



II. MANAGEMENT PRINCIPLES:
THE THEORY OF MANAGEMENT

Psychologist-Managers
in Higher Education:
The Particular Case of I–O Psychology

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This article summarizes perspectives of a group of industrial–organizational (I–O) psychologists who have served with distinction in a number of administrative roles in

academic administration. It is based on a panel presented at the 2004 annual meeting of the Society for Industrial and Organizational Psychology (SIOP). The discussion covered attractions of academic administration, aspects of I–O psychology that are well-suited to academic administration, relevant preparation not included in the typical I–O education, unexpected aspects of higher education administration, the biggest challenges and greatest rewards, and factors to be considered when contemplating an administrative career in academe. These perspectives are presented in the context of brief reference to articles on administrative roles and issues in higher education and a summary of the guidelines (SIOP, 1999) describing competencies developed in doctoral education in I–O psychology. Differences between roles of faculty and administrators are also considered.

Both senior authors of this article are industrial–organizational (I–O) psychologists, who for significant parts of our careers have been involved in academic administration. At a recent convention of the Society for Industrial and Organizational Psychology (SIOP), we convened a panel of distinguished colleagues who have followed (or fallen into) similar career paths and whose careers include distinguished service in a variety of administrative roles in academe. The purpose of this article is to share the views of this group of experienced I–O psychologists on the topic of I–O psychology as a preparation for higher education administration. It has been reported that I–O psychologists have emerged as leaders in academia disproportionately to their numbers (Lowman, Kantor, & Perloff, in press), and it may be that aspects of preparation in I–O psychology are especially suited to academic administration. We hope this article will be useful to those contemplating or currently engaged in higher education administration as well as those consulting with or writing about people in these roles. It will also continue the tradition of this journal in examining various career roles for psychologist-managers.

THE CONTRIBUTORS TO THIS DISCUSSION

Our panelists included John M. Cornwell, Irwin L. Goldstein, Milton D. Hakel, and Rodney L. Lowman. Laura L. Koppes was also initially scheduled to participate and has shared some of her thoughts with us. The panel moderators have synthesized the perspectives of the participants and added some of their own. Various members of this group have filled the positions of department chair, dean of a college or a system, vice chancellor for academic affairs, institutional effectiveness officer or accreditation officer, assistant provost, acting president, and administrator of an off-campus center. They have also held administrative roles in educational and professional organizations and served as foundation officer, owner or president of a consulting firm, and journal editor or publisher. These diverse and demanding managerial and administrative roles related to higher education were the

basis for their reflections about the relevance of I-O psychology as a background for this work. Uncited quotations and paraphrases from the panelists are taken from the recording of the SIOP panel (Hays-Thomas & Siegfried, 2004).

WHAT HAS BEEN ATTRACTIVE ABOUT ACADEMIC ADMINISTRATION?

One topic dealt with career paths and what was expected and found to be attractive about administrative roles in higher education. There was an element of planned career development in the stories, but serendipity also played a role. Most career advancement had occurred within a particular institution as the person took on progressively more responsible duties. Opportunities to serve in interim or acting capacities sometimes arose unpredictably, perhaps leading to progressively higher level positions. In some stories, the individual's administrative position had become aversive or untenable (perhaps for political reasons), after which he or she moved to another arena of administration that became more satisfying and part of a more complex employment situation. Panelists acknowledged ambivalent feelings toward some of the tasks they had performed, both "loving and hating" various aspects of their work. For example, dealing with incidents of sexual harassment was cited as a very stressful and unpleasant, but very necessary, responsibility. However, overall they thought their work was "lots of fun."

One attractive aspect of administration was the need to focus on the future of higher education and how it has and will change as a central aspect of society. Milt Hakel cited Clark Kerr's observation that 66 institutions in Western culture have persisted since 1530. A few are religious organizations (e.g., the Roman Catholic and Lutheran churches), two are parliaments (those of Iceland and the Isle of Man), and the rest are universities. Although current times seem turbulent, universities do endure and "work in their context." Working with these organizations as they change can be a rewarding experience.

The strongest attraction seemed to be the opportunity to "practice what we preach" as I-O psychologists, by serving as internal consultants within our own educational institutions. Also mentioned was the opportunity to have real and broad influence in the organization as one moved to higher levels. Access to information and resources usually increased with upward movement in the organization. It was "great fun" to work with people to influence the direction of the organization and to facilitate and serve the organization in its forward movement. Also attractive were developmental opportunities to work with more senior people who were admired and valued. Satisfaction also came in smaller settings where things could change quickly and from solving more limited problems such as making an academic calendar work better for people.

What we did not hear was any reference to the financial rewards or prestige of their positions (although these may also have been considerations). The work was seen as consisting of problems to be solved, producing visible results, and with positive consequences for faculty and students. One participant said he “practiced I–O psychology every single hour of every day.”

WHAT ASPECTS OF I–O PSYCHOLOGY ARE ESPECIALLY SUITED TO ACADEMIC ADMINISTRATION?

One important theme was thinking in a system perspective. “I always thought everyone did!” one panelist exclaimed; but, perhaps it is not as common as expected. Goldstein pointed out, for example, that the design of a selection system affects training; implementation of a pay raise will affect people differently depending on the subsystem within which they work. An administrator with a system perspective can alert higher level administrators to potential problems and can consider issues from the viewpoint of different levels in the organization. A system perspective illuminates the relation between community colleges and universities, which are becoming more interdependent.

Several of the participants in this panel have been involved in or responsible for their universities’ reaffirmation of accreditation, which appears to be a natural opportunity for the practice of organizational psychology. Evaluation of process or capability (e.g., number of library books, proportion of faculty with terminal degrees) is no longer sufficient. Accrediting bodies are now asking universities to identify learning outcomes in terms of what educated students should know and be able to do. This requires mapping of a criterion space, development of performance measures that go beyond measurement of knowledge, implementation of assessment, and feedback of results in ways that lead to improved learning and curriculum. Active learning requires students to use their knowledge and skill, to try things out, to assess outcomes, and take action based on results using an action research perspective. The current emphasis of regional and disciplinary accrediting agencies on assessment of outcomes highlights the usefulness of a “skill set that does not exist in the same way anywhere else than in I–O psychology, according to Hakel.”

Understanding of compensation and benefits can be especially helpful to an academic administrator because a very large percentage of operating budgets in a university consists of costs associated with personnel and because of the strong emotions associated with absolute and relative financial rewards. According to Cornwell, private institutions may find salary, raises, and benefit plans constantly open to renegotiation. Often internally, contradictory wage structures arise because of idiosyncratic or historical factors, and perceived inequities are common. By virtue of their training, I–O psychologists should be able to use empirical data

about the salary structure to make recommendations or decisions about allocations and adjustments. An understanding of the emotional reactions to compensation decisions is also essential.

One fundamental issue on which I-O psychologists should be well-prepared for academic administration is that of staffing. It is crucial to have a good fit between employees and jobs and to be able to move the “wrong people” gracefully out of jobs in which they are a poor fit. Conflict management skills are also critical, according to Lowman. Other useful understandings coming from an I-O background are the importance of politics and differential influence and the need for alignment across various processes, working toward common objectives in a system. The skillful manager will be able to figure out quickly what is happening in the organization as a whole, determine priorities, and influence others to see and accept this understanding. It is also important to understand what is required to implement a good idea and thus be able to distinguish between an idea that is good and one that is good and also feasible. Timing is also an important factor in the success of a plan or idea.

Some of these skills are embedded in graduate training in I-O psychology. I-O psychologists are said to “contribute to an organization’s success by improving the performance of its people” and to “identify how behaviors and attitudes can be improved through hiring practices, training programs, and feedback systems” (SIOP, 2005, p. iii). The field espouses the scientist–practitioner model in which the I-O psychologist both “develops and evaluates theory using research and empirical skills ... [and] ... applies and evaluates theory and research under specified conditions” (SIOP, 1999, p. 2).

The second edition of SIOP’s *Guidelines for Education and Training at the Doctoral Level* (1999) identifies several areas of competence for I-O psychologists. Some of these (fields of psychology, history and systems of psychology, research methods, and statistical methods or data analysis) pertain to graduate training in psychology in general. Other competence areas more specific to I-O include ethical, legal, and professional contexts of I-O psychology; attitude theory, measurement, and change; career development; consumer behavior; criterion theory and development; human performance–human factors; individual assessment; individual differences; job–task analysis and classification; judgment and decision making; organization development; organization theory; performance appraisal and feedback; personnel recruitment, selection, and placement; small-group theory and team processes; training (theory, program design, and evaluation); and work motivation. Four competencies were added in 1999: consulting and business skills, health and stress in organizations, job evaluation and compensation, and leadership and management. The guidelines are described as “suggestions or recommendations,” and particular graduate programs may not prepare students in all these areas; however, they do provide a general description of the range of areas included in I-O psychology doctoral preparation.

Although there is a substantial body of information on roles in academic administration (e.g., Kezar, 2003), very little attention has been paid to these issues in the I–O literature. An edited book by Frost and Taylor (1996) contains several useful chapters dealing with topics such as the transitions into and from administrative roles, and articles by Bedeian (2002) and Gallos (2002) have analyzed the role of dean from the perspectives of a senior faculty member and a former dean, respectively. Several articles by psychologists have also addressed the role of the academic psychology department chair (Lowman, 1998).

The review by Kezar (2003) listed 12 significant trends in the recent literature on academic administration. Kezar stated:

A major tension is reflected within these themes: the need to reconcile corporate and academic values ... performance assessment, planning, and legal issues reflect the rise of corporate values, whereas human interaction, diversity, collaboration, and mediation represent the traditional values of the academy. (p. 1)

Of the 12 trends in the academic administration literature, at least 9 are highly relevant to the knowledge base and the practice of I–O psychology. These include management fads, determining priorities, human interaction, mediation, planning, legal issues, diversity, assessment, and collaboration.

WHAT MAY AN I–O BACKGROUND NOT PROVIDE?

Goldstein identified three types of skill sets he did not have by virtue of his I–O training and thus had to develop as he moved upward in administration. One had to do with the financing of higher education especially through mechanisms such as capital bonds. The higher level administrator must constantly be concerned about resources and whether they should be expended or conserved in ways that will maintain a strong bond rating. This is a continuous learning process.

A second skill set to be developed was conflict resolution, mediation, and negotiation. One either learns these skills or does not survive in the administrator's job. The biggest surprise, said Goldstein, was the amount of time spent with attorneys dealing with contract disputes, resource allocation, sexual harassment, conflicts involving faculty, and other legal problems in the work organization. "I wish I had some clinical training," Goldstein said.

A third area (which is now represented in the SIOP list of competence areas) is that of individual assessment, particularly selection at high levels of the organization using simulations or other measurements. Most of the "rules of the selection game" that are taught in I–O psychology apply to situations with many applicants and many jobs. In contrast, higher education often involves selecting one person

from a pool. Searches may be secret, managed by search firms, or politically influenced. This is especially the case in searches involving upper level administrative jobs such as deans; provosts; presidents; and, most of all, football and basketball coaches. Again, according to Goldstein, this is a “continuous learning adventure.”

An understanding of the business side of universities can be gained through workshops and certifications offered by the National Association of College and University Business Officers and its regional affiliates, according to Cornwell. I-O psychologists initially may not appreciate the degree of professionalism of those who manage the business side of the university. The vice president for business or finance who understands the academic side as well can be a true servant to the educational mission of the university. Processes can be designed that work well for both academic and business functions, such as timing the performance evaluations of non-academic staff so that they do not occur at the busiest times of the academic calendar. Lowman stressed the need to deal effectively with financial matters, including budgets. At higher levels, this becomes “bigger and more complicated, and brings out the best and worst in people.”

One activity for which I-O psychology may not prepare its graduates is that of terminating employees. One example was a situation that required coordination of campus police, human resources staff, physical plant (to change keys), information technology staff (to change computer access), and others to swiftly and appropriately terminate a group of employees. The timing of the termination was chosen to minimize the likelihood of significant media attention. The I-O psychologist came to respect the expertise of those in other roles at the university who came together to effectively manage this situation.

Managing the “dark side” of the enterprise can also be difficult when political influences become extreme and trust may be threatened. Lowman’s advice was to “make explicit all sides of a position” and to keep decision making as open as possible by helping people to understand how decisions are made and when they are not open to reconsideration.

At higher levels of the institution, administrators must also develop skills in dealing with boards of trustees, whose actions may have great significance for the institution. Their interests and activities and those of administration must be in alignment because of the critical importance of their role. Top administrators may also be unprepared for their responsibility to manage internal and external communications and in support of the reputation of the institution.

Finally, Hakel pointed out that there are limits to what can be taught and learned in graduate school, and this highlights the need for continuous learning and reflection. One thing that could be built into more I-O curricula is attention to and comfort with reflection on one’s development and career path. It would be useful for I-O faculty to stress the need not only for career planning, but also for thoughtful consideration of one’s strengths, interests, and learning opportunities and how they connect.

WHAT SURPRISED YOU THE MOST ABOUT ACADEMIC ADMINISTRATION?

Although many things are handled better than it might appear from a faculty perspective, it was acknowledged there are also many processes that could work better with adjustments that might seem to be “common sense.” For example, decisions are sometimes made in isolation without involvement of critical stakeholders, with the result that decisions may not work well and have to be redone. Decisions that have important implications for many people may be better accepted when made collaboratively; when participants understand the constraints that must be balanced, they may be less likely to reject the decision or to blame others. In some cases, open discussion may show that basic assumptions are false or may identify for the first time shared values that can be incorporated into subsequent decisions.

One participant was surprised by “how much I love this work.” Many faculty see it as the dark side or as cruel punishment, but roles in academic administration may provide wonderful opportunities to have major influence on how decisions are made and how the organization functions. Higher education is moving toward an “evidence-based culture” in which decisions are more often made on the basis of systematic data; yet one contributor was surprised about how often significant changes are made in an institution without any supporting data simply because someone in authority thinks it might be a good idea. It is exciting to have an opportunity to change this aspect of the institution’s culture and move toward more data-based decision making.

A pleasant revelation was the degree of competence of many people in their positions. This is especially impressive when individuals demonstrate skill sets that the observer does not have and may not even have considered. Conversely, there are unpleasant surprises when others’ lack of competence may be revealed as “a Pandora’s box that just keeps giving and giving.”

Another surprise was the intractability of some personnel issues. According to Hakel, “you think you’ve got it fixed, then half an hour later it is busted again because someone says something . . . I enjoy debugging software. At least when you debug it, it stays debugged.” In contrast, interpersonal relationships can quickly deteriorate. A different, pleasant surprise was the opportunity to use organizational development and consulting skills to identify and build support for initiatives, building on “small wins.”

At higher levels of the institution, another surprise was the amount of time spent with attorneys dealing with difficult legal issues. Even a small number of cases can require a large amount of time. Goldstein described the “Washington Post Test” that he learned about when serving as dean at the University of Maryland. He reported learning from his mentor that as an administrator he should be concerned not about whether some controversial issue would appear in the newspaper (because it would), but rather about whether he had a reasonable explanation for it. If

not, considerable reconsideration would be necessary to act so as to maintain the institution's good reputation in the press. Goldstein recounted an episode in which appropriate use of some university funding became an issue of contention between two influential candidates running for public office in the state. In the end, the university's operation was found to be above board, but "we spent a lot of time worrying about it." With upward movement in administration, increased attention is paid not only to how one manages, but also to how others will perceive one's management, especially when important political forces are in play.

Another surprise was the amount of time spent in fund raising, which is increasing as higher education becomes more costly and traditional sources of funding shrink. One participant said, "I've discovered that I love it," about the task of visiting alumni in other communities and finding that they care about the institution and are willing to support it.

WHAT HAVE BEEN THE BIGGEST CHALLENGES, THE GREATEST REWARDS?

There were some successes in managing real crisis situations and other satisfactions that came from implementing something that works much better than what ever preceded it. Lowman's biggest successes have been "building academic programs from nothing." He described the attempt to create a doctoral program at one institution, which led to disappointment when the highest authorities put a moratorium on the development of new doctoral programs. Subsequently, the California School for Professional Psychology (now Alliant International University) was able to implement this concept in 1 year, a "miracle" by academic timetables. Seeing the students enter the program and begin to build its identity was "great fun." Building the California School of Organizational Studies across four locations in California was also a rewarding challenge. It required planning for the integrated management of faculty located in different places and the adding of an international component and collaborative management to start from scratch and "build a brand"—this was very rewarding. Later, management of challenges in a crisis situation, focusing others on what was required to change course quickly, and then seeing things happen in a short time were also extremely important and very satisfying.

Goldstein recounted the challenge of leading his college in its response to a potentially devastating loss of funding in the 1991 through 1992 recession. The college faculty realized that the behavioral sciences addressed many important challenges for the future such as diversity, crime in the streets, human rights, or economic restructuring. The departments forged partnerships with nearby agencies to develop exceptional new academic programs. For example, the economists partnered with the Economic Monetary Fund, and neuroscientists collaborated

with the National Institutes of Health. The geographers developed a program in earth sciences that was jointly operated with NASA–Goddard. In a 10-year period, the college’s grant funding exponentially increased; and as exciting things began to happen, it became easier to recruit outstanding faculty.

Once again, there are financial challenges due to shifting funding priorities and demographic predictions of a large bulge of incoming students, many of whom are themselves financially challenged. How will higher education be reengineered to meet this situation? Can distance learning be used during the summer to provide students the opportunity to leave campus for employment during the summer yet continue their courses with the temporal flexibility afforded by electronic delivery? These questions are long term and societal in scope as higher education responds to the funding challenges of an economy that is dealing with increased deficits along with demands for funding of health care, social services, and other important needs. Goldstein asked, “What are we going to do to cope with this situation besides fundraising, and how are we going to change ourselves so that we remain strong, competitive institutions?”

Although there is often pressure for quick and decisive action, working with faculty governance systems can seem to delay progress. An ongoing challenge for one panelist was trying to work within a faculty governance system that was overly cumbersome and in need of reform. Although the formal structures had become dysfunctional, some faculty held to them as sources of identity. Meanwhile, progress was sometimes made through informal channels. The challenge will be to lead a streamlining and reforming of faculty governance so that it permits faculty to contribute effectively to operation of the university.

A related challenge is the design of processes in which faculty can function as members of a collective or team. The traditional institutional socialization and reward systems have fostered a competitive system that often discourages faculty from effectively working together as members of a team. Higher education will become an ever more competitive business in the future as new delivery models develop, some more profitable and financially sound than the traditional models. The future will require adaptation to change and the willingness to take risks.

PRACTICAL ASPECTS TO CONSIDER: ACADEMIC CATS AND DOGS, AND OTHER THINGS

An important consideration is the development of an exit strategy that provides security in the event that for some reason an administrative assignment does not continue. Retention of tenure and faculty appointment as well as salary considerations are important. In administrative positions, one is called on to make decisions that may anger other stakeholders, and one must prepare for the possibility that others may want to move in a different direction.

Should one continue to teach while holding an administrative appointment? Teaching is the core technology of the university and maintains a connection with the students for whom the academic enterprise exists. It also continually reminds one of the faculty perspective on issues and processes (e.g., Cornwell attempts to manage teaching by scheduling a course in the evening). However, an argument can be made that each role demands great attention, and the quality of each may suffer as a result of attempts to do too much of both.

A recent article, cowritten by a seasoned professor-administrator and a search consultant for academic administrators, identified some very practical ways in which the work lives of faculty and administrators differ (Dowdall & Dowdall, 2005). First is the structured schedule of the academic administrator who is generally present throughout the week and around the year, despite the breaks in the academic calendar that faculty colleagues see as "time off." Leading in academia is sometimes referred to as "herding cats." Several years ago, after being a department chair for short while, one of us (Hays-Thomas) observed the following: "I felt as if I had moved from being a 'cat' to being a 'dog.'" As a faculty member, I had followed my own schedule; coming in and out with autonomy to conduct my work where and when I found it convenient, apart from the obvious necessity of adhering to schedules for classes and meetings. As department chair, I felt "leashed" to the office. When I was away, it was important that someone know how to reach me. It was necessary to take official leave for absences that would have been ignored when I was a nonadministrative faculty member.

Dowdall and Dowdall (2005) suggested that an administrators' work is more responsive to relations with supervisors, whereas within broad work assignments and for most of the year, faculty may have little sense of working under supervision. Autonomy is generally valued, but one consequence is that direction and feedback may be scarce. In addition, faculty are usually able to choose the degree to which they professionally and socially interact with colleagues; administrators must work with the network of individuals whose responsibilities are complementary. Another aspect of relationship is that faculty may behave differently toward their colleagues who move into administration; this tendency is exacerbated when collective bargaining exists and limits the topics that may be discussed between faculty and some administrators.

The pace of decision making for faculty is often slow and deliberative, according to Dowdall and Dowdall (2005). Critical analysis is rewarded, and hasty action is discouraged. Administrators, however, must often make decisions in a time frame that precludes extensive study and analysis. Some decisions cannot be deferred, and compromise or consensual solutions may not be feasible.

Faculty may be able to avoid conflict with colleagues or issues if they wish. Administrators, however, must deal with conflict, often by helping to resolve it. They may be called on to make decisions that displease or negatively impact on a particular segment of the institution. (Of course, if an administrator consistently makes

decisions that upset large groups in the institution, it is probably time to take a good look in the mirror and decide if a leadership position is good for you and for the institution.)

Dowdall and Dowdall (2005) noted that in their faculty roles, professors generally function as equals, whereas administrators often assume hierarchical relations that depend on position. Although some faculty may take leadership roles on committees or in department, college, or university governance, administrators are typically tasked with leadership on certain issues.

Finally, Dowdall and Dowdall (2005) also pointed out that there are differences in the structure of compensation and in the security of one's position. Details vary from one campus to another, but aspiring administrators should find out as much as possible about how the system operates and negotiate effectively before making the move into administration. The continued employment of a tenured faculty member, barring felonious conduct or extreme financial exigency, is generally secure. In contrast, administrators can be and often are moved in to or out of specific jobs. The advice of our panel participants about exit strategies is well-taken.

In the end, Dowdall and Dowdall (2005) advised that faculty examine whether they "feel the pull to the administrative side" (p. 2). Our contributors concur that I-O psychology provides a good foundation for success as an academic administrator, but that a strong personal motivation is also necessary for satisfaction and effectiveness in this role.

WOULD YOU ADVISE OTHER I-O PSYCHOLOGISTS TO ENTER ACADEMIC ADMINISTRATION?

The consensus was that I-O psychology can be good preparation for administration and that this work can be very rewarding if it fits with one's interests and value systems. Many faculty members are not interested in administrative duties and see them as a distraction from the teaching and research that are their prime focus. Therefore, there are opportunities for those with real interest and skill in these areas. Potential administrators should try out administrative roles, serve in acting capacities, and determine their fit with the work. Short-term assignments should be appreciated for the developmental opportunities they provide.

Should an academic I-O psychologist move into administration? Yes and no. According to Lowman, "the passion has to be there for you." One who is primarily devoted to teaching and research may see administration as a dull and boring distraction from his or her major calling. If one is restless in the academic role, has a problem-solving focus and people skills, and is attracted to academic leadership, then administration may be a good fit.

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REFERENCES

- Bedeian, A. G. (2002). The dean's disease: How the darker side of power manifests itself in the office of dean. *Academy of Management Learning and Education, 1*, 164–173.
- Dowdall, G., & Dowdall, J. (2005, September 23). Crossing over to the dark side: Considering a career in academic administration? Here's what you need to think about. *Chronicle Careers*. Vol. LII, 5. Retrieved January 26, 2006, from <http://chronicle.com/weekly/v52/i05/05c00101.htm>
- Frost, P., & Taylor, M. S. (Eds.). (1996). *Rhythms of academic life: Personal accounts of careers in academia*. Thousand Oaks, CA: Sage.
- Gallos, J. V. (2002). The dean's squeeze: The myths and realities of academic leadership in the middle. *Academy of Management Learning and Education, 1*, 174–184.
- Hays-Thomas, R., & Siegfried, W. D., Jr., (Co-chairs). (2004, April). Applying I/O psychology in higher education administration: Opportunities and Challenges. Panel conducted at the meeting of the Society of Industrial Organizational Psychology, Chicago.
- Kezar, A. J. (2003). *Higher education trends (1999–2000): Administration* (ERIC Clearinghouse on Higher Education). Retrieved September 13, 2003, from <http://www.eric.org/trends/administration2000.html>
- Lowman, R. L. (1998). The academic department head's position. *The Psychologist-Manager Journal, 2*, 11–81.
- Lowman, R. L., Kantor, J., & Perloff, R. (in press). History of I–O psychology educational programs in the United States. In L. L. Koppes (Ed.), *Historical perspectives in industrial and organizational psychology*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Society for Industrial and Organizational Psychology, Inc. (1999). *Guidelines for education and training at the doctoral level in industrial/organizational psychology*. Bowling Green, OH: Author.
- Society for Industrial and Organizational Psychology, Inc. (2005). *SIOP membership directory*. Bowling Green, OH: Author.