceptible to common method variance (Crampton & Wagner, 1994), from either archival sources (e.g., expatriate experience and speaking multiple languages) or from bosses but collected at a different point in time (e.g., performance appraisal ratings and skills assessments), were also tested. As such, common method variance alone does not explain the validity results. A related limitation is that the external performance appraisal measures and the skills assessments were only available for a small subset of the managers in the sample; the small sample size limited our ability to detect significant relationships. Future research should replicate these findings using different and more refined criteria.

Finally, perhaps the most important direction for future research is the creation of a theoretical framework for understanding the processes by which end-state competencies and the ability to learn from experience contribute to the development of executive potential. Such a framework might build upon work by Kanfer and Ackerman (1989). While the specific focus of their model is on the acquisition of specific task skills, it is likely to be relevant to understanding the development of executive potential (i.e., a much broader skill acquisition process). Like the Kanfer and Ackerman (1989) framework which posits an interaction between ability, motivation, and opportunity in skill acquisition, an understanding of the interactions between the end-state dimensions, the ability to learn from experience dimensions, and different learning environments, would be relevant for a theoretical framework of executive development. Such a theoretical framework must also address the inherent conflict between the need for performance in the short-run (i.e., having the end-state competencies required for success in today's business environment) and learning the competencies necessary for success in the long-run. Prior

research has shown that performance concerns, particularly early in skill acquisition, can override learning objectives (Kanfer & Ackerman, 1989). In fact, the inherent conflict between performance motivation and motivation to acquire new skills may be a partial explanation for several of the unexpected negative relationships found in the regression analysis. For example, as found in the validity test for current performance, risk taking may impede performance in the short run, but it may facilitate learning in the long run. For all of these reasons, the development of a theoretical framework on the processes, interactions, and conflicts underlying the development of executive potential is a particularly fertile area for future research.

Conclusion

In closing, we took an initial step in the development of reliable measures of end-state competencies and the ability to learn from experience through the creation of the Prospector instrument. In analyzing a sample of managers from six international companies, we found some initial evidence that the Prospector dimensions add incremental predictive value to traditional appraisal approaches commonly used by practicing managers in their efforts at the early identification of international executive talent. Our hope is that the dimensions developed here can now be used in more controlled settings, using additional raters, following people over longer periods of time, and eventually helping produce better measures of both potential and performance.

References

Ashford, S.J. & Black, J.S. (forthcoming). Journal of Applied Psychology.

Ashford, S.J., & Cummings, L.L. (1985). Proactive feedback seeking: The instrumental use of the informational environment. Journal of Occupational Psychology, 58, 67-79.

Ashford, S.J. (1986). Feedback-seeking in individual adaptation: A resource perspective. Academy of Management Journal, 29, 465-487.

Bandura, A. (1971). Social learning theory. Morristown, NJ: General Learning Press.

Bandura, A., & Cervone, D. (1986). Differential engagement of self-reactive influences in cognitive motivation. Organizational Behavior and Human Decision Processes, 38, 92-113.

Barham, K., & Oates, D. (1991). The international manager. London: The Economist Books.

Bass, B.M. (1985). Leadership and performance beyond expectations. New York: Free Press.

Bennis, W. (1989). On becoming a leader. New York: Addison-Wesley.

Bennis, W., & Nanus, B. (1985). Leaders. New York: Harper & Row.

Black, J.S., Mendenhall, M., & Obbou, G. (1991). Toward a comprehensive model of international adjustment: An integration of multiple theoretical perspectives. Academy of Management Review, 291-317.

Bobko, P., & Russell, C.J. 1994. On theory, statistics, and the search for interactions in the organizational sciences. Journal of Management, 20: 193-200.

Boyatzis, R.E. (1982). The competent manager. New York: John Wiley.

Borman, W.C., Hanson, M.A., Oppler, S.H., Pulakos, E.D., & White, L.A. (1993). Role of early supervisory experience in supervisor performance. Journal of Applied Psychology, 78, 443-449.

Bradburn, N.M. (1983). Response effects. In P.H. Rossi, J.D. Wright, & A.B. Anderson (eds.) Handbook of survey research. New York: Academic Press.

Bray, D., & Grant, D. (1966). The assessment center in the measurement of potential for business management. Psychological Monographs: General and Applied, 80, 1-27.

Bycio, P., Alvares, K.M., & Hahn, J. (1987). Situational specificity in assessment center ratings: A confirmatory factor analysis. Journal of Applied Psychology, 72, 463-474.

Campbell, J., Dunnette, M., Lawler, E., & Weick, K. (1970). Managerial behavior, performance, and effectiveness. New York: McGraw-Hill.

Carmines, E.G., & Zeller, R.A. (1979). Reliability and validity assessment. Sage publication series on Quantitative Applications in the Social Sciences, 07-017. Beverly Hills: Sage Publications.

Conger, J.A., & Kanungo, R.N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. Academy of Management Review, 12, 637-647.

Crampton, S.M., & Wagner, J.A., III. (1994). Percept-percept inflation in microorganizational research: An investigation of prevalence and effect. Journal of Applied Psychology, 79, 67-76.

Dechant, K. (1990). Knowing how to learn: The neglected management ability. Journal of Management Development, 9, 40-49.

Derr, C.B., & Briscoe, J.P. (1995). Managing high potentials: Practices in the United States. Working paper, Executive Development Roundtable, Boston University.

Derr, C.B., Jones, C., & Toomey, E.L. (1988) Managing high-potential employees: Current practices in thirty-three U.S. Corporations. Human Resource Management, 27, 273-290.

Dreher, G.F., & Bretz, R.D., Jr. (1991). Cognitive ability and career attainment: Moderating effects of early career success. Journal of Applied Psychology, 76, 392-397.

Eyring, J.D., Johnson, D.S., & Francis, D.J. (1993). A cross-level units-of-analysis approach to individual differences in skill acquisition. Journal of Applied Psychology, 78, 805-814.

Finkle, R. (1976). Managerial assessment centers. In M. Dunnette (ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally, 861-888.

Ford, J.K., MacCallum, R.C., & Tait, M. 1986. The application of exploratory factor analysis in applied psychology: A critical review and analysis. Personnel Psychology, 39: 291-314.

Gabarro, J.J. (1987). The dynamics of taking charge. Boston: Harvard University Press.

Gardner, J.W. (1987). Attributes and context. Leadership papers. Washington, D.C.: Independent Sector.

Goldberg, L. (1993). The structure of phenotypic personality traits. American Psychologist, 48, 26-34.

Gordon, R.A. (1968). Issues in multiple regression. American Journal of Sociology, 73, 592-616.

Gorsuch, R.L. 1974. Factor analysis. Philadelphia, PA: W.B. Saunders.

Guion, R.M. (1978). "Content validity" in moderation. Personnel Psychology, 31, 205-213.

Hill, L.A. (1992). Becoming a manager. Boston: Harvard Business School Press.

House, R.J. (1977). A 1976 theory of charismatic leadership. In J.G. Hunt and L.L. Larson (eds.), Leadership: The cutting edge, Carbondale, IL: Southern Illinois University Press, 189-207.

Howard, A. (1974). An assessment of assessment centers. Academy of Management Journal, 17, 115-134.

Howard, A. & Bray, D. (1988). Managerial lives in transition: Advancing age and changing times. New York: Guilford Press.

Huck, J. (1973). Assessment centers: A review of the external and internal validities. Personnel Psychology, 26, 191-212.

Hunter, J.E. (1986). Cognitive ability, cognitive aptitudes, job knowledge, & job performance. Journal of Vocational Behavior, 29, 349-362.

Kanfer, R., & Ackerman, P.L. (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. Journal of Applied Psychology, 74, 657-690.

Kegan, R. (1982). The evolving self: Problem and process in human development. Cambridge, MA: Harvard University Press.

Keys, B., & Wolfe, J. (1988). Management education and development: Current issues and emerging trends. Journal of Management, 14, 205-229.

Kobasa, S.C. 1979. Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1-11.

Kotter, J. (1982). The general managers. New York: Free Press.

Kotter, J. (1988). The leadership factor. New York: Free Press.

Kouzes, D., & Posner, B. 1987. The leadership challenge: How to get extraordinary things done in organizations. Jossey-Bass: San Francisco.

Kovach, B.E. (1994). Successful derailment: What fast-trackers can learn while they're off the track. Organizational Dynamics, 33-47.

Kuhnert, K.W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive/developmental analysis. Academy of Management Review, 12, 648-657.

Kuhnert, K., & Russell, C. (1990). Using constructive developmental theory and biodata to bridge the gap between personnel selection and leadership. Journal of Management, 16, 595-607.

Lee, T.W., Ashford, S.J., Walsh, J.P., & Mowday, R.T. (1992). Commitment propensity, organizational commitment, and voluntary turnover: A longitudinal study of organizational entry processes. Journal of Management, 18, 15-32.

Levinson, C.J. (1978). The seasons of a man's life. New York: Knopf.

Lobel, S.A. (1991). Global leadership competencies: Managing to a different drumbeat. Human Resource Management, Spring, 39-47.

Locke, E.A., Frederick, E., Lee, C., & Bobko, P. (1984) Effect of self-efficacy, goals, and task strategies on task performance. Journal of Applied Psychology, 69, 241-251.

Macleod, G., & Wyndham, J. (1991). Developing the competent manager. Asia Pacific Human Resource Management, Winter, 69-78.

Major, D.A., Kozlowski, S.W.J., Chao, G.T., & Gardner, P.D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. Journal of Applied Psychology, 80, 418-431.

McCall, M.W., Jr.. (1994). Identifying leadership potential in future international executives: Developing a concept. Consulting Psychology Journal, 46, 49-63.

McCall, M.W., Jr. (1992). Executive development as a business strategy. The Journal of Business Strategy, January-February, 25-31.

McCall, M.W., Jr. and Lombardo, M. (1983). Off the track: Why and how successful executives get derailed. Technical report no. 21. Greensboro, ND: Center for Creative Leadership.

McCall, M.W., Jr., Lombardo, M., & Morrison, A. (1988). Lessons of experience. New York: Lexington Books.

McCauley, C. (1986). Developmental experiences in managerial work: A literature review. Technical report no. 26. Greensboro, NC: Center for Creative Leadership.

McCauley, C.D., Ruderman, M.N., Ohlott, P.J., & Morrow, J.E. (1994). Assessing the developmental components of managerial jobs. Journal of Applied Psychology, 79, 544-560.

McDaniel, M.A., Schmidt, F.L., & Hunter, J.E 1988a. A meta-analysis of the validity of methods for rating training and experience in personnel selection. Personnel Psychology, 41, 283-309.

McDaniel, MA., Schmidt, F.L., & Hunter, J.E. 1988b. Job experience correlates of job performance. Journal of Applied Psychology, 73, 327-330.

Messick, S. 1995. Validity of psychological assessment. American Psychologist, 50, 741-749.

Morrison, E.W. (1993a). Longitudinal study of the effects of information seeking on newcomer socialization. Journal of Applied Psychology, 78, 173-183.

Morrison, E.W. (1993b). Newcomer information seeking: Exploring types, modes, sources, and outcomes. Academy of Management Journal, 36, 557-589.

Morrison, R.F., & Brantner, T.M. (1992). What enhances or inhibits learning a new job? A basic career issue. Journal of Applied Psychology, 77,

Morrison, R.G., & Hock, R.R. (1986). Career building: Learning from cumulative work experience. In D.T. Hall & Associates (Eds.), Career development in organizations (pp. 236-273). San Francisco, CA: Jossey-Bass.

Mumford, M.D., Stokes, G.S., & Owens, W.A. (1990). Patterns in life history: The ecology of human individuality. Hillsdale, NJ: Lawrence Erlbaum Associates.

Nicholson, N., & West, M. (1988). Job Change: Men and Women in Transition. Cambridge: Cambridge University Press.

Nunnally, J. (1978). Psychometric theory, 2nd ed. New York: McGraw-Hill.

Ostroff, C., & Kozlowski, S. (1992). Organizational socialization as a learning process: The role of information acquisition. Personnel Psychology, 45, 849-874.

Ouchi, W.G. (1981). Theory Z: How American business can meet the Japanese challenge. New York: Avon Books.

Quinn, R.E., Faerman, S.M., Thompson, M., & McGrath, M. (1990). Becoming a master manager: A competency framework. New York: John Wiley.

Randall, D.M. Fedor, D.P., & Longenecker, C.O. (1990). The behavioral expression of organizational commitment. Journal of Vocational Behavior, 36, 210-224.

Ree, M.J., Carretta, T.R., & Teachout, M.S. (1995). Role of ability and prior job knowledge in complex training performance. Journal of Applied Psychology, 80, 721-730.

Reich, R.B. (1991). The work of nations: Preparing ourselves for 21st Century Capitalism. New York: Knopf.

Romzek, B.S. (1989). Personal consequences of employee commitment. Academy of Management Journal, 39, 641-661.

Russell, C. (1987). Person characteristics and role congruency explanations for assessment center ratings. Academy of Management Journal, 30, 817-826.

Russell, C., & Kuhnert, K. (1992). Integrating skill acquisition and perspective taking capacity in the development of leaders. Leadership Quarterly, 3, 335-353.

Sackett, P.R., & Dreher, G.F. (1982). Constructs and assessment center dimensions: Some troubling empirical findings. Journal of Applied Psychology, 67, 401-410.

Schaeffer, R. (1985). Developing new leadership in a multinational environment. Report No. 874. New York: The Conference Board.

Schmidt, F.L., Hunter, J.E., Outerbridge, A.N., & Goff, S. (1988). Role of early supervisory experience in supervisor performance. Journal of Applied Psychology, 73, 46-57.

Sloan, E.B., Hezlett, S.A., Kuncel, N.R., & Sytsma, M.R. (1996). Performance, potential and peril: What it takes to succeed at the top. Paper presented at the 11th Annual Conference of the Society for Industrial/Organizational Psychology, San Diego, CA .

Sorcher, M. (1985). Predicting executive success. New York: Wiley.

Tung, R. (1988). The new expatriates. Cambridge, MA: Ballinger.

Wakabayashi, M., Graen, G., Graen, M., & Graen, M. 1988. Japanese management progress: Mobility into Middle Management. Journal of Applied Psychology, 73(2), 217-227.

Wexley, K.N. & Baldwin, T.T. (1986). Management development. 1986 Yearly Review of Management of the Journal of Management, 12, 277-294.

Woodruffe, C. (1993). What is meant by a competency? Leadership and Organization Development Journal, 14, 29-36.

Table 1
Sample Demographics

Potential Ratings of Managers[a]			**Expatriate Experience**	
High Potential	72%		No Assignments	60%
Solid Performers	28%		One assignment	24%
			Two or more	16%

Company[a]			**Age**	
Company 1	34%		$\leq$ 35 years old	27%
Company 2	12%		36-40 years old	29%
Company 3	17%		41-45 years old	20%
Company 4	17%		$\geq$ 46 years old	24%
Company 5	5%			
Company 6	16%			

Function

Gender[a]			Finance	17%
Female	18%		Marketing/Sales	14%
Male	74%		Human Resources	9%
			Engineering	8%
			Service	7%
Country of Origin			Health Affairs	6%
USA	36%		Mgmt Information Systems	4%
Australia	20%		Research and Development	4%
England	15%		Material Management	3%
Germany	14%		External Affairs	3%
New Zealand	4%		Strategic Planning	3%
Scotland	2%		Support Services	2%
Ireland	1%		Manufacturing Operations	2%
Others[b]	each <1%		Purchasing	2%
			Real Estate	1%
			Law	<1%
			Public Affairs	<1%

[a] Percentages do not sum to 100 due to missing data

[b] Argentina, Bolivia, Brazil, Chile, Czech Republic, Hong Kong, Indonesia, Japan, Malaysia, Mexico, Singapore, Thailand, Vietnam, and Yemen

Table 2
Scale Items

Scale Name	Eigen value	% Variance Explained	Alpha	Sample Item
End-State Competency Dimensions				
Sensitive to Cult. Differ.	5.65	4.9%	.82	When working with people from other cultures, works hard to understand their perspectives.
Business Knowledge	2.3	2.0%	.79	Has a solid understanding of our products and services.
Courage to Take a Stand	2.2	1.9%	.92	Is willing to take a stand on issues.
Brings out the Best in People	1.99	1.7%	.92	Has a special talent for dealing with people.
Acts with Integrity	1.38	1.2%	.85	Can be depended on to tell the truth regardless of circumstances.
Is Insightful	1.32	1.1%	.87	Is good at identifying the most important part of a complex problem or issue.
Is Committed to Success	1.25	1.1%	.82	Clearly demonstrates commitment to seeing the organization succeed.
Takes Risks	1.01	0.9%	.72	Takes personal as well as business risks.
Learning-Oriented Dimensions				
Uses Feedback	48.6	41.9%	.79	Has changed as a result of feedback.
Culturally Adventurous	3.3	2.8%	.77	Enjoys the challenge of working in countries other than his/her own.
Seeks Opportunities to Learn	1.77	1.5%	.85	Takes advantages of opportunities to do new things.
Is Open to Criticism	1.58	1.4%	.76	Appears brittle -- as if criticism might cause him/her to break (reversed).
Seeks Feedback	1.15	1.0%	.77	Pursues feedback even when others are reluctant to give it.
Is Flexible	1.07	0.9%	.70	Doesn't get so invested in things that he/she cannot change when something doesn't work.

Table 3
Descriptive Statistics and Scale Correlations

Table 4
Regression Analyses of Performance Measures on Prospector Dimensions

	Ratings by Boss:				External Performance Appraisal Ratings:				
	Current Performance				Leadership and Motivation		Strategic Business Awareness		Achievement of Results
	Primary Sample		Company 5		Company 5		Company 5		Company 5a	
	β	t	β	t	β	t	β	t	β	t
End-State Dimensions										
Has Broad Business Knowledge	-.02	-.76	-.16	-1.16	-.28*	-1.69	.13	0.65	-.24	-1.35
Sensitive to Cultural Differences	-.09*	-2.34	-.40*	-2.11	-.18	-0.81	.38	1.39	-.16	-0.68
Has the Courage to Take a Stand	.20***	4.19	-.05	-.021	-.40	-1.44	.36	1.06	.26	0.85
Brings out the Best in People	.26***	6.35	.40+	1.64	.43	1.52	.42	1.20	.56+	1.84
Acts with Integrity	.04	.89	.12	0.77	.35*	1.99	-.01	-.03	-.02	-0.10
Is Insightful	.24***	6.05	.25+	1.72	.12	0.69	.03	0.15	.13	0.69
Is Committed to Success	.07+	1.68	-.01	-0.80	.28	1.24	-.17	-.60	.41+	1.66+
Takes Risks	.04	.93	.10	0.57	-.42*	-2.05	-.27	-1.05	-.25	-1.11
Learning Oriented Dimensions										
Uses Feedback	.09*	2.14	.12	0.62	-.36	-1.58	-.15	-0.52	-.07	-0.30
Cross-Culturally Adventurous	.03	1.00	.06	0.40	.44*	2.41	-.25	-1.07	-.02	-0.11
Seeks Opportunities to Learn	.01	0.18	.21	1.06	.15	0.66	-.04	-0.15	-.02	-0.07
Is Open to Criticism	-.03	-.96	.00	0.00	.20	1.28	-.06	-0.30	-.07	-0.38
Seeks Feedback	-.12**	-3.14	.10	0.05	.07	0.37	.18	0.77	.07	0.35
Is Flexible	.05	1.30	.16	0.48	-.18	-0.92	-.43+	-1.78	-.31	-1.46
F	59.70***		4.49***		2.75**		.89		1.89+	
R²	.53		.64		.52		.26		.42	
Adjusted R²	.52		.49		.33		-.03		.20	
N	761		56		56		56		56	

a The external performance appraisal ratings were only available for Company 5.
+ p < .10   * p < .05   ** p < .01   *** p < .001, two tailed tests.

Table 5
Discriminant Analysis Results

	Pooled within-group correlations	Canonical discriminant function coefficient
Is Insightful: See Things From New Angles	.85	.58
Seeks Opportunities to Learn	.81	.24
Has the Courage to Take a Stand	.78	.24
Takes Risks	.72	.18
Is Committed to Success	.65	.13
Brings Out the Best in People	.62	.03
Uses Feedback	.59	.03
Sensitive to Cultural Differences	.54	.16
Seeks Feedback	.53	-.12
Is Open to Criticism	.48	.16
Acts With Integrity	.48	-.13
Is Flexible	.46	-.14
Cross-Culturally Adventurous	.43	-.01
Seeks Broad Business Knowledge	.32	-.31

Classification Results

	Predicted Membership		
Actual Membership	Solid Performing	High Potential	Total
Solid Performing Group	66.2% N=156	33.8% N=79	100% N=235
High Potential Group	25.3% N=153	74.7% N=450	100% N=603

N=838.

Percent of grouped cases correctly classified: 72.32%.

Wilk's Lambda = .78   Chi-square = 199.304***

Similar results where obtained from the primary sample (N=782) and the sub-sample of Company 5 (N=56). 73% of cases in the primary sample were correctly classified (Wilk's lambda = .769, Chi-square = 196.45***). 75% of the cases in the sub-sample of Company 5 were correctly classified (Wilk's lambda = .66, Chi-square = 19.22).

Table 6
Regression Analysis of On-the-Job Learning on the Prospector Dimensions

	Supervisor Ratings of:								External Ratings of:			
	Job Content Learning				Behavioral Skill Learning				Technical Skills		Interpersonal Skills	
	Primary Sample		Company5		Primary Sample		Company5		Company 2		Company 2	
	β	t	β	t	β	t	β	t	β	t	β	t
End-State Dimensions												
Has Broad Business Knowledge	.07*	2.22	.21	1.34	.03	.96	-.05	-0.35	.36+	1.83	.22	1.11
Sensitive to Cultural Differences	-.13***	-3.27	-.24	-1.11	-.08+	-1.85	.05	0.24	-.07	-0.32	.05	0.24
Has the Courage to Take a Stand	.07	1.37	-.05	-0.17	-.04	-0.84	-.13	-0.35	.11	0.50	.11	0.48
Brings out the Best in People	.05	1.01	-.08	-0.31	.45***	9.70	.34	1.34	.30	1.49	-.06	-0.27
Acts with Integrity	.02	0.51	.21	1.21	-.07	-1.56	.01	0.06	.01	0.08	.04	0.20
Is Insightful	.46***	10.60	.48**	2.93	.15***	3.31	-.08	-0.54	-.06	-0.28	-.21	-0.99
Is Committed to Success	.02	0.42	-.36	-1.65	.02	0.38	.07	0.36	.03	0.16	.26	1.37
Takes Risks	-.01	-0.25	.24	1.20	-.05	-1.20	-.07	-0.38	.10	0.63	.00	0.00
Learning-Oriented Dimensions												
Uses Feedback	.03	0.75	-.17	-0.78	.11**	2.55	-.08	-0.39	-.01	-0.03	.35+	1.63
Cross-Culturally Adventurous	.00	0.04	-.04	-0.23	.09**	2.53	.10	0.62	.07	0.36	-.13	-0.64
Seeks Opportunities to Learn	.18***	3.72	.40+	1.78	.08+	1.66	.29	1.40	-.18	-0.75	.01	0.04
Is Open to Criticism	-.02	-.65	-.01	-0.07	.07*	-1.94	.25*	1.70	-.10	-0.63	-.14	-0.88
Seeks Feedback	-.09*	-2.11	.11	0.59	.03	0.66	.27	1.52	.13	0.70	.12	0.62
Is Flexible	.06	1.57	.10	0.52	.03	0.84	-.06	-0.32	-.15	-0.81	-.31+	-1.65
F	51.38***		2.99**		48.11***		3.86***		1.24		1.19	
R^2	.49		.54		.48		.60		.28		.27	
Adjusted R^2	.48		.36		.47		.44		.05		.04	
N	761		56		761		56		62		62	

Table 7
Regression Analysis of International Criteria on the Prospector Dimensions

	External Measures of:					Supervisor Ratings of:			
	Prior Expatriate Experience			Multi-Lingual		Success with International Issues			
	Primary Sample		Company 5		Primary Sample[a]		Primary Sample		Company 5	
	β	t	β	t	β	t	β	t	β	t
End-State Dimensions										
Broad Business Knowledge	-.14*	2.06	.16	0.85	.01	0.21	.06+	1.73	.06	0.41
Sensitive to Cultural Differences	-.13+	-1.63	.14	0.53	.17*	2.23	-.07	-1.58	-.34	-1.63
Has the Courage to Take a Stand	.02	0.25	.28	0.85	-.12	-1.31	-.01	-0.18	-.32	-1.22
Brings out the Best in People	-.07	-0.88	-.40	-1.20	.06	0.84	.12**	2.49	.27	1.09
Acts with Integrity	.04	0.54	.08	0.39	-.25***	-3.48	.07	1.61	-.13	-0.80
Is Insightful	.03	0.36	-.20	-1.00	.08	0.95	.29***	6.38	.27+	1.70
Is Committed to Success	.05	0.67	-.02	-0.08	.01	0.09	.10*	2.38	.28	1.31
Takes Risks	-.12	-1.57	-.02	-0.08	.24***	3.24	-.05	-1.27	.35+	1.81
Learning-Oriented Dimensions										
Uses Feedback	.02	0.26	-.19	-0.71	.08	1.05	-.02	-0.52	-.26	-1.22
Cross-Culturally Adventurous	.57***	7.17	.46*	2.13	.26**	3.38	.24***	6.50	.07	0.38
Seeks Opportunities to Learn	-.08	-0.85	.01	0.02	-.13	-1.43	.11*	2.13	.44*	2.05
Is Open to Criticism	-.06	-0.91	.05	0.25	-.16*	-2.46	-.06+	-1.81	.28+	1.82
Seeks Feedback	.09	-1.05	-.26	-1.14	-.09	-1.13	-.06	-1.41	-.28	-1.54
Is Flexible	.05	0.74	.43+	1.88	-.08	-1.35	.01	0.21	.10	0.55
F	4.71***		1.24		7.32***		40.50***		3.39**	
R²	.19		.33		.26		.43		.57	
Adjusted R²	.15		.06		.23		.42		.40	
N	333b		56		361		762		56	

a The multilingual variable was only available for Companies 2–4.
b The expatriate variable was only available for Companies 2–5.

Table 8
Hierarchical Regression Analyses of Executive Potential on Appraisal and Prospector Dimensions

Dependent Variable = Executive Potential

	β	t	β	t	β	t
Step 1						
Performance Appraisal Measures						
Leadership and Motivation	.00	.02	.29	1.85	.27	1.46
Strategic Business Awareness	-.02	-.16	-.07	-.48	-.08	-.54
Achievement of Results	.13	.82	.05	.28	.02	.11
Step 2						
End-State Dimensions						
Has Business Knowledge			.08	.47	.00	.00
Sensitive to Cultural Differences			.07	.36	-.01	-.04
Is Insightful			.16	.95	.23	1.22
Acts with Integrity			-.37	-1.99	-.30	-1.40
Takes Risks			.13	.62	.21	.87
Has the Courage to Take a Stand			.64	2.69	.64	2.11*
Brings Out the Best in People			.01	.04	.13	.44
Is Committed to Success			-.41	-1.68	-.51	-1.91+
Change in R2 After Step 2			.30			
Change in Adjusted R2 after Step 2			.18			
F			2.39*			
Step 3						
Learning Dimensions						
Is Open to Criticism					.27	1.47
Seeks Feedback					.02	.07
Uses Feedback					-.15	-.55
Seeks Opportunities to Learn					.04	.15
Is Cross-Culturally Adventurous					.10	.43
Is Flexible					.10	.44
Change in R2 After Step 3					.06	
Change in Adjusted R2 after Step 3					-.05	
F					.590	
F	.25		1.82+		1.33	
R^2	.01		.31		.37	
Adjusted R^2	-.04		.14		.09	