

HR PROFESSIONALS' BELIEFS ABOUT EFFECTIVE HUMAN RESOURCE PRACTICES: CORRESPONDENCE BETWEEN RESEARCH AND PRACTICE

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Five thousand human resource (HR) professionals were surveyed regarding the extent to which they agreed with various HR research findings. Responses from 959 participants suggest that there are large discrepancies between research findings and practitioners' beliefs in some content areas, especially selection. In particular, practitioners place far less faith in intelligence and personality tests as predictors of employee performance than HR research would recommend. Practitioners are somewhat more likely to agree with research findings when they are at higher organizational levels, have SPHR certification, and read the academic literature. Suggestions are made for more effective dissemination of HR research findings. © 2002 Wiley Periodicals, Inc.

Accumulating evidence suggests that certain human resource (HR) practices are consistently related to organizational productivity and firm financial performance (e.g., Arthur, 1994; Becker & Gerhart, 1996; Huselid, 1995; U.S. Department of Labor, 1993). For example, Welbourne and Andrews (1996) found that new companies that placed a high value on HR (as assessed by content of their prospectuses) and that included high levels of organizationally based pay-for-performance had a five-year survival rate of 92% as compared with 34% for companies that were low on both dimensions. Similarly, Huselid (1995) found that a one-standard-deviation increase in scores on a "high-performance HR practices" scale (which included such practices as regular attitude surveying, paying for performance, formal communication programs, and use of employment tests) was associated with a 23% increase in accounting profits and an 8% increase in economic value. In addition,

Terpstra and Rozell (1997) found that companies whose HR professionals read the academic research literature have higher financial performance than those that do not.

Nevertheless, it is a well-known fact that organizations often fail to adopt practices that research has shown to be effective (e.g., Johns, 1993; Rogers, 1995). One potential reason for this may be a lack of practitioner awareness of research findings (Gannon, 1983). For example, a variety of business and personal factors (such as increased competition, new legislative requirements, and dual-career families) may leave HR professionals with little time for reading. In addition, research journals have become so technically complex that they are nearly inaccessible to individuals without a doctorate degree. Moreover, previous research suggests that many of the questions that academics find interesting are viewed as rather unimportant by practitioners (Campbell, Daft, & Hulin, 1982). For all these

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reasons, managers may be largely unaware of recent advances in HR research.

An alternative possibility, however, is that managers and professionals are actually *aware* of research findings, but for one reason or another fail to *implement* them. For example, Pfeffer and Sutton (2000) have argued that the research-practice gap is primarily a “knowing-doing” gap rather than a “knowing” gap. As with knowledge gaps, failures of implementation may occur for a variety of reasons, such as overwork, risk aversion, political considerations, or organizational inertia (Johns, 1993; Rogers, 1995).

Determining the extent to which gaps between research and practice are the result of lack of knowing versus lack of doing requires, as a first step, explicit investigation of what practitioners *do* know. Surprisingly, there does not appear to be much evidence concerning this question. As such, existing research does not allow us to pinpoint where the biggest gaps currently exist between research findings and practitioner beliefs.

The present research was conducted to remedy this gap. Specifically, we surveyed a large sample of HR practitioners with respect to their beliefs regarding various research findings. In this way, we were able to identify those practices for which there is the greatest (and least) consistency between research findings and practitioner beliefs. In addition, we examined the various ways in which HR professionals obtain information about HR practices. The purpose of this latter step was to determine how research findings might be more effectively disseminated to HR professionals, and whether some sources of information provide greater research accuracy than others. Taken together, we hope these findings will provide a base for future efforts to reduce gaps in knowledge and beliefs through improved information dissemination, more useful research, or both.

The Study

Members of the Society for Human Resource Management (SHRM) comprised the sample for this study. SHRM's database manager selected a stratified random sample of five thousand members with the titles of HR manager or above (e.g., director, assistant or associate

director, vice president or senior vice president). Surveys were sent to 2,600 HR managers; 1,200 directors, assistant directors or associate directors; and 1,200 vice-presidents or associate vice-presidents. This sampling strategy was designed to ensure that respondents would be generalists rather than specialists, and that they would have significant responsibilities for HR policy and implementation.

To examine the extent to which the beliefs of HR professionals are consistent with established research findings, a thirty-nine-item questionnaire was constructed. Survey content was based on five of the seven dimensions covered by the Human Resource Certification Institute's “Professional in Human Resources” (PHR) exam. The included dimensions were: *Management Practices* (motivation, leadership, performance management, employee involvement, and HR roles); *General Employment Practices* (legal issues, performance appraisal and employee attitudes); *Staffing* (recruitment, selection, and career planning); *HR Development* (training and development, evaluation of training effectiveness), and *Compensation and Benefits* (job pricing, pay structures, compensation strategies and effectiveness). The dimensions of *Safety* and *Labor Relations* were not included because many HR departments do not have responsibility for these particular functions.

The initial questions were developed by having each of the authors construct content-relevant research items for areas in which he or she had particular research expertise. We were able to generate items for most content areas on the basis of our own familiarity with these research areas. For the few topics on which we had little expertise, we examined research-oriented textbooks and research handbooks for leads to relevant research citations. In this way, we created thirty-nine initial items, sampled in roughly the same proportions as their coverage on the PHR exam. By linking our item sampling strategy to this well-established prototype of the HR body of knowledge, we attempted to create the best possible opportunity for HR practitioners to demonstrate their awareness of the relevant research literature.

Although the general content categories were modeled around the PHR exam, the ac-

tual nature of the questions was quite different. Specifically, in contrast to the certification exam (which tends to focus heavily on legal, definitional, and procedural issues), the present survey focused on *research* findings regarding the effectiveness of particular practices. Items were constructed to be either true or false, based on previous research results. Respondents were asked to indicate whether they agreed, disagreed, or were uncertain about each item, allowing us to determine content areas where practitioner beliefs diverge most sharply from research findings.

The original questionnaire was pretested on a sample of fifty-nine highly prolific researchers in HR and industrial/organizational psychology. On the basis of these researchers' responses and feedback, problematic items were either reworded or replaced.

In addition, we collected information about what types of reading HR professionals do, where they go to get help with HR problems or issues, and attitudes toward various sources of HR information. Lists of common informational sources were provided, and respondents indicated the frequency with which these sources were used. Both archival (e.g., Web sites, journals) and social (e.g., consultants, academics, other HR practitioners) information sources were assessed.

The purpose of collecting this information was twofold. First, knowing where HR professionals go for information is useful for future attempts to disseminate research findings and other types of information. Second, by

comparing methods of information search with practitioners' knowledge of the research literature, we can assess whether some sources of information appear to be more effective at disseminating research findings than others.

Results: What HR Professionals Believe

Responses were received from 959 participants, for a response rate of at least 19.2% (we do not know how many surveys were undeliverable). Nearly half the respondents (48.5%) were HR managers, while the rest were either directors (26.1%), vice presidents (18.0%), or other titles (7.4%). Perhaps not surprisingly (given our sampling strategy), the average respondent also had considerable experience in HR (13.8 years, $SD = 7.9$). Test-retest reliability for the questionnaire was assessed using an independent sample of forty-eight mid-level general and HR managers enrolled in an Executive MBA Organizational Behavior class. Over a six-week time span, test-retest reliability was found to be .70.

Between the time of survey administration and preparation of this article, four of the original thirty-nine items were eliminated from the survey.² Of the remaining thirty-five items, the average respondent answered twenty (57%) of the items correctly (Figure 1). However, there was great variability in the extent of agreement, with one subject agreeing on only nine of the items (26%) and two agreeing on thirty items (86%). In addition, there was enormous variation in the extent to which

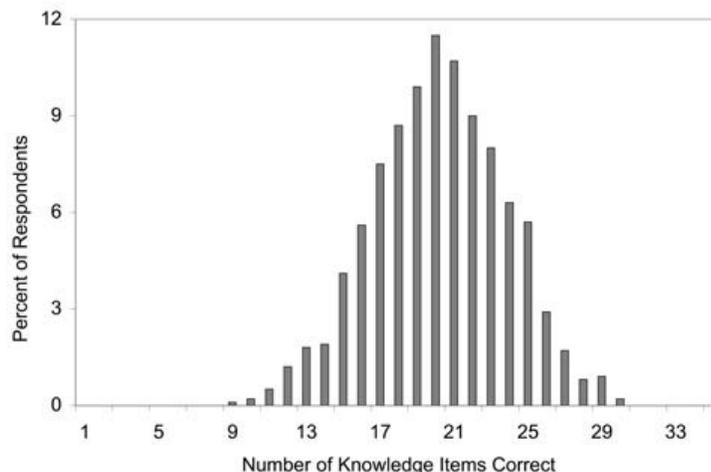


Figure 1. Histogram of knowledge scores.

respondents (as a group) agreed with particular items, ranging from a low of 16% for one item to a high of 96% for another (Table I).

The first column of Table I shows the thirty-five retained items. Column 2 indicates whether each item is true or false, the percentage of respondents who agreed with the item, and the percentage of respondents who

were uncertain (the percentage who disagreed can be calculated by subtracting the sum of these two numbers from one hundred). The third column summarizes the nature of the research findings that support each item, along with sample research citations. (Additional citation information for each item can be found in the Appendix). Finally, the fourth

TABLE I Items, Responses, and Supporting Evidence

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
Management Practices			
1. Leadership training is ineffective because good leaders are born, not made.	False 96% (2%)	Field study evidence that leadership behaviors and effectiveness increase following training (Barling et al., 1996). Evidence that leadership behaviors are only weakly predicted by dispositional characteristics (Judge & Bono, 2000) that are heritable (Loehlin et al., 1998; Reimann et al., 1997).	
2. The most important requirement for an effective leader is to have an outgoing, enthusiastic personality.	False 82% (4.5%)	This kind of personality is, on average, an asset for leadership. A recent meta-analysis estimates a corrected validity coefficient of .31 between extraversion and leader effectiveness (Judge et al., in press). However, intelligence has an even higher correlation (.52; Lord et al., 1986). Also, some highly effective leaders are distinctly introverted (Bennis & Nanus, 1997; Collins, 2001).	Although it is unlikely that any future variables will produce higher validities than intelligence, work on leader behaviors (such as vision-setting and communication skills) is just beginning, so little is known about their average effect sizes. We do know (e.g., Barling et al., 1996; Baum et al., 1998) that leadership success can be affected by leaders' behaviors and not just their traits, so future research would be useful.
3. Once employees have mastered a task, they perform better when they are told to "do their best" than when they are given specific, difficult performance goals.	False 82% (6%)	Employees reach higher levels of performance when they are given difficult-yet-attainable goals rather than told to do their best. This is one of the most robust findings in all of industrial/organizational psychology (Locke & Latham, 1990).	
4. Companies with vision statements perform better than those without them.	True 62% (15%)	Baum et al. (1998) found that growth-oriented visions and strong vision communication produced significantly higher firm growth rates. Hoch et al. (1999) found that 93% of the most successful software firms had clear and ambitious visions, as compared with 25% of the least successful. The importance of having a product vision for successful product development has also been reviewed by Brown & Eisenhardt (1995).	

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
5. Companies with very low rates of professional turnover are less profitable than those with moderate turnover rates	False 62% (23%)	Bain & Company (Reichheld, 1996) has analyzed the economics of professional turnover in several industries. For example, in brokerage firms, they calculated that an increase in broker retention rates from 80% to 90% results in an increase of 155% in the average net present value of a new broker. A general model of the “economics of employee loyalty” is also presented.	This finding might not hold true in certain types of internal labor market contexts —e.g., organizations with strong employment “guarantees” (e.g., government employment), or organizations with very strong contingency reward systems or “up-or-out” promotion & partnership systems. More contingency-based research would be useful.
6. If a company feels it must downsize employees, the most profitable way to do it is through targeted cuts rather than attrition.	True 54% (17%)	Morris, Cascio, & Young (1999) tracked changes in employment of the S&P 500 companies over a 12-year period. They found that companies whose downsizing was associated with sale of assets (i.e., strategic or targeted downsizing) had improved their return on assets by the second year after downsizing. In contrast, pure “employment downsizers” still had lower ROAs two years later than they had before downsizing. See also Cameron et al. (1993).	
7. In order to be evaluated favorably by line managers, the most important competency for HR managers is the ability to manage change.	True 50% (12%)	This was found by Ulrich et al. (1995), based on more than 12,000 peer and supervisory assessments of the performance of nearly 2,000 HR professionals. Ability to manage change explained 41.2% of the variance in supervisors’ and peers’ evaluations of HR professionals, as compared with 23.3% for HR knowledge and delivery and 18.8% for knowledge of the business.	
8. On average, encouraging employees to participate in decision making is more effective for improving organizational performance than setting performance goals.	False 18% (9%)	Meta-analytic evidence that the effects of participation are weaker (< 1%) than the effects of goal setting (20%; Locke et al., 1980). These effects also hold at multiple levels of analysis. Further evidence shows that the effects of goal setting are robust (Locke & Latham, 1990), while the effects of participation are highly variable (e.g., Wagner, 1994).	
General Employment Practices			
9. Most managers give employees lower performance appraisals than they objectively deserve.	False 94% (3%)	Appraisal <i>leniency</i> is much more common than <i>stringency</i> (Jawahar & Williams, 1997; Longenecker et al., 1987)	

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
10. Poor performers are generally more realistic about their performance than good performers are.	False 88% (3%)	Primary study evidence that poor performers are less accurate about their relative performance than are good performers (Kruger & Dunning, 1999).	
11. Teams with members from different functional areas are likely to reach better solutions to complex problems than teams from a single area.	True 88% (5%)	Multiple studies on cross-functional teams have shown positive outcomes for product and project quality (e.g., Keller, 2001; Lutz, 1994; Northcraft et al., 1995; Pelled et al., 1999). At the top management level, Hambrick et al. (1996) found that more heterogeneous teams (with respect to functional area, education, and tenure) made bolder (although slower) competitive moves, causing an overall net positive effect on firm market share and profits.	Although product outcomes are generally positive, psychosocial outcomes such as member satisfaction or stress are frequently negative. Also, it is possible that at very high levels of multiple types of diversity, interpersonal conflict might overtake the performance benefits of diversity.
12. Despite the popularity of drug testing, there is no clear evidence that applicants who score positive on drug tests are any less reliable or productive employees	False 57% (21%)	Norman et al. (1990) drug tested more than 4,000 applicants and then followed them through more than 1 year of employment. Those who tested positive had a 59% higher absenteeism rate and a 47% higher involuntary turnover rate. Parish (1989) found significant results for disciplinary actions, and Winkler & Sheridan (1989) for vehicular accidents, absenteeism, and medical costs. See also McDaniel et al. (1988).	
13. Most people over-evaluate how well they perform on the job.	True 54% (4%)	Meta-analytic and primary study evidence that self-ratings have higher means than peer and supervisor ratings (e.g., Brown, 1986; Harris & Schaubroeck, 1988; Mabe & West, 1982; Thornton, 1980).	
14. Most errors in performance appraisals can be eliminated by providing training that describes the kinds of errors managers tend to make and suggesting ways to avoid them.	False 25% (5%)	Most performance appraisal errors are extremely resistant to change (Latham & Wexley, 1994). In addition, training to eliminate one kind of error often introduces other types of errors (e.g., Bernardin & Pence, 1980). Many managers are well aware that they commit errors, but continue to do so for personal and social reasons (Longenecker et al., 1987).	
Training & Employee Development			
15. Lecture-based training is generally superior to other forms of training delivery.	False 96% (2%)	Meta-analytic evidence that computer-based instruction is slightly more effective than traditional instruction (Kulik & Kulik, 1991). Indirect evidence is provided by educational theory suggesting that the medium for instruction is less critical than the events of instruction in determining learning outcomes (e.g., Clark, 1983). In this regard, lecture-based training is a passive technique, while active techniques are typically more effective (Gagne & Medsker, 1996).	

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
16. Older adults learn more from training than younger adults.	False 68% (18%)	Meta-analytic evidence that age is negatively associated with learning outcomes (Colquitt et al., 2000). Large sample evidence that age is associated with decreases in cognitive capacities associated with learning (Horn & Cattell, 1967). Primary study evidence of negative relationship with learning in organizational setting (Warr & Bunce, 1995).	
17. The most important determinant of how much training employees actually use on their jobs is how much they learned during training.	False 60% (11%)	Meta-analytic evidence that post-training knowledge has a smaller relationship with transfer than some individual differences and contextual variables (Colquitt et al., 2000). Primary study evidence that transfer of training climate has a stronger relationship with transfer than learning does, in an organizational setting (Tracey et al., 1995).	
18. Training for simple skills will be more effective if it is presented in one concentrated session than if it is presented in several sessions over time.	False 59% (11%)	Meta-analytic evidence that training for simple skills is more effective when spaced over time than massed in one session (Donovan & Radosevich, 1999; Lee & Genovese, 1988).	
Staffing			
19. The most valid employment interviews are designed around each candidate's unique background.	False 70% (6%)	Meta-analytic evidence that structured interviews (where all candidates receive the same questions) have higher validities than unstructured ones (Schmidt & Hunter, 1998; Wiesner & Cronshaw, 1988).	
20. Although people use many different terms to describe personalities, there are really only four basic dimensions of personality, as captured by the Myers-Briggs Type Indicator (MBTI).	False 49% (23%)	There are five basic dimensions of personality—the “Big Five” of Conscientiousness, Extraversion, Openness to Experience, Agreeableness, and Emotional Stability/Neuroticism (Digman, 1990). Except for Extraversion, these are not the traits assessed by MBTI.	
21. On average, applicants who answer job advertisements are likely to have higher turnover than those referred by other employees.	True 49% (13%)	Meta-analytic (e.g., Conard & Ashworth, 1986) and primary study evidence (e.g., Decker & Cornelius, 1979; see Rynes, 1991, for a review).	Recent evidence on the effects of recruitment sources has been less consistent than earlier evidence. The emergence of the Web as a major recruitment source may also change future recruiting source dynamics.
22. Being very intelligent is actually a disadvantage for performing well on a low-skilled job.	False 42% (12%)	The validity coefficient for intelligence is always positive. Hunter (1986) and Schmidt & Hunter (1998) estimate the corrected validity coefficient for unskilled jobs to be .23. (Comparable figures are .40 for semi-skilled, and .58 for professional-managerial jobs.)	

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
23. There is very little difference among personality inventories in terms of how well they predict an applicant's likely job performance.	False 42% (30%)	The validity of personality measures as predictors of performance will depend to a large extent on the degree to which they tap important "Big Five" personality dimensions, particularly Conscientiousness. So, for example, Big Five personality measures are relatively good predictors of performance, while the MBTI doesn't even claim to predict performance (Gardner & Martinko, 1996).	
24. Although there are "integrity tests" that try to predict whether someone will steal, be absent, or otherwise take advantage of an employer, they don't work well in practice because so many people lie on them.	False 32% (34%)	Even if applicants or employees do distort their answers, validity of these instruments is still substantial. A large meta-analysis suggested that the overall corrected validity coefficient for integrity tests (across all types of performance measures) is .41. Counterproductive behaviors such as theft or absenteeism are somewhat better predicted (.47) than overall job performance (.34).	
25. One problem with using integrity tests is that they have high degrees of adverse impact on racial minorities.	False 31% (50%)	A recent study based on four large-sample databases showed "trivial" differences (less than .15 standard deviations in all cases) across Caucasians, Asians, Native Americans, and African Americans (Ones & Viswesvaran, 1998).	
26. On average, conscientiousness is a better predictor of job performance than is intelligence.	False 18% (10%)	There is considerable meta-analytic evidence that intelligence is a better predictor of job performance than conscientiousness (Schmidt & Hunter, 1998; average validity coefficient for intelligence = .51 vs. .31 for conscientiousness).	
27. Companies that screen job applicants for values have higher performance than those that screen for intelligence.	False 16% (27%)	Meta-analytic evidence that intelligence is the best established predictor of job performance (Schmidt & Hunter, 1998). Primary study evidence that the effect of values on job performance is dependent on many factors (Adkins et al., 1996); values influence perceptual organization and guide decision making, but their link to job performance is unclear (Ravlin & Meglino, 1987).	Overall findings unlikely to change. However, additional studies are needed at the organizational level of analysis. In addition, more "values" studies are needed that measure performance as an outcome (most values research has examined affective outcomes such as satisfaction, tenure, and commitment).
Compensation & Benefits			
28. When pay must be reduced or frozen, there is little a company can do or say to reduce employee dissatisfaction and dysfunctional behaviors.	False 72% (13%)	Both laboratory and organizational field research shows that providing procedurally just explanations of pay cuts can dramatically reduce the negative side effects (Greenberg, 1990, 1993).	

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
29. Most employees prefer to be paid on the basis of individual performance rather than on team or organizational performance.	True 81% (8%)	Multiple studies have demonstrated this result (e.g., BNA, 1988; Cable & Judge, 1994). For example, Bretz & Judge (1994) found that of seven organizational characteristics, the one that best predicted simulated organizational choice was pay for individual (versus team-based) productivity.	
30. Merit pay systems cause so many problems that companies without them tend to have higher performance than companies with them.	False 66% (7%)	Positive relationships have been shown between merit systems and organization-level performance by Kopelman & Reinharth (1982) and Kopelman, Rovenpor, & Cayer (1991). Heneman (1992) reviewed five studies establishing a positive merit system-performance link. Even the major empirical study to raise “cautions” about merit pay (Pearce et al., 1985) found increases in performance after merit pay implementation; the increases simply failed to reach statistical significance (with a very small sample size).	
31. There is a positive relationship between the proportion of managers receiving organizationally based pay incentives and company profitability.	True 62% (23%)	Gerhart & Milkovich (1990) found that companies with 80% managerial eligibility for stock options had 25% higher return on assets than companies where only 20% of managers were eligible. (See also Welbourne & Andrews, 1996).	
32. New companies have a better chance of surviving if all employees receive incentives based on organization-wide performance.	True 59% (17%)	New companies that placed a high value on their employees (as coded from prospectuses) and that included high levels of organizational-performance-based pay had dramatically higher five-year survival rates (92%) than those who were low on both dimensions (34%; Welbourne & Andrews, 1996).	
33. Talking about salary issues during performance appraisals tends to hurt morale and future performance.	False 51% (10%)	In a field study of nine different sites, Prince & Lawler (1986) found that salary discussions had positive rather than negative effects on employee attitudes and subsequent performance improvement. In addition, the positive effects were strongest for those with lower initial performance and where initial perceptions of performance were most discrepant between supervisors and employees. For similar results based on employee surveys at General Electric, see Welch (2001).	Could use more research on this, but the limited research available suggests that neither morale nor performance suffers from linking pay discussions with performance discussions. Even if short-term morale were to be affected, one could not infer that either longer-term morale or performance would be negatively affected. For example, equity theory predicts the effect can easily go the other way—e.g., people working harder to reduce their dissatisfaction with the previous appraisal.

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TABLE I (continued.)

<i>Items</i>	<i>Answer—% Correct (% uncertain)</i>	<i>Research Evidence</i>	<i>Possible Contingencies</i>
34. Most employees prefer variable pay systems (e.g., incentive schemes, gain sharing, stock options) to fixed pay systems.	False 40% (12%)	A national survey showed that 63% of workers surveyed prefer straight salary, followed by individual incentives (22%) and company-wide incentives (12%; BNA, 1988). Cable & Judge (1994) found a similar preference for fixed pay among job-seeking college students. Also, theories of risk and agency theory have as a core assumption that employees require a compensating risk differential in order to make variable pay acceptable to them (e.g., Jensen & Meckling, 1976).	
35. Surveys that directly ask employees how important pay is to them are likely to overestimate pay's true importance in actual decisions.	False 35% (10%)	Probably due to social desirability and/or lack of self-insight, people tend to say pay is less important to them than the weights they actually place on pay in making choice decisions (Feldman & Arnold, 1978; Rynes et al., 1983). People also think that others who are "just like them" place a higher importance on pay than they themselves do (Jurgensen, 1978)—further evidence of possible lack of self-insight about motivations. These results are also consistent with broader findings from the decision sciences that people tend to underestimate the importance of the most important factors in their decisions (Slovic & Lichtenstein, 1971).	

Note: Full citations for sources not listed in the references section of this article can be found in the Appendix, where they are listed by item number.

column suggests limitations of the current research in some areas, as well as possible contingency variables that might be revealed in future research.

With respect to items in the *Management Practices* domain, a clear majority of practitioners tended to agree with research findings that leadership abilities can be improved through training (96%); that having an outgoing personality is not the most important characteristic of a leader (82%, although it certainly helps; see Judge, Bono, Ilies, & Werner, in press), and that performance is generally higher when people are given specific, difficult goals rather than told merely to do their best (82%). Another group of items garnered only slim majority support: the organizational

benefits of having a leadership vision (62%), the benefits of very low professional turnover (62%), and the general superiority of targeted rather than attrition-based downsizing (54%).

Interestingly, only 50% of respondents agreed with Ulrich, Brockbank, Yeung, and Lake's (1995) finding that the most important competency for HR managers (in terms of supervisory and peer evaluations) is the ability to manage change. This would seem to be a particularly important finding, in that it suggests that modern HR managers need to know far more than the "traditional" HR knowledge covered in HR textbooks and certification exams. Rather, they also need both cognitive and practical knowledge regarding how to get things done in complex social systems. Finally,

only 18% believed that goal setting was more effective than employee participation for improving organizational performance, although this finding has been supported in multiple studies over the past twenty years.

With respect to items falling under the domain of *General Employment Practices*, there was very high agreement with three of the items. Specifically, most respondents (94%) agreed that managers do not give overly stringent performance appraisals, that poor performers are generally less realistic about their performance than higher performers (88%), and that multifunctional teams tend to reach better solutions to complex problems than single-function teams (88%). However, there was considerably less awareness that drug testing has been empirically shown to differentiate applicants in terms of post-hire performance (57%), and that most people overestimate how well they perform on the job (54%).

Finally, respondents were much more optimistic about the possibility of eliminating errors from the performance appraisal process than research findings warrant. Specifically, only 25% disagreed with the questionnaire item, "Most errors in performance appraisals can be eliminated by providing training that describes the kinds of errors managers tend to make and suggesting ways to avoid them." In reality, however, a long line of research shows that attaining accuracy in performance appraisals is extremely difficult, and cannot be achieved by these simple training methods (Latham & Latham, 2000; Latham & Wexley, 1980). Moreover, many managers are fully aware that they are committing certain kinds of errors (especially leniency), but they do so anyway for social, political, or motivational reasons (Longenecker, Gioia, & Sims, 1987).

With respect to *Training and Employee Development*, nearly all respondents (96%) recognized that pure lecturing is generally not the best way to deliver training. In addition, 68% accurately believed that older adults do not learn more from training than younger adults, while 60% realized that how much is learned during training is not the most important determinant of how much training is actually used on the job. Finally, 59% (accurately) disagreed with the statement that

training for simple skills is more effective when presented in a single concentrated session.

On the other hand, in the *Staffing* area, practitioner beliefs were notably inconsistent with research findings. In fact, on only one item was there substantial agreement between research findings and practitioner beliefs. Specifically, 70% (accurately) disagreed that the most valid employment interviews are designed around each candidate's unique background. Rather, considerable evidence suggests that the most valid interviews are *not* unique, but rather structured to be the same across all candidates.

On all other selection-related items, fewer than 50% of respondents agreed with prevailing research findings. One particularly notable difference between practitioners' beliefs and research findings concerned the perceived usefulness of intelligence (or general mental ability, GMA) as a predictor of performance. Generally speaking, research findings suggest that GMA is a much better predictor of subsequent job performance than most practitioners believe. In the words of Schmidt and Hunter (1998):

Research evidence for the validity of GMA measures for predicting job performance is stronger than that for any other method...literally thousands of studies have been conducted over the last nine decades....Because of its special status, GMA can be considered the primary personnel measure for hiring decisions, and one can consider the remaining personnel measures as supplements to GMA. (pp. 264, 266)

In contrast to this strong research-based endorsement of GMA as a selection device, our respondents revealed considerable skepticism about the value of intelligence via their responses to at least three items. Specifically, 57% falsely believed that companies that screen job applicants for values have higher performance than those that screen for intelligence (and 27% were uncertain), while 72% falsely believed that conscientiousness is a better predictor than intelligence (10% uncertain). In addition, 46% incorrectly believed that intelligence is actually a disadvantage for

One particularly notable difference between practitioners' beliefs and research findings concerned the perceived usefulness of intelligence (or general mental ability, GMA) as a predictor of performance. Generally speaking, research findings suggest that GMA is a much better predictor of subsequent job performance than most practitioners believe.

performing well at low-skilled work (12% were uncertain).

Contrary to practitioners' beliefs, research findings suggest that GMA has an average validity coefficient of .51, as compared with .31 for conscientiousness (Schmidt & Hunter, 1998). Similarly, although research connecting applicant or employee values to job performance is far less plentiful than research on conscientiousness, existing evidence suggests that relationships between values and performance are in part determined by fit with other employees, and that they can even be inconsistent in direction (Adkins, Ravlin, & Meglino, 1996; Lauver & Kristof-Brown, in press). Intelligence, on the other hand, has been shown to be a positive predictor of performance at all levels of job skill, although the size of the relationship is smaller for lower-level jobs than for jobs of greater complexity (e.g., $\rho = .23$ for unskilled; $\rho = .40$ for semi-skilled, and $\rho = .58$ for managerial and professional jobs; see Schmidt & Hunter, 1998, p. 264).

Our results also suggest considerable discrepancies between research and practitioner beliefs with respect to both the nature and usefulness of personality traits as a basis for selection. These discrepancies are evident in four items. Specifically, only 49% of respondents (correctly) disagreed with the statement that the four dimensions represented by the Myers-Briggs Type Indicator (MBTI) represent the basic dimensions of personality; only 42% correctly disagreed with the statement that there is very little difference among personality inventories with respect to how well they predict job performance; only 32% (correctly) disagreed with the statement that integrity tests are not useful for selection, and only 31% correctly disagreed with the statement that integrity tests result in high degrees of adverse impact against minorities.

In contrast to the typical HR manager's beliefs, research suggests that there are five (rather than four) basic dimensions of personality, and that they are not the ones assessed by the MBTI (see Table I). In addition, different personality measures can be expected to have very different levels of usefulness for predicting performance because different measures contain varying proportions of the five

basic dimensions, some of which are much more predictive than others (e.g., Barrick & Mount, 1991). Third, integrity tests exhibit relatively high validity ($\rho = .41$) as selection devices, even if some applicants do tend to distort their responses in a favorable direction.³ Finally, research based on several very large samples suggests that differences among racial or ethnic groups on integrity tests are "trivial" and, as such, unlikely to lead to adverse impact (Ones & Viswesvaran, 1998).

It should be noted about personality that, in contrast to most other areas of the questionnaire, relatively high proportions of respondents were uncertain about all of the personality items. For example, 23% were uncertain about whether the four dimensions of the MBTI represent the basic dimensions of personality; 30% were uncertain about whether there are sizable differences in the validity of different personality inventories; 34% were uncertain about whether integrity tests have selection validity; and a very considerable 50% were uncertain about whether integrity tests have adverse impact against minorities. To some extent, the large degree of uncertainty regarding personality tests is understandable, given that supportive results have emerged only in the past decade after several decades of discouraging (pre-meta-analytic and pre-Big Five) results. Although evidence concerning the usefulness of several of the Big Five personality traits has begun to be translated to practitioner audiences, most such translations are still quite recent (e.g., Barrick & Mount, 2000; Behling, 1998).

Although discrepancies between research and practitioner beliefs are quite large in selection, they appear to be somewhat smaller with respect to compensation and benefits. In general, respondents tended to agree with research findings: that there is indeed something managers can do to soften the blow of pay cuts (72% agreement); that most people wish to be paid on the basis of individual rather than group or team performance (81% agreement); that merit pay systems are not detrimental to organizational performance (66% agreement); and that having higher proportions of managers on organizationally based pay incentives is associated with higher organizational performance (62% agreement). In addition, a slim

Our results also suggest considerable discrepancies between research and practitioner beliefs with respect to both the nature and usefulness of personality traits as a basis for selection.

majority (59%) agreed that new companies have a better chance of surviving if all employees receive incentives based on organization-wide performance, and that talking about salary issues during performance appraisals does not destroy employee morale and performance (51%).

On the other hand, in contrast with existing research (Cable & Judge, 1994), only 40% of respondents disagreed with the (false) statement that most employees prefer variable pay systems (e.g., incentives, gain sharing, stock options) over fixed pay systems. This result may have been obtained because this survey was conducted just before the stock market crash in the spring of 2000. As such, respondents may have still been reading popular press articles about how top-tier business students were eschewing “corporate” jobs (or even completing their MBAs) in favor of cashing in on the dot.com and IPO bonanzas.

Finally, only 35% agreed with the finding that people are likely to report that pay is less important to them than it really is. This appears to occur for one of two reasons: it is somewhat “socially undesirable” to admit to strong preferences for pay (e.g., Feldman & Arnold, 1978; Rynes, Schwab, & Aldag, 1983), and the more general tendency to underreport the importance of the most significant decision variables, while overreporting

less significant ones (Slovic & Lichtenstein, 1971). Failure to recognize these general biases in employees’ response patterns might well cause employers to underestimate the extent to which they need to attend to compensation issues.

Where HR Professionals Get Their Information

In addition to asking about respondents’ beliefs, we also inquired as to where respondents get their information, as well as their attitudes toward different informational sources. Table II shows the extent to which our respondents read various types of periodicals that might yield information about the effectiveness of HR practices.

As the table indicates, the only periodical that respondents read more than “sometimes” is *HR Magazine*, which the typical respondent “usually” reads. Three periodicals were also read somewhere between “rarely” and “sometimes”: *The Wall Street Journal*, *HR Focus*, and *HR Executive*. Consistent with other research (e.g., Offermann & Spiros, 2001), very few respondents (fewer than 1%) reported that they “usually” read the three most research-oriented journals on the list—*Journal of Applied Psychology*, *Personnel Psychology*, and *Academy of Management Journal*.

TABLE II Frequency with Which Periodicals Are Read

Periodical	Mean Rating	Standard Deviation
<i>Human Resource Magazine</i>	4.28	.86
<i>Wall Street Journal</i>	2.72	1.19
<i>HR Focus</i>	2.69	1.38
<i>Human Resource Executive</i>	2.62	1.48
<i>Human Resource Management Journal</i>	2.23	1.34
<i>Workforce</i>	2.00	1.31
<i>Business Week</i>	1.94	1.00
<i>Fortune</i>	1.92	1.00
<i>Forbes</i>	1.77	.93
<i>Harvard Business Review</i>	1.77	1.02
<i>Human Resource Planning Journal</i>	1.51	.93
<i>Inc.</i>	1.49	.80
<i>Fast Company</i>	1.46	.95
<i>Personnel Psychology</i>	1.22	.60
<i>Journal of Applied Psychology</i>	1.19	.55
<i>Academy of Management Executive</i>	1.11	.42
<i>Academy of Management Journal</i>	1.11	.39

Note. 1–5 scale, where 1 = “never,” 2 = “rarely,” 3 = “sometimes,” 4 = “usually,” and 5 = “always.”

TABLE III Sources of Help for Solving HR Problems

<i>Resource</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
Other HR professionals in my organization	3.15	1.38
SHRM Web site	2.98	1.04
Other Web sites	2.74	1.10
HR research literature	2.62	1.10
HR professionals in other organizations	2.48	.92
Consultants	1.98	.89
Academics	1.42	.73

Note. 1–5 scale, where 1 = “rarely or never,” 2 = “a few times per year,” 3 = “about once a month,” 4 = “several times per month,” and 5 = “almost daily.”

Table III provides additional information about how practitioners seek or receive information about HR issues. This table shows that the most common sources to which practitioners turn when faced with HR problems are other HR professionals in the same organization, the SHRM Web site, and other Internet sites. Interestingly, despite the very low rates of academic journal reading reported in Table II, practitioners still report going to the research literature more often than to consultants, academics, or HR professionals in other organizations. Although we cannot be sure of the reason for this apparent inconsistency, one possibility is that social desirability considerations cause people to inflate their answers to general questions about how much they read the research literature, as opposed to more specific questions about how often they read particular journals. Another possibility is that practitioners include a wider range of sources

under the category of “research literature” than we did in our survey.

Finally, Table IV shows respondents’ attitudes toward academics and academic research. This table suggests that practitioners are close to neutral on questions about the usefulness or applicability of research findings, but that they nevertheless wish they had more time to read about them (3.9 on a five-point scale). This was particularly true of those with less experience in HR; there was a negative correlation of $-.21$ ($p < .001$) between experience and desire to learn about academic research.

What Characteristics Are Associated with Research Knowledge?

As indicated earlier, there was very high variability in the extent to which respondents’ beliefs were consistent with research findings.

TABLE IV Practitioner Attitudes toward Academics and HR Research

<i>Attitude</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
I wish I had more time to read about academic HR research findings.	3.91	1.03
Most research findings make sense in theory, but don’t work well in practice.	3.04	.84
I would like to spend more time talking with academics about HR problems	2.86	1.09
I generally don’t find academic HR research to be very useful.	2.78	.91
I often wish I could call an academic to help me solve HR problems	2.65	1.07

Note. 1–5 scale, where 1 = “rarely or never,” 2 = “a few times a year,” 3 = “about once a month,” 4 = “several times per month,” and 5 = “almost daily.”

This raises the question of whether differences in research knowledge are reliably associated with differences in individual characteristics (e.g., education) or information-seeking strategies (e.g., academic reading).

To assess this question, we constructed a correlation matrix of major demographic characteristics, information-seeking strategies, and number of correct responses (Table V). As Table V indicates, two individual difference characteristics—job level ($r = .14$, $p < .01$) and SPHR certification ($r = .10$, $p < .01$)—were associated with higher levels of agreement with research findings. Two information-seeking strategies were also significantly correlated with research knowledge: academic reading ($r = .08$, $p < .05$)⁴ and use of consultants to seek information ($r = .09$, $p < .05$).

Finally, we conducted a regression analysis of all the independent variables from Table V to determine the extent to which bivariate results held up after controlling for the effects of all other variables. This analysis showed that three of the variables remained significant in this multivariate analysis: job level ($b = .50$, $t = 3.14$, $p < .01$), SPHR certi-

fication ($b = .81$; $t = 2.56$, $p = .01$), and academic reading ($b = .60$, $t = 1.94$, $p = .05$). However, the overall predictability of the model was quite modest ($R = .20$).

Discussion

In a book called *The Knowing-Doing Gap*, two prominent academics recently argued that the major differences in organizational competitiveness were no longer created by differences in knowledge, but rather by differences in the ability to implement what is known (Pfeffer & Sutton, 2000). Their basic assertion is that information dissemination has become so efficient that everyone is likely to know about best practices; thus, best practices are no longer likely to be sources of competitive advantage:

We now live in a world where knowledge transfer and information exchange are tremendously efficient, and where there are numerous organizations in the business of collecting and transferring best practices. So, there are fewer and smaller differences in what firms know than in their ability to act on that knowledge. (p. 243)

TABLE V Correlations among Major Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Job level	2.56	.86														
2. Tenure	13.89	7.84	.27**													
3. Education	2.37	.64	.17**	.07*												
4. HR major	.53	.50	-.02	.07*	.24**											
5. PHR Cert.	.22	.42	-.15**	-.16**	-.05	-.01										
6. SPHR Cert.	.23	.42	.11**	.18**	.12**	.14**	-.20**									
7. Business reading	1.86	.64	.20**	.19**	.18**	-.01	-.13**	-.01	(.71)							
8. HR reading	2.54	.76	.07*	.08*	.02	.02	.05	.03	.32**	(.68)						
9. Academic reading	1.17	.45	.01	.02	.12**	.08*	.03	.01	.29**	.32**	(.79)					
10. Websites	2.87	.95	-.06	-.13**	-.03	.02	.08*	.02	.09*	.24**	.09*	(.73)				
11. HR professionals	2.52	.92	-.02	.03	.11**	.08**	-.01	.08**	.10**	.17*	.05	.23*				
12. Academics	1.43	.72	-.06	-.06	-.02	.03	.06	-.02	.20**	.26**	.23**	.20**	.24**			
13. Consultants	1.99	.89	.14**	.09*	.07*	-.04	-.06	.02	.15**	.11**	.04	.09*	.21**	.16**		
14. Knowledge	20.21	3.66	.14**	.04	.06	-.02	-.04	.10**	.06	.05	.08*	.03	-.01	.02	.09*	(.70)

Notes: $N = 827$. * $p < .05$ (two-tailed test). ** $p < .01$ (two-tailed test). Job level is coded 1 = Other, 2 = HR Manager, 3 = Director, 4 = VP; Tenure = number of years in HR; Education is coded 1 = H.S., 2 = Bachelors, 3 = Masters, 4 = Ph.D.; HR major = 1, else = 0; PHR certification = 1, else = 0; SHPR certification = 1, else = 0. Knowledge = # correct of 35 possible. All other variables on 5-point scales. Reliability for Knowledge is test-retest; other reliabilities are coefficient alphas.

... our results suggest that there are in fact very large differences across companies in what their HR leaders know about best practices in HR and, furthermore, that the average level of knowledge does not appear to be very impressive.

In clear contrast to this assertion, our results suggest that there are in fact very large differences across companies in what their HR leaders know about best practices in HR and, furthermore, that the average level of knowledge does not appear to be very impressive. Moreover, it is quite likely that our results represent a “best case” scenario, given that we sampled the highest-level HR practitioners and that those who knew even less were probably disproportionately likely to be nonrespondents. In addition, the weakest knowledge areas were not limited to obscure, unimportant, or little-researched issues. Rather, the biggest gaps between research findings and practitioner beliefs concern some of the most central issues in HR: first, how to choose the best employees and, second, how to effectively motivate them through appropriate goal-setting and effective performance management.

Research at multiple levels of analysis increasingly suggests that differences in knowledge and/or application of these practices can have large impacts on a firm’s bottom line (e.g., Huselid, 1995). Moreover, results from Ulrich et al.’s (1995) study of how HR practitioners are evaluated by others suggests that lack of HR knowledge can also be a serious detriment to the career reputations of individual HR practitioners. Given the apparent importance of knowledge to both individual and organizational outcomes, a central issue for future researchers, practitioners, and professional organizations such as SHRM concerns how to disseminate research findings more accurately and effectively.

A second finding from our research is that practitioners’ beliefs diverge from research findings much more widely in some content areas than in others. Clearly, the area in which the largest gaps were uncovered in this study was selection. Specifically, five of the largest discrepancies involved selection-related issues: the relative validity of selecting for intelligence versus values (only 16% agreement), the relative validity of intelligence versus conscientiousness as predictors of performance (18% agreement), the validity of integrity tests (31%), the absence of adverse impact for integrity tests (32%), and the usefulness of intelligence for performing even

low-skilled jobs (42%). Even more specifically, three of the most problematic items revealed lack of awareness of the usefulness of intelligence as a predictor of performance in almost every type of job.

Despite the extensive research base underlying these selection findings, our results suggest that HR managers are generally unaware of this entire body of literature. A number of factors may account for this. First, selection research is more technical than research in many other areas of HR, frequently involving such complex procedures as meta-analysis, corrections for measurement error, and utility analysis. Thus, unless this research is translated for nonacademic audiences, it has little chance of being read and understood by most practicing managers.

Second, the frame of reference with respect to selection appears to be different for academics than it is for practitioners. For example, selection researchers focus on gathering knowledge about rather abstract characteristics of *people* (such as “intelligence” or “conscientiousness”), whereas most recruitment and selection activities are designed around the *job*. Thus, for example, interviewers are trained to develop questions that focus on applicants’ abilities to perform specific job tasks or to handle particular job-related situations, rather than to attempt to infer someone’s personality or intelligence from interview responses. The practice of structuring job descriptions and interview questions around job analysis is consistent with earlier recommendations (following passage of Title VII of the Civil Rights Act) designed to improve selection validity and to reduce the likelihood of unintentional bias or discrimination. In fact, these recommendations (to standardize interview content around job-related questions) have been notably successful in improving the validity of the employment interview (McDaniel et al., 1994; Schmidt & Hunter, 1998). However, they may not be very helpful in revealing the linkages between the interview behaviors exhibited by applicants and the underlying traits (such as intelligence or conscientiousness) that cause some applicants to produce more effective answers than others.

A third reason for the failure of selection research to take root in practice probably resides in the negative coverage that intelligence

and ability testing continue to receive in the popular press (e.g., Goleman, 1998). Despite overwhelming evidence of the usefulness of ability tests for predicting performance (see Hunter, 1986), the persistence of negative press coverage has almost certainly convinced some practitioners that intelligence is an over-rated construct, and/or that it cannot be usefully assessed via paper-and-pencil tests. Furthermore, the fact that ability tests produce adverse impact against certain groups has brought testing squarely into the political arena, where facts are often selectively chosen or distorted to support desired ends. In turn, political and legal uncertainties about testing may have caused some practitioners to lose interest in research about intelligence, feeling that attempts to assess it are too risky.⁵

Whatever the reasons, lack of awareness of broad selection principles can be very costly to organizations, since the characteristics of selected employees place inevitable limits on the extent to which other management practices (such as training and performance management) will be effective. Based on a meta-analysis of twenty-five years' worth of data, researchers at Gallup came to the same conclusion: "People don't change that much....great managers know there is a limit to how much remolding they can do to someone" (Buckingham & Coffman, 1999, pp. 56–57). Because of this, it is crucial to know how to select the right people in the first place. As further evidence of this proposition, Terpstra and Rozell (1993) showed that the use of research-validated staffing practices (such as use of general mental ability tests, structured interviews, and weighted application blanks) was significantly associated with both annual profit ($r = .20$) and profit growth ($r = .14$) across industries, with relationships being particularly strong in the service and financial sectors.

A third contribution of our research was to uncover some clues about the characteristics of HR managers that seem to be associated with higher knowledge. First, managers at higher job levels appear to have somewhat better knowledge of HR practices. For example, respondents at the highest job level (HR vice president) scored 20.86 on average, as opposed to 18.66 for those at the lowest

level (raw difference = 2.20; $d = .60$, $p < .01$). Similarly, those who had received SPHR certification scored 20.84 versus 19.99 for those with no certification or only PHR certification (raw difference = .85; $d = .23$, $p < .01$).

Finally, our findings suggest that knowledge of research findings could be improved if practitioners were to read academic journals. For example, we found that practitioners who "usually" read HR research journals scored an average of 3.15 points higher than all other respondents—a 15% advantage ($d = .86$; $p < .05$). However, our results also revealed a fatal flaw with this potential "solution": the vast majority of practitioners simply do not read the academic literature. In our study, only six of our 959 respondents (fewer than 1%) typically read these sources. In stark contrast, fully 75% of respondents reported that they *never* read any of the three top academic journals. The message seems clear: alternative means of dissemination must be found if practitioners are to acquire greater research knowledge.

Looking to the Future

Because practitioners do not read academic journals, the most promising solution is to put more research content into practitioner journals and other formats commonly used by HR practitioners (e.g., the SHRM Web site). At present, nearly all the content in practitioner journals is provided by consultants and practicing HR professionals. Although these can be useful sources of information, it is important to have researcher input as well, since (as we have seen) research findings can sometimes vary considerably from practitioner beliefs and consultant recommendations.

As an illustration of these points, we offer an example taken from the most widely read practitioner journal, *HR Magazine*, discussing the most commonly misunderstood HR research area (selection). In 1999, the *Magazine* published an article entitled "Reading Employees," a pro-and-con discussion of handwriting analysis (graphology) as a selection tool (Leonard, 1999). The article began by stating that a growing number of U.S. companies are using graphology to screen and place job applicants. It then quoted the president of a

... lack of awareness of broad selection principles can be very costly to organizations, since the characteristics of selected employees place inevitable limits on the extent to which other management practices (such as training and performance management) will be effective.

Although practitioner journals currently do not offer much in the way of research findings, we believe that now may be a particularly good time to increase research coverage.

handwriting consulting firm who said, "I definitely believe that this will be the career guidance tool of the future. With handwriting analysis, you get right to the truth about a person. It can reveal weaknesses as well as strengths and hidden talents." It also quoted a Senior VP of HR who said that her company "lives and dies by handwriting analysis." Although the article does contain warnings from two lawyers about possible legal problems with handwriting analysis due to weak validity evidence, these warnings are subsequently countered by a graphologist who says, "The data clearly support the claims that graphology works and can be an accurate assessment tool." Finally, the article concluded with a quote by another VP with SPHR status: "We've used it for nine years and haven't had one complaint. You can be overly cautious and choose not to do anything, but then you end up being just too afraid to move. I feel that when you have an excellent and accurate assessment tool at your disposal, then you should use it."

In other words, although the article raises some possible cautions about handwriting analysis (particularly with respect to its legal status), both the introduction and conclusion to the article are very positive about graphology. However, not a single academic researcher was consulted for the article; a notable exclusion, since the presence of a credible academic opinion would likely have produced an altogether different conclusion. This is because cumulative research on "content-free" handwriting analysis (i.e., analysis of handwriting only, as opposed to handwriting-plus-content analysis of essays assessing personality or work-related characteristics) has shown that graphology has absolutely no validity as a selection tool. According to Schmidt and Hunter's (1998) summary of previous graphology research,

Whatever limited information about personality or job performance there is in the handwriting samples comes from the *content* and not the characteristics of the handwriting...actually, most of the variation in handwriting is due to differences among individuals in fine motor coordination of the finger muscles. And these differences in fin-

ger muscles and their coordination are probably due mostly to random genetic variations among individuals...which do not appear to be linked to personality. (p. 270)

Thus, a simple phone call to Frank Schmidt or Jack Hunter would likely have shifted the theme of the article from a "pro-con" debate to a "beware of this invalid practice" theme. Moreover, the article would then have had little reason to debate legality, since the absence of validity is a much more fundamental reason for not spending money on a potential selection practice than is uncertain legality.

Although practitioner journals currently do not offer much in the way of research findings, we believe that now may be a particularly good time to increase research coverage. First, our results suggest that most practitioners, particularly the less experienced ones, would like to know more about research findings (Table IV). Second, two relatively recent patterns have emerged in HR research that we believe have increased the potential usefulness of research findings to practitioners.

One of these developments concerns the increased use of meta-analysis to summarize findings from multiple studies of the same issue. By empirically combining data from multiple studies and giving greater weight to those studies with larger samples, researchers are now able to provide much more reliable estimates of effect sizes and to give an indication of the extent to which findings appear to be universal, as opposed to dependent on particular circumstances. By using meta-analysis, researchers have been able to obtain much more reliable estimates of important relationships such as the ones between personality and job performance (Barrick & Mount, 1991; Ones, Viswesvaran, & Schmidt, 1993) or between employee satisfaction and job performance (Judge, Thoresen, Bono, & Patton, 2001). These are truly "big questions" with clear implications for practitioners.

The other positive development is the extent to which HR researchers have shifted from a nearly exclusive concern with individual behavior to a broader concern with *organizational* activities and outcomes. For example, the past decade has seen the emergence of

important research concerning how organizational performance is related to compensation practices (Gerhart & Milkovich, 1990), selection practices (Terpstra & Rozell, 1993), and different configurations of overall HR systems (e.g., Arthur, 1994; Delery & Doty, 1996; Huselid, 1995). The result is that, in an increasing number of areas, we no longer need to “infer up” from the individual to the organizational level of analysis.

At the same time that we urge practitioner journals to increase their coverage of research findings, we also caution that this may not be sufficient to entice researchers to present their work in such journals. Issues of academic incentive structures (e.g., promotion and tenure) aside, researchers may be reluctant to have their work published in journals where scientifically rigorous, peer-reviewed findings are published alongside articles (such as the one on handwriting analysis) that flatly contradict research findings. Thus, the editors of practitioner outlets will not only have to have a stronger commitment to publishing research findings, but also to validating the information contained in non-research-based articles. The mechanisms to ensure that this will occur are not entirely clear at present, although one suggestion might be for professional associations such as SHRM, The Society for Industrial & Organizational Psychology (SIOP), and the Academy of Management to maintain a clearinghouse to link research experts to reporters.

Because such changes will take time, the addition of special research sections to practitioner outlets might also be accompanied by “handbooks” or edited volumes that call on respected researchers to translate their work (and its implications) for practicing managers. Two notable attempts in this regard have recently been undertaken by Cooper and Locke (2000) and Locke (2000).

Another recommendation is that journals that traditionally cover only “HR” knowledge begin to expand to cover research and implementation issues related to change management and, to a lesser extent, general business issues. As mentioned earlier, Ulrich et al. (1995) found that the Change Management competency, more than any other, determined how HR practitioners were viewed in others’

eyes. Given this reality, even considerably better knowledge of the HR literature might not be sufficient for the HR function (and individual HR practitioners) to improve their credibility with others in the organization.

A final recommendation would be for researchers to take a closer look at some of the issues revealed by our survey to exhibit wide gaps between research findings and practitioner beliefs. One such issue would be the enormous gap between researcher and practitioner beliefs about intelligence. More detailed analysis of practitioner beliefs concerning intelligence may help to disentangle the extent to which the discrepancy is due to each of the following potential explanations: (a) lack of knowledge about research findings (as suggested by this research), (b) exposure to conflicting findings by others who also position themselves as “research experts” (e.g., Goleman, 1998), (c) concerns about legality, (d) direct disagreement with the findings (despite knowledge), or (e) agreement with the findings, but disagreement with the practical implications of the findings (e.g., that adverse impact might be created against minorities), and hence, potential misrepresentation of beliefs.⁶

The fruits of such a (more detailed) research approach may be considerable. Previous research has shown that some of the most important advances in HR science and practice have emerged from attempts to resolve differences in beliefs across researcher and practitioner perspectives (Cooper & Locke, 2000). As just one example, for decades practitioners persisted in using the employment interview as a selection device despite scathing reviews of their validity by academics (e.g., Dunnette & Bass, 1963). However, this continued use by practitioners spurred researchers to find ways to improve the validity of the interview through such techniques as job analysis, structured interviewing, note-taking, and formalized scoring. Eventually, meta-analytic techniques were developed that not only demonstrated the superiority of the newer interviewing methods (McDaniel et al., 1994), but also showed that even unstructured interviews have validity, as asserted by practitioners all along (see also Kluger & Tikochinsky, 2001). Thus, many decades of

Researchers may be reluctant to have their work published in journals where scientifically rigorous, peer-reviewed findings are published alongside articles that flatly contradict research findings. Thus, the editors of practitioner outlets will not only have to have a stronger commitment to publishing research findings, but also to validating the information contained in non-research-based articles.

research ultimately revealed that the researcher and practitioner perspectives each had some validity, with the end result being improved research *and* improved practice (Rynes, Barber, & Varma, 2000).

Thus, researchers may find rich rewards from attempting to probe more directly into the discrepancies revealed by the present survey, such as the differing views of practitioners and academics with respect to the roles of intelligence, values, personality, and employee participation in predicting individual and organizational performance. By getting closer to the root sources of these discrepancies, research as well as practice is likely to benefit.

APPENDIX: SOURCES OF ADDITIONAL INFORMATION ABOUT THE QUESTIONNAIRE ITEMS IN TABLE I

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ENDNOTES

1. The authors gratefully acknowledge funding and administrative support from the SHRM Foundation, as well as helpful comments from Debra Cohen, Herb Heneman, Ken Pearlman, Lise Saari, Tom Stone, Ray Weinberg, and Gale Varma. However, the interpretations, conclusions, and recommendations are those of the author(s) and do not necessarily represent those of the Foundation.
2. Two items were eliminated due to ambiguous wording, one due to the discovery of new critiques of existing research, and one to the discovery of new findings.
3. There are two kinds of integrity tests: some overtly ask about attitudes and behaviors related to theft, absenteeism, violence, and the like; others are “disguised-purpose” personality tests that tap three of the “Big Five” personality dimensions (Conscientiousness, Extraversion, and Emotional Stability).
4. As indicated earlier (see Table II), there was extreme restriction of range on this variable, which almost certainly reduced its observed correlation with overall knowledge.
5. We transmitted our findings with respect to the research–practice gap concerning intelligence to a number of HR practitioners, and asked for an explanation. The most common response was that many HR practitioners think ability testing is likely to lead to legal difficulties. As such, it is important to emphasize that we did not ask respondents what they believed about the legality of ability testing. Rather, we asked (in a variety of ways) whether they thought that ability was a better, or weaker, predictor of performance than other less-predictive characteristics (e.g., values or conscientiousness). Clearly, practitioners’ negative beliefs about intelligence go far beyond concerns about legal defensibility.
6. It is possible that these last two reasons—*disagreement* with a known research finding or disagreement with its practical implications—may account for some of the gap uncovered in this study. Specifically, because we asked about practitioners about their *beliefs*, it is possible that some practitioners stated negative beliefs about intelligence despite knowing about intelligence-related research findings. However, we believe the numbers of such respondents are probably very small, for two reasons: first, fewer than 1% reported reading HR research journals and, second, only *one* respondent noted in the margins of the survey that he or she “knew” the research finding, but disagreed with it. Given more than 37,000 opportunities for this to occur (959 subjects × 39 items), we suspect that the proportion of the gap explained by disagreement with known findings is negligible.