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## What is the value of human resource certification? A multi-level framework for research ☆

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### ABSTRACT

We make a contribution to narrowing the science–practice gap by adopting a multi-level theory-based approach to investigating an important issue for practitioners in human resource management: human resource (HR) certification. Despite the facts that more than 150,000 individuals in more than 70 countries have become certified and that HR certification has turned into a million-dollar industry, there is no scholarly evidence regarding the impact of certification on any important individual- and organizational-level outcomes (e.g., individual's career progression and HR department-level effectiveness). First, we distinguish among certification and licensing. Second, we describe the purported benefits of HR certification. Third, we review the existing literature on perceptions of HR certification; including a survey we conducted with 189 HR professionals. Finally, we present a research agenda, including 14 testable propositions, to guide future scholarly research on HR certification with the goal to gather evidence, which to date is not yet available, regarding the value of HR certification for individual practitioners, organizations, and the HR profession.

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Human resource (HR) certification is becoming a significant credential for human resource professionals. Its rise in importance has paralleled the evolution of the HR profession from a more clerical and administrative function to one which plays a central role in helping organizations gain competitive advantage. As professions develop, they seek certification and licensure to gain credibility as an established field and often in competition with other allied professions (e.g., witness psychiatry, psychology, and social work as professions vying for the same clients and third party insurance payments). However, despite the growing interest in HR certification, we know very little about its value to individuals and organizations. For example, are certifications, such as the Society for Human Resource Management's Personnel and Human Resource (PHR) credential comparable to a bachelor's degree in Human Resource Management obtained from a four-year university program as a signal of an individual's knowledge and skills? Alternatively, does an HR certification such as the PHR provide additional information and value about an individual beyond that provided by a bachelor's degree in Human Resource Management? Or, is an HR certification a credential primarily obtained by lower-level human resource workers for legitimacy, something akin to other paraprofessional employees? Our central research question is the following: Where does HR certification fit within the set of tools that can be used to improve the quality of HR professionals, and additionally move the profession forward?

The goal of this manuscript is to make a contribution to narrowing the science–practice gap by adopting a scientific approach to investigating an important issue for practitioners in human resource management and related fields: human resource (HR)

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certification. Specifically, we offer a blueprint for directing theory-based research to study a topic that is of great appeal to practitioners. While there are numerous certifications available for HR professionals and HR certification has turned into a multi-million dollar industry in the United States and many other countries around the world (Farndale & Brewster, 2005), there is virtually no scientific evidence to support their validity. Without scientific evidence, practitioners may be obtaining certifications that have little impact on their career success. Without scientific evidence, organizations may be hiring and promoting certified HR practitioners using a predictor that may be unrelated to future performance. And, without scientific evidence, society may be placing its trust in a credential that is supposed to signal competence, when in fact it may not. Accordingly, our manuscript addresses a need on the part of practitioners and organizations by offering a theory-based proposal to scrutinize the issue of HR certifications scientifically. As such, we respond to Cascio and Aguinis' (2008a) call to use science to “inform debates over human-capital issues that are critical to employees, their managers, broader stakeholders, and society at large” (p. 1078).

The remainder of the manuscript is organized as follows. First, we distinguish between certification and licensing credentials. Second, we describe the purported benefits of HR certification. Third, we review the existing literature on perceptions of HR certification, including results of a survey we conducted with 189 HR professionals. Finally, we present an agenda for multi-level research on HR certification. We derive testable propositions to guide future research that will provide evidence regarding the value of HR certification for individuals considering certification, their current and potential employers, and the HR profession.

## 1. Licensure versus certification

Licensure and certification are two means by which many professions and occupations require or encourage individuals to demonstrate the mastery of a body of knowledge. The primary distinction between the two is that licensure is required of people by law to perform an activity, whereas certification is voluntary (although employers may use it as a job requirement). This has led some authors to describe licensure as “legalized professionalism,” whereas certification is labeled “commercialized professionalism” (Gilmore & Williams, 2007).

Licensure is a process by which individuals are granted permission to perform a defined set of functions (Stromberg et al., 1988). Licensing laws define the practice of a profession and set educational, training, and examination standards for the profession. A primary purpose of licensing is to assist the public in identifying who is qualified to practice the profession. However, licensing does not imply levels of quality. It merely conveys that an individual has met a set of minimal standards to practice. Certifications, on the other hand, focus on the use of a particular professional title, and limit its use to individuals who have met specified standards for education, experience, and examination performance (McKillip & Owens, 2000; Stromberg et al., 1988).

A goal of certification is to persuade professionals, their employers, and their customers, that those who are certified exhibit high levels of job performance (McKillip & Owens, 2000). It is an individual achievement and indicates “quality especially in the absence of knowledge to the contrary” (Drum & Hall, 1993, p. 151). Certification has also been described as “a process by which government or a private association assesses a person, facility, or program and states publicly that it meets specific standards” (Stromberg, 1990).

Certification is also viewed as one means for regulating a profession (Hall & Hurley, 2003). Additionally, regulation is achieved through establishing education and training standards followed by the application of those standards to education and training programs. In psychology, for example, self-regulation of education and training is enacted through professional associations, such as the American Psychological Association (APA), through licensing and credentialing bodies, and through statewide review or approval of programs. Future members of a profession are affected by these organizations and the standards which they employ. According to the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999), both licensure and certification are forms of credentialing, and while they have different functions, they employ similar methods to develop, score, and interpret examinations. Tenopyr (1977) noted that both licensing and certification exams have an inherent element of prediction:

A particular problem extant in employment psychology today is that of the licensing or certification test. Those who construct such tests appear to treat them as pure achievement tests and argue that a licensing test only assures prospective employers or the public that a person has the necessary knowledge and skills to practice in a given profession or trade. However, the assurance of minimum skills is merely an aspect of prediction. It is predicted that those not possessing the minimum skills will do a poorer job of professional practice than those who do possess those skills (p. 49).

Licensure is sanctioned by government entities and carries the force of law whereas certification has no legal underpinnings. Consequently, the status, prestige, and impact of certification – the focus of this manuscript – derive from stakeholders' perception of it and willingness to use it in decision making. Because HR certification has no legal status, its impact rests upon its value among relevant stakeholders—practitioners, organizations, and society. The potential value of HR certification thus is determined by its ability to affect important outcomes such as individual job performance, HR department effectiveness, and organizational performance. Next, we describe the growing number and types of certifications that focus on the HR profession.

## 2. The proliferation of HR certification programs

Most professions require some form of licensure or certification (e.g., accounting, medicine, law, nursing, and clinical psychology) (Plake, 1998). Furthermore, professional certifications are often highly visible and provide credibility to those who possess them. Some of the certifications widely recognized include Certified Public Accountant (CPA), Certified Internet

Webmaster (CIW), Certified Internal Auditor (CIA), and Certified Care Registered Nurse (CCRN) (Aguinis, Michaelis, & Jones, 2005).

The HR certifications sponsored by the Society for Human Resource Management (SHRM) are the most general in content coverage and the most frequently obtained certifications in the human resources profession. As of August 2010, 111,788 individuals from more than 70 countries had been certified by SHRM (HRCI, 2010a). Other HR certification programs exist, but typically are more specialized in nature. For example, WorldatWork sponsors four certifications focused on rewards and compensation specialties: the Certified Compensation Professional (CCP), the Certified Benefits Professional (CBP), the Global Remuneration Professional (GRP), and the Work-Life Certified Professional (WLCP). WorldatWork has issued approximately 21,000 designations to about 16,000 professionals (WorldatWork, 2009; Pete Wood, WorldatWork Certification Program Manager, personal communication, September 24, 2010). The International Foundation of Employee Benefit Plans (IFEFP) sponsors four certifications: the Certified Employee Benefit Specialist (CEBS), Compensation Management Specialist (CMS), Group Benefit Associate (GBA), and Retirement Plans Associate (RPA) (International Foundation of Employee Benefit Plans, 2009). More than 18,000 HR professionals have received certification from the IFEFP. The International Public Management Association for Human Resources (IPMA-HR) sponsors three certifications focused on HR in the public sector: the IPMA-Certified Professional (IPMA-CP), the IPMA-Certified Professional—Executive Level Category (IPMA-EC), and the IPMA Certified Specialist (IPMA-CS) (International Public Management Association for Human Resources, 2009). At total of 1831 HR professionals in the U.S. and 3669 individuals outside of the U.S. have received certification from IPMA-HR. In 2006, the American Society for Training and Development (ASTD) launched a new certification called the Certified Professional in Learning and Performance (CPLP) that focuses on training and development specialists (American Society for Training and Development, 2007). To date, 960 individuals have received this certification. As can be seen from this data, there is a proliferation of certifications available to HR professionals. Table 1 includes summary information on the popularity of various HR certification programs and shows a total of more than 150,000 certified individuals.

While there is no current movement to license HR professionals, as described previously, there are an increasing number of certifications available. Carter (2005) found that the number of HR certifications increased by 48% during the years 2000–2003. This was an element of a larger trend of increasing certifications, in part due to passage of the Educate America Act of 1994, which was designed to promote the development and adoption of a voluntary national system of skill standards and certifications.

For professions that require licensing to practice, it is almost never feasible to undertake criterion-related validation studies (Binning & Barrett, 1989; Borman, Rosse, & Abrahams, 1980; Van Iddekinge & Ployhart, 2008) due to the fact that only persons who pass the licensure test and meet other licensing requirements are permitted to practice (Plake, 1998). However, the same is not true for certifications. For example, teacher certification programs have received much attention, and some researchers have questioned their effectiveness in improving student achievement (e.g., Goldhaber & Brewer, 2001). A healthy debate has ensued (e.g., Darling-Hammond, Berry, & Thoreson, 2001) that has resulted in a call to ask questions about these issues so that research can be used to guide the development of sound public policy (Goldhaber & Brewer, 2001). We echo the same call for research that can be used to guide the development of sound policy regarding HR certification.

The certification of HR professionals is moving forward at a rapid pace. It is a big business with thousands of people involved. The intention behind certification is good—to improve the legitimacy and credibility of the HR profession as a whole and to ensure employers that HR professionals have the necessary knowledge, skills, abilities, and other requirements to perform the job. As with licensure, certification also may protect the public (organizations and employees) from unqualified practitioners who by incompetence or failure to adhere to professional standards may do harm. Certification may also limit the supply of available practitioners, thereby increasing wages for the profession. However, does HR certification, in its current state, live up to its potential? If certification does not do what it is intended to do, it may end up doing more damage than good to the HR profession. Now is the time to pause and examine the issue of HR certification more carefully. Our goal is to begin to investigate the potential benefits of HR certification and to set a theory-based research agenda for the future. Our primary focus is on the certification program sponsored by SHRM, because it is the largest, oldest, and most well established certification program for HR professionals; however, the issues we raise also apply to other HR certifications as well. Next, we provide a brief history of SHRM's HR certification and how the field of human resources is evolving in a path parallel to that of professional psychology.

**Table 1**  
Popularity of HR certifications.

Sponsoring organization	Certifications offered	Number certified
Society for Human Resource Management	PHR, SPHR, and GPHR	111,788
WorldatWork	CCP, CBP, GRP, and WLCP	16,000
International Foundation of Employee Benefit Plans	CEBS, CMS, GBA, and RPA	18,663
International Public Management Association for Human Resources	IPMA-CP, IPMA-CP Executive Level, and IPMA-CS	5500
American Society for Training and Development	CPLP	960

*Note.* PHR: Professional in human resources, SPHR: Senior professional in human resources, GPHR: Global professional in human resources, CCP: Certified compensation professional, CBP: Certified benefits professional, GRP: Global remuneration professional, WLCP: Work-life certified professional, CEBS: Certified employee benefits specialist, CMS: Compensation management specialist, GBA: Group benefit associate, RPA: Retirement plans associate, IPMA-CP: International public management association-certified professional, IPMA-CP Executive level: International public management association-certified professional executive level, IPMA-CS: International public management association-certified specialist, CPLP: Certified professional in learning and performance.

### 3. A brief history of the SHRM HR certification program

HR certification was first discussed in 1948 during the formation of the first human resource professional organization called the American Society for Personnel Administration (ASPA—now called SHRM). Herbert Heneman, Jr. published an article titled “Qualifying the Professional Industrial Relations Worker,” which focused on the need for certifying personnel professionals based on a code of ethics and an objective measure of technical competence (HRCI, 1998). However, a certification program was not developed until the mid-1970s. Today, the two primary certifications offered by SHRM are the Professional in Human Resource (PHR) and the Senior Professional in Human Resources (SPHR), although there is a more recently launched Global Professional in Human Resources (GPHR) designation and State of California PHR and SPHR versions.

SHRM has become the preeminent regulating body in the HR profession through its sponsorship of the PHR and SPHR certifications. Additionally, SHRM has recently established education and training standards for colleges and universities that offer undergraduate and graduate programs in HR. The goal is “to provide colleges and universities a resource for tracking HR curricula against a common, minimum skill set needed by employers who seek to fill HR professional positions” (SHRM, 2009a).

Similar to the role of APA in the field of psychology, SHRM has become the gatekeeper in ensuring a common body of professional HR knowledge. As SHRM describes it, “Undertaking this initiative will establish SHRM as a clear educational leader and help to set the agenda on what the educational requirements are for a career in HR; raise the bar for HR degree content and delivery of HR degree content; and underscore the point that HR is a profession, with specific educational requirements” (SHRM, 2009a). SHRM's efforts regarding the establishment of a common body of knowledge have been endorsed by the Association to Advance Collegiate Schools of Business (AACSB) International. Future members of the HR profession are affected by these standards and the research (or lack thereof) upon which they are based.

Numerous practitioners invest their time and money in preparing for and taking HR certification exams. But, what do they believe they are getting for their investment, and what do employers gain by having certified HR professionals? Next we discuss the potential benefits of HR certification and why individuals may want to obtain it.

### 4. Potential benefits of HR certification

Proponents of HR certification assert that there are many benefits to obtaining it. From an individual perspective, the potential benefits of HR certification include mastery of the HR body of knowledge; public and personal recognition, currency, career advancement, pay incentives; and demonstrating a professional attitude (Wiley, 1995). From an organizational perspective, the potential benefits of HR certification include the possibility that certified HR professionals perform better than those who are not certified, using HR certification as a selection tool may increase the number of qualified HR professionals, and consultants selected on the basis of certification may provide better advice than those who do not have certification (Wiley, 1995).

Aguinis et al. (2005) proposed the use of signaling theory (Spence, 1973, 1974) as a conceptual framework to understand why employees may obtain an HR certification and why employers might use HR certification as a predictor in employee selection and assessment systems. Signaling theory proposes that it is expensive for organizations to thoroughly investigate the background of every individual who applies for a job to determine his or her skills and abilities. Consequently, organizations reduce costs by relying on credentials, or signals, for hiring decisions. They could assume, for example, that on average certified HR professionals are more productive than non-certified ones, and rather than testing all applicants to determine their individual capabilities, employers simply select from the pool of applicants who have an HR certification. If HR certification is a valid predictor of job performance, then the benefits of using this signal as a job requirement (i.e., increasing the odds of selecting high performing HR professionals) outweigh the costs (e.g., failing to hire high performing HR professionals who do not have the credential).

With a program that has been in existence for over 30 years and certified more than 110,000 HR professionals, it is surprising that there is no empirical research (cf. Barrett, Phillips, & Alexander, 1981) that tests any of these potential benefits. Several explanations may account for this. There may be a concern on the part of the sponsoring organization that empirical research may show that – despite its popularity – HR certification has little or no impact on important measures of individual and organizational outcomes. Publication of such research could potentially reduce revenue generated by the program. Another explanation is that HR professionals seek certification solely for intrinsic reasons (e.g., personal satisfaction, sense of accomplishment, and perceptions of self-worth) and therefore there is no expectation that extrinsic outcomes (e.g., increases in pay, faster career advancement, and enhanced reputation and respect) will be affected by obtaining it. Regarding the latter intrinsic explanation for obtaining certification, Wiley (1995) asserted that:

“Certification has a bleak future if the majority of people seek certification for symbolic reasons (i.e., to build self-esteem). Certification agencies are likely to have a bright future when people seek certification for more credible reasons, such as to demonstrate a mastery of the body of knowledge, to show distinctive competence, or to gain a salable or unique credential. People are willing to invest in themselves, and firms are willing to invest in employees (i.e., subsidize certification efforts) when they realize that their investments will add value and will have a positive impact on the bottom line” (p. 287).

Even SHRM seems to recognize the extrinsic value of their credentials. For example, emails advertising certification regularly sent to SHRM members proclaim that “These valuable, industry-recognized credentials can open doors to unlimited career opportunities and professional growth” (SHRM, 2009b) and include testimonials of individuals such as “I recently accepted a new



HR position. One of the preferred requirements of the job was having a PHR/SPHR certification. I believe that having the credentials was an essential component of being a competitive candidate" (SHRM, 2011).

A final type of potential benefit of certification is to enhance the reputation, influence, and legitimacy of the HR profession. Research on human resources reputation and effectiveness (Ferris et al., 2007) suggests that reputation is a collectively agreed upon perception by others that exists in a vacuum of imperfect information. When others gather information regarding an individual (e.g., HR professional), an organization, or a profession (e.g., HR), reputation is relied upon to fill in the blanks. To successfully acquire a reputation, an individual, an organization, or a profession must stand out from others in the field. Furthermore, a good reputation increases an individual's, an organization's, or a profession's power (i.e., ability to influence others; Fiol, O'Connor, & Aguinis, 2001). Moreover, such reputation and power enhance a field's legitimacy (Suchman, 1995).

HR certification implies that there are standards in the profession which must be met to practice HR competently. This serves two purposes. One, certification puts a stamp of approval on individuals in the profession who have obtained it and signify that they are competent and capable of performing HR duties effectively in any organization. As with a certified mechanic, a board certified physician, or a certified public accountant, it reassures the public that they are getting competent professional service. A conclusion from a 2005 SHRM Symposium on the Future of Strategic HR was that "not enough barriers were in place to prevent those professionals who were ill-prepared to practice HR from entering the field" and that "only the best and brightest new entrants with strong business and strategic skills should be given access to the HR field" (SHRM, 2005). Two, certification sends a signal to other professionals (e.g., accountants and engineers) within organizations that HR people are professionals, too.

As noted by several authors (e.g., Hammonds, 2005; Stewart & Martin, 1996; Stewart & Woods, 1996), the HR profession is often portrayed as getting little or no respect from other functions in organizations. Certification has the potential to change attitudes about the value-added contribution of the HR function. By increasing the number of competent professionals and reducing the number of incompetent ones practicing HR, certification can improve the reputation of the profession. Next, we discuss how HR certification is perceived by relevant stakeholders.

## 5. Perceptions of HR certification

Despite its growing popularity, surprisingly little is known about how HR professionals and employers perceive certification. In a 1992 article, Wiley reported survey data that suggests the following reasons HR professionals seek certification (in order of popularity): (1) professional accomplishment, (2) personal satisfaction, (3) test knowledge, (4) career advancement, and (5) peer recognition. A Workforce survey conducted in 1998 found that (1) 56% of respondents had obtained one form of HR certification, (2) 67% said they believed HR certification gave them more credibility among corporate peers and other senior managers, and (3) 96% said their employers did not require certification in order to be hired (Sunoo, 1999).

While Rynes, Colbert, and Brown (2002) were not focusing their study on correlates of HR certification, they some interesting findings. PHR certification was negatively related to job level and tenure. That is, study participants reported who had PHR certifications had lower job levels and less tenure compared to those who did not have PHR certification. SPHR certification was positively related to job level, tenure, education, and having an HR major, and negatively related to having a PHR certification. Thus, study participants with an SPHR had higher job levels, longer tenure, more education, and an HR major in comparison to those who did not have an SPHR.

A 2004 SHRM study found that HR certification is viewed as an important credential (Claus & Collison, 2004). Approximately 54% of respondents believed that to work in HR, one must have some type of recognized credentials. Additionally, 29% of respondents believed that to work in HR, one should have a professional certification from a certifying body or agency within one's country. Approximately 81% of respondents believed that to advance one's career in HR, one must have some type of recognized credentials. Additionally, approximately 64% of respondents believed that to advance one's career in HR, one should have professional certification related to HR from a certifying body or agency within one's country.

### 5.1. Survey of HR professionals

To further explore how HR professionals perceive HR certification, we conducted a survey at two large metropolitan chapters of SHRM. There was a total of 189 participants at two locations—San Antonio, Texas, and Denver, Colorado. Fifty-five people responded to the survey in San Antonio (response rate of approximately 60%), and 134 responded in Denver (response rate of approximately 67%). Slightly more than half of the respondents to this survey reported that they are certified. Of those that reported they are certified, the majority had a PHR (roughly one-third of those certified), while fewer have a SPHR, and even fewer had both certifications. The majority of respondents to this survey were responsible for both recruiting HR professionals and hiring them.

Respondents rated their level of agreement with nine Likert-scaled statements assessing attitudes toward HR certification. When the responses of all participants (both certified and noncertified) were combined, results suggested that most people are fairly neutral about their attitudes toward HR certification. When we disaggregated the data into groups of certified and non-certified respondents, we found statistically significant differences in responses between the certified and non-certified groups for five of the nine statements: (a) In general, human resource staff who have a PHR or SPHR designation are better performers than human resource staff without certification; (b) I prefer to hire certified HR professionals; (c) I require certification when hiring human resource professionals; (d) My preference or requirement for certification is stated explicitly in the advertisement or job posting; and (e) Certified applicants are better qualified than non-certified applicants, all other things being equal. Thus, it appears that in contrast with those who are not certified, those who have certification hold more favorable perceptions towards it as a hiring tool.

While these results are suggestive and limited in their generalizability, we believe that it would be useful to compare perceptions of SHRM members with those who are not SHRM members regarding the value of HR certification. Since SHRM members are more likely to identify with its programs, such as certification, we expect that they will have a pro-certification bias. This leads to our first proposition:

**Proposition 1.** *Members of HR professional organizations (e.g., SHRM) are more likely than non-members to hold favorable attitudes and beliefs about the value of HR certification.*

### 5.2. Employer perceptions of HR certification

In the only peer-reviewed publication on employer perceptions of HR certification, Aguinis et al. (2005) examined job announcements to determine if employers either required or preferred HR certification for their HR positions. They content-analyzed 1873 HR job announcements over a one week period on four internet job sites: Monster, Yahoo!HotJobs, CareerBuilder, and SHRM.

Aguinis et al. (2005) found that only about 4% of job announcements required or preferred HR certification. Demand for HR certification was slightly higher for (a) postings on SHRM's website, (b) job titles of HR Director and HR Generalist, (c) HR specialty areas of employee relations and general HR, (d) in the manufacturing and accommodation and food services industries, and (e) for jobs requiring more HR experience. Demand for HR certification was virtually nonexistent for (a) job titles of HR Administrator, HR Coordinator, HR Clerk, and HR Senior Analyst; (b) HR specialty areas of recruiting, administration, payroll, training, and HRIS; (c) in the transportation, warehousing, government, and retail industries; and (d) for jobs requiring little HR experience.

### 5.3. Summary of previous empirical research on perceptions of HR certification

From the limited research to date results are mixed regarding how HR professionals and employers perceive HR certification. Certified HR professionals seem to have more positive beliefs about the benefits of certification, and yet employers seem reluctant to use certification as a screening tool (at least in job advertisements). With the increasing popularity of the SHRM certification program as well as the proliferation of other similar certifications, it is time to determine (1) what certification measures and how well it does it; and (2) what difference having certification makes to individuals, to organizations, and to the HR profession.

## 6. An agenda for HR certification research

The occupational structure of HR is varied with many entry points, and some jobs require more advanced HR knowledge (theories and research) that can be obtained through university education (e.g., HR manager, vice president of HR, and chief learning officer) whereas other jobs may require only basic HR knowledge (e.g., recruiter). There is at least an implicit and to our knowledge untested assumption about the types and levels of knowledge necessary to successfully perform HR jobs at various levels in organizations. At the very lowest levels of the HR occupation structure are jobs such as job analyst, recruiter, employment interviewer, and administrative staff member that typically do not need extensive backgrounds in HR knowledge. Individuals in these jobs can be trained quickly to perform their narrow and specialized roles. Higher-level HR specialists, such as training specialists and compensation analysts, can perform their jobs with specialized training, and likewise do not need extensive backgrounds in HR knowledge (although general HR knowledge is beneficial). Many of the HR certifications seem to cater to specialists, such as those in compensation, benefits, and training. At the manager level and on up to the director or vice president of HR, it seems that a more extensive background in HR knowledge is warranted. We speculate that an undergraduate degree in HR or related disciplines prepares individuals to become HR managers, whereas a master's degree or doctorate prepares individuals to perform effectively in high level, more strategic-oriented jobs. But even at these levels, it is unclear whether, for example, it is better to have a master's degree in HR (with its narrower focus) or a master's degree in business (with its broader focus).

We believe that the potential value of HR certification is greatest for those HR professionals who do not have undergraduate or graduate degrees in human resource management or related disciplines. University degrees have more status and provide a stronger signal to employers regarding human resource competence than do HR certifications. On the other hand human resource professionals who do not have university degrees (or do not have university degrees in human resource management or related disciplines) are most likely to benefit from obtaining a HR certification. This leads to our next proposition.

**Proposition 2.** *Individuals with undergraduate or master's degrees in human resource management or related disciplines will not benefit as much (increased hiring probability, higher salaries, and faster promotion rates) from an HR certification compared to individuals without such degrees.*

As the HR profession moves toward a more strategic focus, there is a need to examine the effects of certification versus other types of training and education, especially as they relate to obtaining and succeeding in C-suite positions, such as senior vice presidents of HR. We expect that university education, particularly an undergraduate or master's degree in human resource management or a master's degree in business administration are more influential in preparing HR professionals for C-suite positions. Investigating these issues would require the use of longitudinal research designs (Ployhart & Vandenberg, 2010) that track careers of HR professionals over time. The famous AT&T Management Progress Study, begun in 1956 by Bray, Campbell and

Grant (1974) provides a model for this type of longitudinal research. Bray's study collected data on the backgrounds and performance of company managers to study their careers as they unfolded over many years. Howard (1986) used two AT&T longitudinal samples to study five types of college characteristics (level of education, grades, quality of undergraduate institution, major field of study, and extracurricular activities) to evaluate management potential as demonstrated in assessment center performance and later promotions. One of her more interesting and influential findings was that liberal arts majors excelled more than technical and business graduates, leading many companies to change their hiring emphases for these positions. This leads to our next proposition.

**Proposition 3.** *As assessed by longitudinal research, we predict that individuals with undergraduate or master's degrees in human resource management or master's degrees in business administration will obtain more C-suite positions and perform more effectively in these roles compared to individuals who have certifications such as SHRM's PHR or SPHR.*

The remainder of our discussion focuses on those individuals who are most likely to benefit from HR certification (i.e., those individuals without university degrees in human resource management or related disciplines) and how HR certification may affect individuals, human resource departments, organizations, and the human resource profession.

### 6.1. A multi-level framework for HR certification research

HR certification has the potential to affect outcome variables at multiple levels. For example, if HR certification is a valid predictor of job performance, using it as a selection decision making tool may improve individual-level job performance (i.e., the job performance of HR professionals). HR certification also may predict other individual-level outcomes such as career advancement and pay. Additionally, if organizations use HR certification as a selection tool for HR practitioners, then the performance of their HR departments should likewise be improved (i.e., more qualified HR professionals would result in better HR department-level effectiveness). Moreover, the reputation of the HR department within an organization should be enhanced by more competent human capital and better performance of the HR function. Likewise, such reputation may lead to increased levels of legitimacy (Suchman, 1995). Recent advances in multi-level theory and methods in selection provide a foundation for developing a more comprehensive understanding of the impact of such predictors as HR certification across organizational levels (cf. Ployhart, 2006).

Levels of analysis have long been recognized as important in management and human resource management research (Aguinis, Boyd, Pierce, & Short, 2011; George & James, 1994; Hitt, Beamish, Jackson, & Mathieu, 2007; Klein, Cannella, & Tosi, 1999; Klein, Dansereau, & Hall, 1994; Kozlowski & Klein, 2000). Distinctions often are made among the individual, group, and organizational effects of various constructs. However, while levels of analysis have been widely recognized, examining effects of constructs across levels is a more recent methodological advance (e.g., Bliese, Chan, & Ployhart, 2007; Kozlowski & Klein, 2000). And, while much cross-level research has been published recently, the staffing literature has been slow to adopt this perspective (e.g., Ployhart, 2006; Schneider, Smith, & Sipe, 2000). HR certification provides an opportunity to explore multi-level effects within a staffing context.

Multi-level theory describes processes for both contextual and emergent effects (Kozlowski & Klein, 2000). Contextual effects are those that result from the top-down, from higher hierarchical levels to lower ones. In the case of HR certification, contextual effects would result from an organization's decision to use certification as a tool to select HR professionals. Presumably, this choice of staffing practice would result in changes in the behavior/performance of individual employees (e.g., more professional behavior and higher levels of HR job performance). Emergent effects are those that result from bottom-up, from lower hierarchical levels to higher ones (Ployhart, Weekley, & Baughman, 2006). Emergent effects would result, for example, when a HR department that hires HR professionals on the basis of certification becomes, over time, composed primarily of highly qualified and competent employees. This would result, presumably, in better overall HR unit performance and more effective delivery of HR programs, thereby making HR's contribution to organizational performance more effective. Emergent effects are particularly important in understanding how differences in knowledge, skills, abilities, and other individual characteristics (KSAOs) contribute to unit-level differences.

Two different types of emergent processes have been identified: composition models and compilation models (Kozlowski & Klein, 2000). Composition models propose that high similarity (or homogeneity) among lower level employees creates a distinct within-unit aggregate-level construct. On the other hand, compilation models propose that variability among lower level employees creates a unique higher level construct. Effects of HR certification are consistent with a composition model of emergence, in that higher similarity among HR professionals' qualifications and knowledge in a department leads to a higher level of unit performance. Greater homogeneity of HR knowledge and professionalism in the HR unit would create a shared mindset and ease coordination leading to more effective HR program delivery.

Fig. 1 illustrates our proposed multi-level framework for research on HR certification. The figure depicts three important elements: (a) time, (b) macro-level effects, and (c) micro-level effects. First, the starting time begins with the implementation of the organizational staffing practice of using HR certification as a selection tool. This staffing practice represents a contextual (top-down) effect on the organization's individual KSAOs because all potential HR professional employees will be recruited using the HR certification predictor. HR certification is used as a selection tool because it measures human resource management knowledge. Stated more formally,

**Proposition 4.** *Using HR certification as a selection tool will be positively associated to individuals' HR management knowledge.*

Certification implies that those who are certified should demonstrate better job performance (as measured by effectively diagnosing and resolving HR problems, designing and implementing HR programs aligned with organizational objectives, etc.)

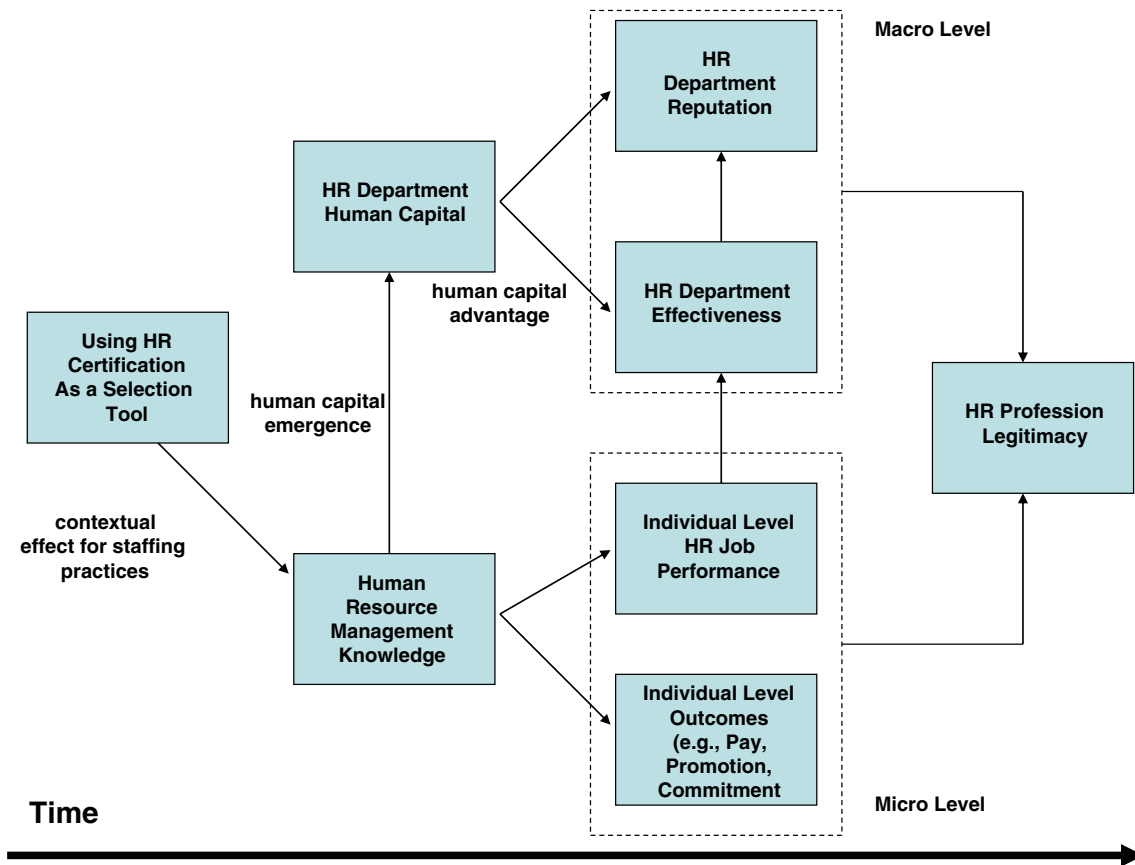


Fig. 1. A multi-level framework for HR certification research.

than those who are not certified. [Huselid, Jackson, and Schuler \(1997\)](#) identified two major competencies of HR managers and assessed how these capabilities were related to HR management effectiveness and productivity, cash flow, and market value. One competency, called professional HRM capabilities, refers to knowledge and expertise to deliver traditional technical HRM practices (recruiting, selection, performance measurement, training, and the administration of compensation and benefits). This competency mirrors what is assessed by SHRM's PHR certification. The other competency, called business-related capabilities, refers to knowledge and expertise related to team-based job designs, flexible workforces, quality improvement practices, employee empowerment, diagnosing a firm's strategic needs, and planned development of the talent required to implement competitive strategy and achieve operational goals. This competency mirrors what is assessed by SHRM's SPHR certification. In a study of 293 U.S. firms, the authors found support for a hypothesized relationship between professional HRM capabilities and technical human resource management effectiveness. They also found that strategic HRM effectiveness was related to both professional HRM capabilities and business-related capabilities. This leads to our next proposition.

**Proposition 5.** *Certified HR professionals will perform better (i.e., effectively diagnose and resolve HR problems, design and implement HR programs aligned with organizational objectives, etc.) on the job than do non-certified HR professionals.*

The professional staff in an HR unit is likely to vary considerably in their backgrounds, with many entering from promotions or transfers ([Schramm, 2007](#)). Greater variance in backgrounds in an HR unit may lead to greater variation in both HR knowledge and ability to effectively develop, implement, and administer HR programs, policies, and processes. Therefore, both HR knowledge and ability to develop, implement, and administer HR programs, policies, and processes can be enhanced by increasing the quality of the stock of HR human capital in a unit. However, as [Ployhart, Weekly, and Ramsey \(2009\)](#) suggest, firms must establish a critical mass (sufficient stock) of human capital to influence unit effectiveness. Infusing an HR unit with one or a few competent HR professionals may marginally improve its performance, but the unit would need to reach a sufficient stock of competent HR professionals before significant gains in unit effectiveness could be realized.

**Proposition 6.** *A greater proportion of certified HR professionals who have shared HR knowledge in an HR department will lead to higher unit-level performance.*

In addition to job performance, other individual outcomes are affected at the individual level by HR professionals obtaining HR certification. In their study of Internet-based job announcements, [Aguinis et al. \(2005\)](#) found that HR job vacancies for which HR certification is required or preferred were associated with higher salary levels as compared to HR job vacancies for which HR



certification is not required or preferred. The mean salary for jobs requiring HR certification was approximately .5 standard deviations higher (approximately \$17,000/year) than for jobs not requiring HR certification. This leads to our next proposition.

**Proposition 7.** *Certified HR professionals will have higher salaries than non-certified HR professionals.*

Besides higher salaries, some researchers have suggested that having HR certification should affect career advancement (Wiley, 1995). Employers will view certified HR professionals as more competent than non-certified HR professionals. This will affect both initial hiring decisions as well as promotion decisions. Lester, Mencl, Maranto, Bourne, and Keaveny (2010) conducted a retrospective study of alumni from three universities and found that having a PHR certification from SHRM increased the probability of obtaining a first job in HR, but had no significant effect on promotions. However, they did not include the SPHR certification in their study which may be more influential in promotion decisions since it represents a higher level of HR knowledge. Thus, when employers make hiring and promotion decisions certified HR professionals will be preferred over non-certified HR professionals. This leads to our next proposition.

**Proposition 8.** *Certified HR professionals will have a higher probability of being hired initially and being promoted than non-certified HR professionals.*

Obtaining an HR certification may also predict a person's commitment to the HR profession (Sincoff & Owen, 2004). As one HR professional with 20 years of experience stated: "Not having a designation doesn't suggest that someone working in the field is deficient in any way. Nor does being certified guarantee that the holder will find employment. But, I think it does demonstrate a basic level of competence. And, even more important than that is what it says about the individual regarding his or her commitment to the profession and his or her desire to be recognized as a professional" (Canadian HR Reporter, 2006). The financial commitment alone can be substantial. The exam fees range from \$250 to \$300 for the PHR, and from \$375 to \$425 for the SPHR (HRCI, 2010b). Individuals preparing to take the exam may spend \$795 for a self-directed SHRM Learning System (SHRM, 2010c) and hundreds of dollars more if they also take instructor-led preparation courses (SHRM, 2010d). This leads to our next proposition.

**Proposition 9.** *Certified HR professionals will be more committed to the HR profession than non-certified HR professionals.*

Through the use of HR certification as a selection tool, individuals' KSAOs will become increasingly similar within the HR department over time and contribute to the macro-level HR department human capital (defined as the competencies of the HR department). This is based upon Schneider's attraction–selection–attrition (ASA) model (Schneider, 1987) which proposes that over time organizations become more homogeneous in their human capital due to processes that recruit, hire, and retain applicants with similar KSAOs. The process through which this homogeneity occurs is called human capital emergence (Ployhart et al., 2006). Human capital emergence is the multi-level process through which individual-level KSAOs – in this case HR certification – become HR department level human capital. Thus,

**Proposition 10.** *Using HR certification as a selection tool will create more homogeneity of KSAOs, thus contributing to the macro-level human capital of the HR department.*

Certification also may enhance the reputation of the HR function in the eyes of other constituents both within and outside organizations (Ferris et al., 2007). By establishing standards and requiring demonstrated knowledge and job performance, other constituents within and outside organizations will be persuaded to view certified HR staff as professional peers (Sunoo, 1999). Other constituents will be more likely to view the HR function as adding value if it is administered by certified HR professionals. This leads to our next proposition.

**Proposition 11.** *A greater proportion of certified HR professionals in the HR function will lead to more favorable perceptions by multiple constituents regarding the value-added contribution of the HR function in the organization and thereby enhance HR department reputation.*

Furthermore, a more effective HR department that adds value to the organization will positively affect internal evaluations of the reputation of the HR department. HR department effectiveness has been conceptualized and studied from a multiple constituency perspective (Colakoglu, Lepak, & Hong, 2006; Tsui, 1987, 1990; Tsui & Milkovich, 1987). Relevant constituencies of HR units include: managers in line functions (e.g., manufacturing and marketing), professional level employees, non-exempt or hourly employees, union stewards or officers, and operating unit line executives. Since different constituent groups have different expectations of HR departments, fulfilling those expectations is particularly challenging. As described previously, increasing the quality of the HR human capital stock may lead to more effective delivery of HR programs, policies, and processes. When organizational constituents experience high quality, consistently delivered HR programs, policies, and processes, their assessment of the HR department will be enhanced. This leads to our next proposition:

**Proposition 12.** *Greater effectiveness of the HR function within the organization will lead to more favorable perceptions by the multiple constituents regarding the value-added contribution of the HR function in the organization and thereby enhance HR department reputation.*

HR department human capital contributes to HR department effectiveness. HR departments with higher levels of unit-level human capital are likely to outperform those HR units with lesser quality human capital in meeting the needs and expectations of

multiple constituencies. This is described as the human capital advantage (Ployhart, 2006; Ployhart, Weekley, & Ramsey, 2009). This leads to our next proposition:

**Proposition 13.** *A greater proportion of certified HR professionals in an HR department will lead to higher HR department effectiveness.*

Finally, we propose that HR certification will have a positive effect on the legitimacy of the HR profession through the combination of both micro- and macro-level outcomes. Galang, Elsik, and Russ (1999), and later Ferris et al. (2007), drawing upon work by Suchman (1995) identified three main legitimacy issues faced by the field of HR: cognitive, normative, and instrumental. Cognitive legitimacy is influenced by making HR practices and goals more meaningful to relevant constituents. Certified HR professionals are more likely than their non-certified counterparts to be able to frame HR practices and goals in ways that are understandable and convey meaning and importance to multiple constituencies. Normative legitimacy is influenced by how well HR departments make contributions to organization goals, norms, and strategies. Certified HR professionals are more likely than their non-certified counterparts to be able to align HR programs, practices, and policies with organizational goals and strategies. Instrumental legitimacy is influenced by convincing constituents that what HR professionals do is in the constituents' best interests. Certified HR professionals are more likely than their non-certified HR counterparts to be able to meet the expectations of their constituents through developing and administering both effective and efficient HR programs and practices. This leads to our final proposition.

**Proposition 14.** *The legitimacy of the HR profession will be positively associated with micro-level outcomes of HR certification (individual level HR job performance and other individual level outcomes) and macro-level outcomes of HR certification (HR department effectiveness and HR department reputation) accumulated across individual HR professionals and across organizations over time.*

## 6.2. Summary of predictions from a multi-level framework for research on HR certification

As noted in the previous section, HR certification is most likely to benefit individuals without university degrees in human resource management or related disciplines. So, although our model and associated propositions could guide research regarding HR professionals at all levels, we believe it is most applicable for those individuals who are most likely to benefit from HR certification.

Hiring more competent HR professionals through the use of HR certification as a selection tool should contribute to better HR department performance through the processes of human capital emergence and human capital advantage. This multi-level framework of HR certification allows researchers in human resource management and related fields to hypothesize and test assumptions and potential benefits regarding HR certification at both micro and macro levels, which is the type of model-bridging research most likely to lead to influential and practically meaningful theories (Aguinis et al., 2011). By developing a theory of emergence, in this case a composition model, research can add to our understanding of the cross-level effects of using a selection tool, such as HR certification, for hiring HR professionals. And, finally, using this multi-level approach provides an alternative means for demonstrating the utility of selecting practitioners using HR certification as a selection tool (cf. Cascio & Aguinis, 2008b). This is in contrast to more traditional utility models which rely upon formula-based estimates of the aggregate sum of individual performance contributions.

## 7. Conclusion

Certification has its roots in the efforts of practitioners to establish a profession. Especially during the latter half of the twentieth century, many who worked in HR felt as if their work did not receive its proper respect, and certification was viewed as one means for rectifying that situation. Some critics continue to question the legitimacy of HR practitioners and their work (Hammonds, 2005; Stewart & Martin, 1996; Stewart & Woods, 1996), which has probably influenced the large number of HR professionals seeking certification in the last few years. Yet, while many HR professionals have embraced HR certification, there is virtually no research investigating its value—either to them, to their employers, or to the HR profession. This high degree of interest on the part of practitioners regarding a specific topic and the concomitant lack of scientific research on the same topic is a perfect example of the science-practice divide much lamented in human resource management and related fields. In fact, the very little research conducted regarding certification has focused on the development of certification tests (e.g., Bergstrom & Lunz, 1999; Raymond, Neustel, & Anderson, 2007; Sackett, 1998), but has not addressed the impact of certification for individuals, organizations, and the field.

Lawler and Boudreau (2009, p. 40) sum up the problem of HR talent management as follows:

Quite possibly the biggest challenge that needs to occur in HR has to do with talent management—not elsewhere in organizations, but how talent is managed in HR. In many respects talent management in HR is a case of the shoemakers' children lacking shoes. Our results suggest that HR often doesn't have the right talent; all too often it has talent that is inferior to the talent in other key parts of the organization.

As we have argued in this paper, HR certification has a potentially limited, but important role to play by increasing the HR knowledge of those individuals who enter the field from other areas and disciplines. However certification is unlikely to be an

adequate credential for signifying readiness to perform higher level HR work, such as HR manager jobs or vice presidents of HR. Unfortunately, however, we can only speculate what types of preparation and credentials are most valuable for HR work, since there is virtually no research that provides guidance. This is why we wrote this paper—to lay out a research agenda that will build an evidentiary basis for identifying relevant background qualifications for HR professionals.

We have proposed a multi-level framework of HR certification effects with the goal to contribute to a narrowing of the science–practice divide. This framework asserts that HR certification has effects at both the micro level (by influencing individual level HR job performance and individual level outcomes) and at the macro level (by influencing HR department reputation and HR department effectiveness). Both micro- and macro-level effects of HR certification ultimately influence the legitimacy of the HR profession. This framework provides a theory-based blueprint for research that answers the most important research questions regarding HR certification. Furthermore, research testing the propositions in our framework will provide the kind of evidence-based information that can reduce the science–practice gap and inform practitioners, employers, and professional organizations regarding the utility of HR certification.

## References

- Aguinis, H., Boyd, B. K., Pierce, C. A., & Short, J. C. (2011). Walking new avenues in management research methods and theories: Bridging micro and macro domains. *Journal of Management*, 37, 395–403.
- Aguinis, H., Michaelis, S. E., & Jones, N. M. (2005). Demand for certified human resources professionals in internet-based job announcements. *International Journal of Selection and Assessment*, 13, 160–171.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing*. Washington, D.C.: American Educational Research Association.
- American Society for Training and Development (2007). Learning and performance certification program. Retrieved from. <http://www.astd.org/content/ASTDcertification/>
- Barrett, G. V., Phillips, J. S., & Alexander, R. A. (1981). Concurrent and predictive validity designs: A critical reanalysis. *The Journal of Applied Psychology*, 66, 1–6.
- Bergstrom, B. A., & Lunz, M. E. (1999). CAT for certification and licensure. In F. Drasgow, & J. B. Olsen (Eds.), *Innovations in computerized assessment* (pp. 67–91). Mahwah, NJ: Erlbaum.
- Binning, J. F., & Barrett, G. V. (1989). Validity of personnel decisions: A conceptual analysis of the inferential and evidential bases. *The Journal of Applied Psychology*, 74, 478–494.
- Bliese, P. B., Chan, D., & Ployhart, R. E. (2007). Multilevel methods: Future directions in measurement, longitudinal analyses, and nonnormal outcomes. *Organizational Research Methods*, 10, 551–563.
- Borman, W. C., Rosse, R. L., & Abrahams, N. M. (1980). An empirical construct validity approach to studying predictor–job performance links. *The Journal of Applied Psychology*, 65, 662–671.
- Bray, D. W., Campbell, R. J., & Grant, D. L. (1974). *Formative years in business: A long-term AT&T study of managerial lives*. New York: Wiley.
- Canadian HR Reporter. (2006, September). HR professional designations. 19(15), 9.
- Carter, S. (2005). The growth of supply and demand of occupational-based training and certification in the United States, 1990–2003. *Human Resource Development Quarterly*, 16, 33–54.
- Cascio, W. F., & Aguinis, H. (2008a). Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *The Journal of Applied Psychology*, 93, 1062–1081.
- Cascio, W. F., & Aguinis, H. (2008b). Staffing twenty-first-century organizations. *Academy of Management Annals*, 2, 133–165.
- Claus, L., & Collison, J. (2004). *The maturing profession of HR in the United States of America survey report*. Alexandria VA: SHRM Research Department.
- Colakoglu, S., Lepak, D. P., & Hong, Y. (2006). Measuring human resource management effectiveness: Considering multiple stakeholders in a global context. *Human Resource Management Review*, 16, 209–218.
- Darling-Hammond, L., Berry, B., & Thoreson, A. (2001). Does teacher certification matter? Evaluating the evidence. *Educational Evaluation and Policy Analysis*, 23, 57–77.
- Drum, D. J., & Hall, J. E. (1993). Psychology's self-regulation and the setting of professional standards. *Applied and Preventive Psychology*, 2, 151–161.
- Farndale, E., & Brewster, C. (2005). In search of legitimacy: Personnel management associations worldwide. *Human Resource Management Journal*, 15, 33–48.
- Ferris, G. R., Perrewe, P. L., Ranft, A. L., Zinko, R., Stoner, J. S., Brouer, R. L., et al. (2007). Human resources reputation and effectiveness. *Human Resource Management Review*, 17, 117–130.
- Fiol, C. M., O'Connor, E. J., & Aguinis, H. (2001). All for one and one for all? The development and transfer of power across organizational levels. *Academy of Management Review*, 26, 224–242.
- Galang, M. C., Elsik, W., & Russ, G. S. (1999). Legitimacy in human resources management. In G. R. Ferris (Ed.), *Research in personnel and human resource management*, 17. (pp. 41–79) Greenwich, CT: JAI Press.
- George, J. M., & James, L. R. (1994). Levels issues in theory development. *Academy of Management Review*, 19, 636–640.
- Gilmore, S., & Williams, S. (2007). Conceptualising the “personnel professional”: A critical analysis of the Chartered Institute of Personnel and Development's professional qualification scheme. *Personnel Review*, 36, 398–414.
- Goldhaber, D. D., & Brewer, D. J. (2001). Evaluating the evidence on teacher certification: A rejoinder. *Educational Evaluation and Policy Analysis*, 23, 79–86.
- Hall, J. E., & Hurlley, G. (2003). North American perspectives on education, training, licensing, and credentialing. In G. Stricker, & T. A. Widiger (Eds.), *Handbook of psychology: Volume 8 clinical psychology* (pp. 471–509). Hoboken NJ: John Wiley & Sons, Inc.
- Hammonds, K. H. (August, 2005). Why we hate HR. *Fast Company*, 97, 40.
- Hitt, M. A., Beamish, P. W., Jackson, S. E., & Mathieu, J. E. (2007). Building theoretical and empirical bridges across levels: Multilevel research in management. *Academy of Management Journal*, 50, 1385–1399.
- Howard, A. (1986). College experiences and managerial performance. *The Journal of Applied Psychology*, 71, 530–552.
- Human Resource Certification Institute (1998). History of HRCI. Retrieved from. <http://www.hrci.org/AboutUs/HISTORY/>.
- Human Resource Certification Institute (2010a). Statistics. Retrieved from. <http://www.hrci.org/HRCertification.aspx?id=2147483768>.
- Human Resource Certification Institute (2010b). Exam deadlines and fees. Retrieved from. [http://www.hrci.org/deadlines\\_fees](http://www.hrci.org/deadlines_fees).
- Human Resource Certification Institute (2010c). SHRM learning system. Retrieved from. <http://ecommerce.mylearningresource.com/stores/SHRM/learningsystems/ls.html>.
- Human Resource Certification Institute (2010d). PHR/SPHR certification preparation. Retrieved from. [http://www.shrm.org/Education/seminar/Pages/php\\_sphr.aspx](http://www.shrm.org/Education/seminar/Pages/php_sphr.aspx).
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and strategic human resource management effectiveness as determinants of firm performance. *Academy of Management Journal*, 40, 171–188.
- International Foundation of Employee Benefit Plans (2009). Designations. Retrieved from. <http://www.ifebp.org/CEBSDesignation/Overview/Designations/>.
- International Public Management Association for Human Resources (2009). Certification. Retrieved from. <http://www.ipma-hr.org/content.cfm?pageid=35>.
- Klein, K. J., Cannella, A., & Tosi, H. (1999). Multilevel theory: Challenges and contributions. *Academy of Management Review*, 24, 243–248.
- Klein, K. J., Dansereau, F., & Hall, R. J. (1994). Levels issues in theory development, data collection, and analysis. *Academy of Management Review*, 19, 195–229.

- Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations. Contextual, temporal, and emergent processes. In K. J. Klein, & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 3–90). San Francisco: Jossey-Bass.
- Lawler, E. E., & Boudreau, J. W. (2009). *Achieving excellence in human resources management: An assessment of human resources functions*. Stanford, CA: Stanford University Press.
- Lester, S. W., Mencl, J., Maranto, C., Bourne, K. A., & Keaveny, T. (2010). The impact of passing the Professional in Human Resources exam on early career success for undergraduates entering the human Resource field. *International Journal of Selection and Assessment*, 18, 282–290.
- McKillip, J., & Owens, J. A. (2000). Voluntary professional certifications: Requirements and validation activities. *The Industrial Organizational Psychologist*, 38, 50–57. <http://www.siop.org/tip/backissues/TipJuly00/09McKillip.htm>.
- Plake, B. S. (1998). Setting performance standards for professional licensure and certification. *Applied Measurement in Education*, 11, 65–80.
- Ployhart, R. E. (2006). Staffing in the 21st century: New challenges and strategic opportunities. *Journal of Management*, 32, 868–897.
- Ployhart, R. E., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design, and analysis of change. *Journal of Management*, 36, 94–120.
- Ployhart, R. E., Weekley, J. A., & Baughman, K. (2006). The structure and function of human capital emergence: A multilevel examination of the attraction–selection–attrition model. *Academy of Management Journal*, 49, 661–677.
- Ployhart, R. E., Weekley, J. A., & Ramsey, J. (2009). The consequences of human resources stocks and flows: A longitudinal examination of unit service orientation and unit effectiveness. *Academy of Management Journal*, 52, 996–1015.
- Raymond, M. R., Neustel, S., & Anderson, D. (2007). Retest effects on identical and parallel forms in certification and licensure testing. *Personnel Psychology*, 60, 367–396.
- Rynes, S. L., Colbert, A. E., & Brown, K. G. (2002). HR professionals' beliefs about effective human resource practices: Correspondence between research and practice. *Human Resource Management*, 41, 149–174.
- Sackett, P. R. (1998). Performance assessment in education and professional certification: Lessons for personnel selection? In M. D. Hakel (Ed.), *Beyond multiple choice: Valuating alternatives to traditional testing for selection* (pp. 113–129). Mahwah, NJ: Erlbaum.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40, 437–453.
- Schneider, B., Smith, D., & Sipe, W. P. (2000). Personnel selection psychology: Multilevel considerations. In K. J. Klein, & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 91–119). San Francisco: Jossey-Bass.
- Schramm, J. (2007). HR's new contours. *HR Magazine*, 52, 96.
- Sincoff, M. Z., & Owen, C. I. (2004). Content guidelines for an undergraduate human resources curriculum: Recommendations from human resources professionals. *Journal of Education for Business*, 80, 80–85.
- Society for Human Resource Management (2005). *SHRM human resource curriculum guidebook and templates*. Alexandria VA: Society for Human Resource Management.
- Society for Human Resource Management (2009a). SHRM's HR curriculum guidebook and templates. Retrieved from <http://www.shrm.org/Education/hreducation/Pages/overview.aspx>.
- Society for Human Resource Management (2009b). SHRM learning system. Retrieved from <http://www.shrm.org/Education/educationalproducts/learning/Pages/default.aspx>.
- Society for Human Resource Management (2011). Pass the PHR/SPHR exam the first time with the SHRM Learning System Self-Study Program. Email distributed by SHRMEducation@SHRM.org on March 25, 2011.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87, 355–374.
- Spence, A. M. (1974). *Market signaling: Informational transfer in hiring and related screening processes*. Cambridge, MA: Harvard University Press.
- Stewart, T. A., & Martin, M. H. (May, 1996). Human resources bites back. *Fortune*, 133(9), 175–176.
- Stewart, T. A., & Woods, W. (January, 1996). Taking on the last bureaucracy. *Fortune*, 133(1), 105–108.
- Stromberg, C. D. (1990, May). Associations' certification programs: Legal and operational issues. *Paper presented at a meeting of the American Speech and Hearing Association, Rockville, MD* (Available from the author at Hogan & Hartson, 555 13th Street, NW, Washington, DC 20005).
- Stromberg, C. D., Haggarty, D. J., Leibenluft, R. F., McMillian, M. H., Mishkin, B., Rubin, B. L., et al. (1988). *The psychologists legal handbook*. Washington, D.C.: Council for the National Register of Health Service Providers in Psychology.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20, 571–610.
- Sunoo, B. P. (May, 1999). Certification enhances HR's credibility. *Workforce*, 78(5), 70–80.
- Tenopyr, M. L. (1977). Content–construct confusion. *Personnel Psychology*, 30, 47–54.
- Tsui, A. S. (1987). Defining the activities and effectiveness of the human resource department: A multiple constituency approach. *Human Resource Management*, 26, 35–69.
- Tsui, A. S. (1990). A multiple constituency model of effectiveness: An empirical examination at the human resource subunit level. *Administrative Science Quarterly*, 35, 458–483.
- Tsui, A. S., & Milkovich, G. T. (1987). Personnel department activities: Constituency perspectives and preference. *Personnel Psychology*, 40, 519–537.
- Van Iddekinge, C. H., & Ployhart, R. E. (2008). Developments in the criterion-related validation of selection procedures: A critical review and recommendations for practice. *Personnel Psychology*, 61, 871–925.
- Wiley, C. (1995). Reexamining professional certification in human resource management. *Human Resource Management*, 34, 269–297.
- Wiley, C. (August, 1992). The certified HR professional. *HR Magazine*, 37, 77–84.
- WorldatWork (2009). Certification. Retrieved from <http://www.worldatworksociety.org/society/certification/html/certification-home.jsp>.