
Solutions in Search of the Problem: Innovation, Flexibility, and Graduate Education

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In this article, we focus on three concerns with the Byrne et al. (2014) piece on graduate education. First, Byrne et al. do not clearly identify the nature of the problem based on an adequate needs assessment prior to giving their solutions. Second, the solutions they suggest will create systems that quash rather than enhance graduate training innovation and flexibility. Third, there is no recognition that graduate training programs are open systems that continue to evolve and improve over time to address

changing needs as they are occurring. We also provide concluding comments regarding organizational realities that must also be taken into account when prescribing solutions.

The Nature of the Problem: Need for a Needs Assessment

Organizational psychology is a data driven field. We pride ourselves on recommending or taking action on an organizational problem only after an adequate needs assessment has been conducted (Goldstein & Ford, 2002). Byrne et al. provide a number of solutions for the future of graduate training, but little in the way of data from a comprehensive needs assessment in order to determine what the

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“problem is” that the solutions they are proposing are trying to solve. Byrne et al. note that graduate training needs to change to ensure students are better prepared and competitive for a shifting employment marketplace. Yet, no data are provided and few citations are given as to best evidence to support assertions regarding the nature of this “need.” Although it is unlikely that anyone would quibble that the marketplace is always shifting, assumptions in the article made regarding the nature of the shifts are not based on the type of data one should have before proposing large-scale changes in graduate education.

Data are needed to determine where the market is shifting (consulting firms, internal HR positions, governmental positions) and what is shifting (what knowledge and skills are becoming more or less important). Byrne et al. suggest certified internships and postdocs cover “areas we note as relevant and in some areas lacking in the SIOG *Guidelines*” (p. 4, emphasis added), but do not provide any data to support that these are relevant competencies that are lacking in graduate training. A basic level of data would be a SIOG survey on the employability of recent PhD students and where they are working. No data are presented on what employers want and no data are presented to support the notion that graduates are not finding jobs due to an inadequacy in the competencies they have accumulated through graduate school. Yet, this type of data could aid in understanding if there is a problem with students becoming employed (how long it takes to locate a job, what types of jobs are obtained, salary levels). Then one could conduct a root cause analysis to understand where the problem of employability is located (e.g., certain regions, or certain types of programs). In addition, job analyses for the jobs where recent PhDs have been hired (as well as jobs where organizational psychology PhDs applied but have not been hired because they were found to be lacking relevant competencies) could provide a picture of the types of skills that the market is demanding of new PhD psychologists.

Surveys could be conducted by SIOG that focus on satisfaction of managers with new hires and suggestions from them on competencies needed in newly minted PhDs. Focus groups could be held by SIOG with a diverse set of practitioners from public, private, and governmental sectors to provide specific data on the shifting demand for skills of new PhDs in our field and to predict future needs 5–10 years out. Rather than assuming, as Byrne et al. do, that topics such as individual assessments are critical competency areas for most new hires, relevant data should be collected to determine the nature of the problem.

Advancing Innovation Versus Ensnoring the Status Quo

The certification pathway proposed by Byrne et al. is highly likely to stifle innovation and runs contrary to what we know about effective institutional strategies. Indeed, its failure as an institutional strategy is well established by other disciplines. Key goals of scientific inquiry are to generate new knowledge and advance understanding. These are also hallmarks of effective graduate education. Science advances by—yes—building on accumulated wisdom but by also (and importantly) probing beyond what we know to explore the unknown. It seeks to innovate and adapt, not merely replicate and exploit. In contrast, the approach proposed by Byrne et al.—certification—ensnares the status quo. It is about stability rather than flexibility. It looks backward rather than forward. It sets the bar low rather than high.

We assert that organizational psychology needs to more innovative and adaptive, broadly relevant to society, organizations, and other disciplines of inquiry. Innovation and adaptability are key to our unique identity as a profession (Ryan & Ford, 2010). The world is rapidly networking and increasingly digital in the 21st century. The nature of work and organizations is evolving. Organizational psychology needs to be probing the frontiers of theory, methods,

and practice to build alternative models of work and organizations as they will be, not as they were. Cascio and Aguinis (2008) content analyzed 5,780 articles across 45 years (1963–2007) published in *Personnel Psychology* and the *Journal of Applied Psychology* to evaluate trends. Among other conclusions, they expressed a pivotal concern that organizational psychology was not innovative enough: “if we extrapolate past emphases in published research to the next 10 years, we are confronted with one compelling conclusion, namely, that industrial–organizational psychology will not be out front in influencing the debate on issues that are (or will be) of broad organizational and societal appeal” (p. 1074).

We know from the organizational strategy and design literatures that “defender” strategies can only be effective so long as the environment is stable (Miles, Snow, Meyer, & Coleman, 1978). It is not stable. A changing environment necessitates an “innovator” strategy predicated on flexible, decentralized structures (vs. centralized), and process mechanisms (Zahara & George, 2002) and human resource strategies that unlock motivation, abilities, and creativity (Ployhart & Moliterno, 2011; Snow & Snell, 2012).

Innovation also necessitates access to new ideas, research methods, and techniques; it necessitates bridging structural holes in knowledge networks, not tightening network boundaries (Burt, 2004). Similarly, the trends in “big” science are focused on multidisciplinary—to bridge knowledge across dissimilar discipline networks—and translational science—translating and implementing innovative findings into practice (Zerhouni, 2005). These are inherently outward-looking efforts (Kozlowski, 2012). In contrast, certification is inward focused and parochial. Moreover, innovation and translation need to be timely—to move from knowledge generation to implementation and application quickly. They need to be incorporated into the graduate curriculum directly without having to navigate a protracted institutional effort to

achieve consensus. Faculty need to have the flexibility to innovate, implement, and translate new theories, research methods, and findings into the graduate curriculum.

Finally, certification is the first step on the slippery slope toward accreditation. Certification sets minimal standards. In that sense, it provides cover for weak curricula and hobbles graduate training. It stifles innovation. And, it limits practice. Anyone familiar with our sister discipline of clinical psychology will well appreciate the many problems that accrue when guild interests overwhelm academic and scientific values in the governance of the graduate curriculum. SIOP has dabbled with this concept of certification on and off in the past, and, thankfully, it has always fallen by the wayside on closer examination. This is not a direction that we think organizational psychology should go.

Continuous Evolution of Graduate Training

Another troubling assumption underlying the suggestions of Byrne et al. is that PhD programs are not changing over time to address changing realities of employment. In our experiences with one leading program (each of us with over 17 years at that program) as well as in our numerous, frequent exchanges with colleagues at many peer institutions within the United States and around the globe, this is not a correct assumption. We know that faculty go to numerous and varied conferences, read journals and the popular business press, and are engaged with their local business communities to stay current with changing workplace issues. We know from participating in various benchmarking efforts, as well as conducting them ourselves, that graduate programs are continually being renewed, refined, and updated, both across curricula as well as in individual courses (e.g., exchange of syllabi, emails, and discussions regarding how one teaches an emerging area). In the next few paragraphs, we provide examples of responsiveness to a changing environment in the specific

areas mentioned by Byrne et al. as lacking in graduate education.

In terms of the specific issue of remaining relevant to practice, we have alumni in various types of organizations with whom we stay connected to inform us about their job duties and their impressions of new PhD students. We engage in cutting-edge research funded by agencies that are probing the frontiers of knowledge regarding organizational, team, and individual effectiveness. In addition, we do consulting work in industry and thus have a finger on the pulse of what types of projects and needs organizations have. On the basis of input from these various sources on what we are doing well, where the frontiers of science and practice are, and where we could improve, we regularly revamp our curriculum and individual course objectives and focus our efforts to provide students with a high quality experience that prepare them for work as a practitioner or as an academic. Although the data we have regarding what other programs do in this regard is less systematic and more anecdotal, we know that other programs make similar efforts.

To provide some specifics on our current, recently revised curriculum, we have worked to more clearly track breadth and depth that students are gaining about our field while in graduate school. The areas we now focus on include (a) motivation, learning, and performance; (b) individual differences and assessment; (c) developing others; (d) systems and levels; (e) the cultural context; (f) work attitudes and well being; (g) analytic and research design; (h) professional skills; and (i) work relationships, leadership, and social influence. We have also changed our comprehensive exam process to explicitly cover both knowledge of the field broadly as well as individual demonstration of depth of knowledge relevant to student's own emerging interests. A number of years ago we changed our mentoring process to focus students' attention to what competencies they are accumulating over time in our graduate program and to allow for greater self-management and crafting of

developmental experiences in line with an individual's chosen career trajectory. We provide feedback to students as to what they need to do to develop. These competency areas include (a) self regulation, (b) project management, (c) oral communication skills, (d) written communication skills, (e) working with others, (f) managing external relationships (with clients, stakeholders), (g) developing and mentoring others, and (h) building organizational capacity. As can be seen from this list, the focus on competency development is relevant for students going applied as well as those focusing on academia.

Of note, Byrne et al. seem to see competencies as taught only in class or acquired during an internship. Yet, a graduate student at any well-organized PhD program is engaged in learning through a variety of means—research projects, applied projects, attending and giving talks, discussions, independent study, teaching classes, and assistantships. In addition, although we give the specific example of our curriculum at MSU, we know from our own benchmarking studies that other programs have similarly worked to revise their curricula to meet changing needs.

Specific to Byrne et al.'s contentions regarding a lack of skill development in practitioner-oriented areas, several years ago we added a professional skills class to our PhD curriculum to specifically focus on consulting competencies (e.g., organizational diagnosis, influencing others, contracting, presenting effective talks to corporate audiences). Within the course, students are provided with multiple opportunities to practice these skills in "real settings" with partner organizations (e.g., creating a white paper and delivering presentations on targeted topics specified as critical business needs by the partner [e.g., best practices in recruiting using social media]), conducting focus groups on topics identified by the organization (e.g., how to improve well being) and with individual alumni (e.g., serving as role-playing hard-nosed clients). Beyond the one course, applied skills development is part of many

other courses (e.g., in the most recent selection course, students worked on job analyses, selection tool design, transportability studies, review of diversity initiatives in hiring, and other applied projects; in our workplace training and development seminar, students developed a training program for an organization that included conducting a needs assessment, developing training objectives, designing the program incorporating key learning principles, and determining an evaluation strategy). Applied skills are also gained via specific applied research projects completed with faculty members. For example, we have annual opportunities with partner organizations for students to design, administer, report on, and present to top executives an employee attitude survey and to take charge of a 360 feedback process for top-tier management; other current projects include validation efforts, an analysis of applicant feedback to improve recruitment and hiring efforts, an analysis of the relationship of a wellness program to organizational outcomes, conducting interviews on stakeholder engagement, and the list goes on. Once again, although our examples are from what we do at Michigan State University, we know other programs have other variants in coursework, requirements, and activities that are aimed at development of similar types of competencies.

Specific to Byrne et al.'s emphasis on counterproductive behavior and also to the lack of documented ethics training, ethics training is a core part of any respectable graduate program. We note that ethics encompasses much more than the examples of counterproductivity that Byrne et al. point out. Due to NSF requirements on responsible conduct of research (<http://www.nsf.gov/bfa/dias/policy/rcr.jsp>), most universities have implemented specific ethics training requirements that are documented for graduate students. For example, at Michigan State University, beyond the usual Institutional Review Board ethics training, our organizational psychology students must complete a certain number of hours each year of

in-person workshops, online courses, or selected independent readings specifically focused on ethics. On the applied side, ethical issues are covered in detail in many of our courses (e.g., professional issues, organizational development, selection, and diversity). SIOP certainly has a role to play in promoting ethical research activities and ethical practice, and could provide greater online resources for graduate student training, particularly given the increased funder requirements for graduate student training in responsible conduct of research.

Specific to Byrne et al.'s suggestions regarding lack of skills for academic positions, in addition to what one considers "traditional" research training (e.g., coursework, and project work involving research design, analysis, presenting, publishing), there is much greater preparation for the teaching role in today's graduate environment than what may have occurred in the past. For example, one of us teaches a course on "Teaching of Psychology" each year for graduate students prior to the student teaching a face-to-face course. This course provides guidance on course design, active learning strategies, assessment guidelines, and how to handle student issues. Each graduate instructor is then observed in the classroom by the faculty member and provided with written and oral feedback on how to improve his/her teaching. Recent NSF funding to improve instructor training in the sciences has led to an explosion in available resources for graduate student skill improvement. For example, at Michigan State, there are a number of resources available specifically geared toward helping graduate students learn how to teach (<http://grad.vudat.msu.edu/teaching>): the Certification in College Teaching (<http://grad.msu.edu/collegeteaching/>) which is available at many other institutions, online courses on teaching in higher education (<http://grad.msu.edu/TECHE/>), multiday institutes focused on specific pedagogical skills development for graduate students (<http://grad.vudat.msu.edu/teaching/pff/>),

stand-alone workshops throughout the year (e.g., assessment design, developing a teaching portfolio, teaching large lecture sections), teaching assistant training, and a plethora of online resources on instruction (<http://fod.msu.edu/oir/online-instructional-resources>). We wish to emphasize again that although we are describing what is available for graduate student development at our institution, we know that many of these efforts are cross-institution collaborations, and many resources are accessible via the Internet. SIOP also can play a role in promoting graduate student skill development by offering specific workshops geared to graduate students on developing their competencies as instructors.

The other faculty "role" that has shifted over time and has thus been a shifting emphasis in our curriculum is funding one's research. Although graduate students are not at a career stage where they are able (or should spend too much time) on pursuing major federal grant opportunities, they do have the opportunity to be exposed to the process of grant writing and grants management occur (e.g., through mentorship by those with large grants, through brown bags on the grant writing process, through course assignments requiring writing a grant proposal for a funder rather than a generic research proposal), and students are encouraged to engage in seeking funding at an appropriate level (e.g., through SIOP and APA, and SHRM funding opportunities; through NSF and other fellowships).

There are other areas that our environmental monitoring efforts tell us need to be enhanced in graduate training that may be tough for many programs to tackle. One that we are working on is providing students with international experiences. Although we have had student exchanges for research assistantships and internships in France, Vietnam, and Singapore; have hosted Fulbright scholars from a number of countries; and encourage students to attend international conferences; we still seek ways to flex our curriculum and to find funding so that students can get a global perspective on organizational psychology. SIOP could play

an important role in helping graduate programs in this area by providing scholarships for international exchange experiences at the graduate student level.

In summary, our role as graduate educators encompasses scanning the environment, recognizing trends, and adapting what we teach and the types of experiences we can offer our students. We believe that many of our peers at other institutions are engaged in similar efforts. Thus, we wonder why Byrne et al. assert that graduate training is not forward thinking.

A Final Concern: Organizational Realities

One final concern with Byrne et al.'s piece that we wish to briefly mention is that the context is not considered adequately in the proposed "solutions." In organizational diagnosis and needs assessment, there is an emphasis on ensuring one has a full understanding of the context and the practical constraints one faces in a particular intervention effort (e.g., monetary and personnel resources, time constraints). Byrne et al. do not provide any discussion of current budgetary and personnel resource issues facing graduate programs (which loom large for many institutions) or provide any suggestions on how to deal with these difficult realities. Disregarding these realities in implementing certification would lead to a high probability of failure. We briefly want to point out a number of contextual issues that are concerns:

- Who pays for the type of post-doc proposed? Postdocs are typically connected to specific grants, and therefore the postdoc holder has a defined set of job duties. SIOP standards and "seal of approval" are not meaningful, as the nature of the postdoc is typically driven by the specifications of the funded project and/or the funder for training grants. The proposal also makes an assumption that there are enough funded projects for the

number of postdocs that would be needed. In today's challenging climate for obtaining grants, we and our peers are focused on funding our own graduate students through grants to ensure continuity of our programs. Postdocs are costly and would thus take away sorely needed funding for graduate students.

- Why would individuals take on postdoc positions when they are generally not needed to obtain initial professional positions? Certainly they can play a critical role in broadening and deepening skills for a particular student's goals, but they are by no means universally required. Given the number of job ads that come our way as well as the solid employment rate for our graduates into initial academic positions, we only have evidence to suggest that students have no need to take on a lower wage, temporary position when they can immediately move into a higher wage job. (However, note neither we nor Byrne et al. provide any market data on this issue.) Post-docs often arise in fields with a small number of jobs relative to the number of applicants and work well in scientific fields that have large need for "bench" scientists who can be funded through large and ongoing grants.
- Why would corporations go through the extra effort of certifying internships for organizational psychology students when they do not need to for any other type of intern? These business realities would seem to dictate a move away from hiring organizational psychology students in favor of others, given that many internship positions are not limited to a certain type of degree or background. We know our students already compete with and work with interns with training in human resources, labor relations, sociology, anthropology, economics, and other fields. In addition, our students' experiences with internships

have been almost universally positive. Feedback from our own students helps us as faculty know how to mentor students away from any internship that is not a great experience.

In summary, Byrne et al. do us a service in reminding us of the need to continually think about and update graduate training to meet a changing world. They do a disservice in providing solutions without defining the problem, proffering suggestions that stifle rather than enhance innovation and do not consider the contextual realities, and assuming deficiencies without documenting what really is going on in graduate training.

References

- Burt, R. S. (2004). Structural holes and good ideas. *The American Journal of Sociology*, 110, 349–399.
- Byrne, Z. S., Hayes, T. L., McPhail, S. M., Hakel, M. D., Cortina, J. M., & McHenry, J. J. (2014). Educating industrial–organizational psychologists for science and practice: Where do we go from here? *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 7(1), 2–14.
- Cascio, W. F., & Aguinis, H. (2008). Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *Journal of Applied Psychology*, 93, 1062–1081.
- Goldstein, I., & Ford, J. K. (2002). *Training in organizations* (4th ed.). Belmont, CA: Wadsworth.
- Kozlowski, S. W. J. (2012). On the horizon. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology* (pp. 1385–1389). New York, NY: Oxford University Press.
- Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, 3, 546–562.
- Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36, 127–150.
- Ryan, A. M., & Ford, J. K. (2010). Organizational psychology and the tipping point of professional identity. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 3, 241–258.
- Snow, C. C., & Snell, S. A. (2012). Strategic human resource management. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology* (pp. 993–1008). New York, NY: Oxford University Press.
- Zahara, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27, 185–203.
- Zerhouni, E. A. (2005). Translational and clinical science – Time for a new vision. *The New England Journal of Medicine*, 353, 1621–1623.