Identifying the Competencies, Critical Experiences, and Career Paths of I-O Psychologists: Academia

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A long-standing focus of the Professional Practice Committee (PPC) has been examining career paths in I-O psychology. A study of practitioner careers was proposed in 2009 and was expanded in 2012 to include both practitioner and academic career paths to better capture all of the careers that I-O psychologists hold. Graduate students from the university of Akron’s Center for Organizational Research (COR) worked with PPC members to collect and analyze data from SIOP members in both academic and applied settings. The intent of the project was to identify competencies and critical experiences across I-O psychology career paths in academia, consulting, industry, and government. For the purposes of this study, a competency is defined as a skill someone has developed that is necessary for success on the job; a critical experience is recognized as an on the job experience that defines what is required to perform or prepare for the career level within a given practice area.

In the current TIP article, we present results of this project for the academic career path. We introduced previous results regarding entry-level competencies necessary for success in academia in Zelin, Lider, Doverspike, Oliver, and Trusty (2014; collected from qualitative data; a reply to
Byrne, et al., 2014), provided a brief overview of results in a recent Practitioners’ Forum column (Zelin, Doverspike, Oliver, Kantrowitz, & Trusty, 2014), and presented initial survey results during an executive Board invited session at the Annual Conference for the Society for Industrial and Organizational Psychology (SIOP; Trusty, et al., 2014). However, the current article is the first to tie together all data collected from the academic sample, including the qualitative interviews and responses to the SIOP Careers Study survey. Future TIP articles will provide results from the consulting, industry, and government career paths, respectively.

Qualitative Data: Subject Matter Expert Interviews

Participants

Graduate students from COR interviewed 11 SIOP members in academic positions from a wide range of colleges and universities. Participants had an average of 17.64 years of experience in academia with a range of 8–31 years. Specific job titles of the participants included: associate professor, full professor, department chair, dean, assistant provost, and program director. We selected a diverse set of individuals spanning both research- and teaching-focused schools, small to large student populations, those with and without I-O graduate school programs, and individuals holding administrative positions. We also included professors employed in both business and psychology departments.

Methodology

A structured interview process was used to begin identifying the competencies and critical experiences necessary for success in participants’ current position as well as those necessary for success at other levels of their college and/or university. Sample questions used in the interview can be found in Appendix A; All appendices can be downloaded from the SIOP website: www.siop.org/TIP/jan15/appendices. The initial job-level structure used to examine the career paths contained five levels for competencies and critical experiences to be identified: individual contributor (e.g., assistant/associate professor), expert individual contributor (e.g., full professor), manager (e.g., department chair), manager of managers (e.g., dean), and executive (e.g., vice president, provost). To be consistent across the consulting, industry, and Government sectors, we will use the career ladder labels rather than the university-provided labels (e.g., “individual contributor” rather than “assistant/associate professor”).

Results

Most of the I-O psychologists we interviewed moved from assistant to associate to full professor within their careers. Over half (N = 6) became department or program chairs, and the same amount (N = 6) had moved into a higher-level management role at some point during their career, such as assistant dean/dean. Overall, participants noted that very few I-O psychologists were in the provost, vice president, or president roles.
Within the typical career movement from assistant to associate to full professor, the participants stated that the three most important competencies necessary for success were research, teaching, and service. The relative weight of importance to career success for each competency depended on the research orientation of the school. At universities that focused heavily on research and article production, the research competency took on more importance relative to other competencies. However, as one reached tenure and moved toward full professor, the service competency took on greater importance and the research competency became relatively less weighted. In comparison, colleges and universities that focused more on teaching rather than article production placed relatively equal weights on research, teaching, and service with regard to job role success.

Participants also noted that the department chair/Head position was not necessarily regarded as a step up the career ladder from associate or full professor. Some participants actively sought the chair position, seeing it as a move higher up the administrative ladder, whereas others took on the job because it was their turn via seniority to serve, and a few were nominated. Some of the academics who chose to become department chair saw the next step in the career path (i.e. associate vice president or associate dean) as entailing more administrative work rather than research and teaching, and thus did not choose to move into a higher management position. Others were selected into associate dean or Interim dean roles without first acting as a department chair. All participants noted that it was likely that academics could return to a teaching position after working in a university managerial role full-time, or concurrently serve in a management position while retaining some of their academic duties.

Quantitative Data: Careers Study Survey

Methodology

From the interviews, we produced a master list of critical experiences and competencies, which were categorized by level. However, for data collection and analysis purposes, the Careers Study survey combined all competencies and experiences across all levels to facilitate comparison across levels (e.g., members who indicated a current position of associate professor rated the same competencies as other career levels within academia). In contrast to the interviews, the survey was focused on defining what experiences and competencies were important for one’s current job level rather than also considering the competencies and experiences necessary for promotion.

For each job-related competency and critical experience, participants were asked to rate its importance in terms of performing their current job. Responses for both sets of questions ranged from 1 = not important to 5 = critical. For the critical experiences, participants were also able to select a “not applicable” answer if the experience did not apply to their current position. We did this to make the distinction between an experience that is part of a
job but not very important (not important) versus an experience that is not part of the job at all (not applicable). We coded “not applicable” responses as “system missing.” Thus, the results that were provided solely incorporate the critical experiences that were designated as being a part of the job. Participants were asked to indicate whether they learned the particular competency in graduate school, on the job, or through structured training. Participants also were asked questions about their background information, including their highest obtained degree, years of work experience, all sectors in which they have worked, current sector of work, current job title and job level, length of time spent in current job sector, gender, ethnicity, and age.

Participants

We received responses from 522 members who identified as working within academia and who completed at least a portion of the online survey. The average age of participants in the sample was 45.39 years, with a standard deviation of 13.90 years. Slightly over half (54%) of the participants were male, and the majority (84.10%) self-identified as White. The next most common identification was Asian/Pacific Islander (7.20%). Two participants had previously worked in the industry sector, and one indicated previously working for a consulting organization. It should be noted that through the interviews a few of the academics also had their own consulting firms, but this was not captured in the Careers Study survey. Approximately 96% of participants received their PhD and 4% received their master’s degree. A few participants indicated having additional certifications or licensures.

Results

When analyzing the results, it was determined that the academic career path model could be effectively described using three (vs. the original five) job levels. The final three levels included individual contributor (assistant and associate professor), expert individual contributor (full professor), and managerial (e.g., department chair, dean, vice president, provost, president). Although we left the five original levels in the survey, we collapsed across levels because (a) the interviews indicated that these levels were more appropriate for this practice area, and (b) the sample sizes in the survey were too small to result in meaningful analyses, especially in managerial levels.

The interviews and the survey data revealed that academia did not have one clear career path. The progression from individual contributor to expert individual contributor was often the progression that academics first followed. However, from there, some academics moved up to a managerial position and continued to stay in a managerial position until retirement or leaving the school. Others moved into a managerial position for a few years before returning to an individual contributor or expert individual contributor position. Still others moved back and forth between the two levels or even held two positions (e.g., full professor and department chair) concurrently. Finally, some remained as a full professor and never pursued a mana-
gerial position. Thus, the academia career path was often set around the individual’s ultimate career goals, or the needs and/or rules of the university (e.g., needing a department chair; unable to move into an administrative position beyond department chair), rather than following a set linear career path.

**Competencies**

Means and standard deviations, and where learned information for all competencies appear in Appendix B [www.siop.org/TIP/Jan15/appendices](http://www.siop.org/TIP/Jan15/appendices). Top-10 competencies necessary for success within each level and the top-five academic competencies aggregated across all three levels are listed in Table 1.

Although we reported the top-10 competencies within each level, participants only rated a few of the competencies above a mean average of 4.00 (i.e., very important) especially within the individual contributor level. We did find that there were many differences in importance of certain competencies across career paths. For in-

![Figure 1: Academia career path.](image)

**Table 1**

Top-Ten Competencies for Each Level Within Academia and Top-Five Competencies Across Levels

<table>
<thead>
<tr>
<th>Individual contributor</th>
<th>Expert individual contributor</th>
<th>manager/manager of managers/executive</th>
<th>Overall top five competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Integrity*</td>
<td>4T. Ethical behavior*</td>
<td>4T. Communication: Verbal*</td>
<td>4. Integrity 4.48 .71</td>
</tr>
<tr>
<td>5. Ethical behavior*</td>
<td>4T. Integrity*</td>
<td>4T. Trustworthiness*</td>
<td>5. Ethical behavior 4.47 .75</td>
</tr>
<tr>
<td>7. Disciplinary competence*</td>
<td>7. Creative thinking*</td>
<td>7. Communication: Written\b</td>
<td></td>
</tr>
<tr>
<td>10T. Attention to detail*</td>
<td>10. Energy</td>
<td>10. Administrative skills</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** individual contributor = assistant professors and associate professors; expert individual contributor = full professors, manager/manager of managers/executive = department chair, dean, vice president, provost, president. T indicates same means. Superscripts indicate differences for the same competencies across the levels (e.g., Communication: Written compared across individual contributor, expert individual contributor, manager/manager of managers/Executive).
stance, although written communication was rated in the top-10 across all three levels, it was significantly more important for individual contributors and expert individual contributors than for those in a managerial position, $F(2, 388) = 7.97, p < .001$. Further differences can be found in Table 1. Both the individual contributor and expert individual contributor levels had no significant differences in ratings of importance, which was expected as they both hold the title of professor.

The rankings of the critical competencies changed slightly as one moved into the managerial role, as new duties required additional leadership and administrative skills. For instance, creative thinking, research ability, disciplinary competence, and teaching ability fall out of the top 10, underscoring the shift in the nature of individual contributor and managerial roles. In turn, integrity, fairness, and ethical behavior become the top three most important competencies necessary for success once one moves into a managerial role.

Participants’ responses varied on where they developed proficiency for the competencies. Interestingly, many marked “N/A” throughout the list of competencies, especially for competencies that are more innate and personality related, such as compassion, empathy, energy, and enthusiasm. Other competencies were marked as “N/A” for individual contributors and

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Top-Ten Critical Experiences for Each Level Within Academia and Top-Five Critical Experiences Across Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top critical experiences</strong></td>
<td><strong>Manager/manager of managers/Executive</strong></td>
</tr>
<tr>
<td>Individual contributor</td>
<td>Expert individual contributor</td>
</tr>
<tr>
<td>1. Publish articles in field of expertise $^a$</td>
<td>1. Design and conduct studies $^a$</td>
</tr>
<tr>
<td>2. Design and conduct studies $^a$</td>
<td>2. Publish articles in field of expertise $^a$</td>
</tr>
<tr>
<td>3. Balance research, teaching, and service effectively $^a$</td>
<td>3. Maintain successful running of department (e.g., classes offered; department respected across campus)</td>
</tr>
<tr>
<td>4. Effectively manage class discussions, creating assignments, tests, quizzes, or papers, and grading course work $^a$</td>
<td>4. Provide service to the college</td>
</tr>
<tr>
<td>5. Deliver engaging lectures $^a$</td>
<td>5. Effectively manage class discussions, creating assignments, tests, quizzes, or papers, and grading course work $^a$</td>
</tr>
<tr>
<td>7. Use different types of analytical methods (e.g., Structural Equation Modeling, Hierarchical Linear Modeling, Multiple Regression, ANOVAs)</td>
<td>7. Provide career advice and other professional guidance to students</td>
</tr>
<tr>
<td>8. Use different types of analytical software (e.g., SPSS, Mplus, SAS)</td>
<td>8. Provide research experiences to students</td>
</tr>
</tbody>
</table>

Note: individual contributor = assistant professors and associate professors; expert individual contributor = full professors, manager/manager of managers/executive = department chair, dean, vice president, provost, president. T indicates same means. Superscripts indicate differences for the same experiences across the levels (e.g., “Design and conduct studies” compared across individual contributor, expert individual contributor, manager/manager of managers/executive).
expert individual contributors but were indicated as learned through structured training by managers (e.g., financial acumen). This difference could also be due to the relative importance of the competencies for each level, as financial acumen was rated as more important for success by managers than individual contributors or expert individual contributors. Thus, such competencies not required for success may have not yet been learned.

**Critical Experiences**

Means and standard deviations for all critical experiences appear in Appendix C (www.siop.org/TIP/Jan15/appendices). The top-10 critical experiences for success in academia at each level, and the top-five critical experiences for success in academic positions across levels are listed in Table 2.

Similar to the academia competencies, many of the experiences for individual contributors and expert individual contributors were not significantly different from one another. For instance, the ANOVA for “design and conduct studies” was significant, $F(2, 352) = 6.28, p < .01$, but the factor driving the significance were the ratings from those in managerial positions. Thus, the differences occur in the critical experiences that do not overlap between the two individual contributor levels (e.g., “Use different types of analytical software,” and “Provide career advice and other professional guidance to students”).

The critical experiences necessary for success were markedly more different when one moved from individual contributor positions into a managerial position. In fact, there were no overlapping experiences between managers and either of the individual contributor levels. For instance, the experiences necessary for success at the manager level included management of various areas (e.g. performance of faculty, performance of employees, liaison between faculty and administration), whereas (a) designing and conducting studies, (b) publishing research, and (c) balancing research, teaching, and service were more important for success in individual contributor and expert individual contributor roles.

**Final Career Path Models and Future Directions**

Results from the Interviews and the Careers Study survey indicated that academia careers can be captured and described using three levels: individual contributor, expert individual contributor, and managers. Furthermore, the career path of an academic is not necessarily linear, as academics can move from individual contributor positions into manager positions before moving back into individual contributor positions. The top-10 competencies differed across career levels, with individual contributor and expert individual contributor positions requiring research ability and teaching ability, whereas managerial positions required leadership and administrative skills. The top-10 experiences differed across career levels as well, with publishing articles and designing and conducting studies being important for individual contributors and expert individual contributor, and demonstrating effective administration or successful department operation was critical for managers.
These findings could have implications for describing academia career paths and for considering the ongoing education of academics by graduate schools, employers, and professional organizations. Specifically, we noticed a pattern across levels in where skills were learned. The technical competencies (e.g., written communication) needed for individual contributor positions were often reported as being learned in graduate school, whereas nontechnical competencies (e.g., leadership) required for manager positions were often marked as being learned on the job rather than in training or graduate school. This suggests the opportunity for more formal development opportunities to help prepare I-O psychologists for a broader range of career roles, as well as opportunities for graduate schools and/or professional organizations to consider their roles in helping to provide this expanded education.

With regard to training technical competencies in prospective academics, graduate programs typically have a curriculum in place that emphasizes research ability and teaching ability. However, graduate programs can also focus on providing experiences that can help students develop nontechnical competencies that are particularly important for the managerial track. For example, working in collaborative research groups could help develop collaboration, leadership, and trustworthiness competencies along with research ability and written communication skills. Other nontechnical competencies such as integrity and ethical behavior can continue to be emphasized within the current curriculum to better prepare students for a broader range of jobs in academia.

With regard to on the job experiences or training, some of the nontechnical competencies could be trained through programs put into place by an individual’s workplace employer to help ease the transition between the individual contributor and the manager levels. For instance, the university or college could help build mentoring or shadowing programs for those interested in and/or those who have been identified as moving into administrative positions.

Similar types of formal learning programs might also be offered by professional organizations. In recent years SIOP has initiated mentoring programs for those interested in learning about a broad range of issues facing practitioners, and at the 2014 Annual Conference a speed mentoring session was offered for researchers and academics interested in obtaining research funding. Expanding these types of initiatives to further cover other nontechnical competencies needed to help prepare academics for administrative/managerial positions might be an avenue for professional organizations to consider.

Results from this study could help people determine if the academic career path (especially the administrative/managerial positions) is a good fit for them. Service, administration, and managing performance all become main aspects of a job in academia, which many people considering careers in academia could weigh in their career choices. This study also lists competencies and critical experiences necessary for success at different levels that can help direct the career paths of those who are already involved in academic roles.
or who are looking for additional career opportunities in academia. In particular, the study highlights that a move into a management position will require a shift in competencies and experiences, moving away from research, teaching, and creative thinking and more into administrative and managerial activities. Individuals might consider these factors against their own competencies, values, and interests before deciding to make a career move into a managerial position. Similarly, looking for opportunities to develop managerial skills, even when in individual contributor roles, could help individuals prepare for success in a managerial position.

We recognize that this study only captures the basic career path moves for academia as a whole. Future research should investigate the differences between academic employment in teaching-oriented and research-oriented schools, as well as business versus psychology programs. As noted in the interviews, each combination of teaching/research-oriented and psychology/business schools may have different competencies and critical experiences necessary for success. Conducting a longitudinal study would also help capture whether the nonlinear nature of the academia career path has implications for competency maintenance. That is, if someone is serving a 3- to 4-year chair or assistant dean appointment and is unable to teach or conduct research during that time, yet will be moving back into an expert individual contributor role upon completion of their appointment, it may be more important for these people to focus on maintaining those research and teaching skills.

References


