

Using Scientific Research and Best Practices to Drive Competency-Based Solutions

**Blaine Gaddis
&
Steve Nichols**

Hogan Assessment Systems

This paper presents information for a SIOP Panel Discussion on Competencies accepted for the 2015 conference.



THE SCIENCE OF PERSONALITY

Session Abstract

A majority of top Fortune companies use competency models to drive their talent management systems. As such, one would expect Industrial/Organizational Psychologists to be heavily involved in developing, implementing, and managing these programs, but such is often not the case. Instead, business applications continue to expand, while debate continues about how to define scientific best practices. In short, scientific research on competencies is lagging behind business practices. This panel brings professionals together across academic, applied, and internal contexts to explore how we can reverse this trend and more effectively use scientific research and best practices to inform competency-based business solutions.

Session Summary

A recent estimate found that 70 – 80% of Fortune 500 companies use talent management systems, nearly all of which use competencies for performance management. This figure climbs even higher for Fortune 100 companies, where estimates place the use of competency models above 80% (PeopleFluent, 2012; Stone, Webster, & Schoonover, 2013). One might expect, therefore, that I/O psychologists are heavily involved in developing, implementing, administering, and maintaining these systems. Unfortunately, this is often not the case.

Instead, business application of competencies have outpaced scientific research to the point that, by the mid-1990s, “nobody had a clear sense of what was going on” (Schippmann, 2010; p. 204). Even now, data-based evaluations of competency models remain sparse and often dated (Rathbar-Daniels, Erickson, & Dalik, 2001; Schoonover, Schoonover, Nemerov, & Ehly, 2000). Controversy remains about even basic issues such as how to define “competency” and how to scientifically develop a competency model (Campion et al., 2011; Sanchez & Levine, 2009). In short, the I/O community has far too long allowed the tail to wag the dog with respect to competencies. As such, the goal of this panel is to explore how I/O professionals working across academic, applied, and internal contexts can work together to drive a more scientific and research-grounded approach to using competencies in organizations.

Due to factors such as globalization, technological innovation, and continuous changes to work processes and structure, traditional job analysis may not be as useful as it once was for human capital interventions (Barnes-Nelson, 1996; Olian & Rynes, 1991; Sanchez, 1994). Although businesses continue to use job analysis to describe work activities, many have also developed custom competency models to identify common performance themes across jobs, work groups, and divisions (Schippmann et al., 2000). Competencies provide a common framework practitioners can use to drive a variety of HRM applications including selection, development, succession planning, strategy and change initiatives (Cook & Bernthal, 1998; Schippmann, 2010).

In a seminal article, McClelland (1973) contended that aptitude tests, almost universally used to predict performance, do not serve their intended purpose particularly well and are prone to cultural biases. He also noted that other traditional measures, such as examination results and references, are equally poor at predicting success on the job. Instead, McClelland suggested that

individual competence, rather than intelligence, might provide a more promising avenue for forecasting effectiveness.

As the popularity of competencies grew, so did their applications in solving human capital issues. The 1980s witnessed an expansion in competency applications for predicting long-term success in managerial jobs (McClelland & Boyatzis, 1982) and determining characteristics that facilitate leadership across roles (Boyatzis, 1982). In turn, these led to the development of competency-based selection tools such as behavioral event interviews (Boyatzis, 1994; McClelland, 1998; Spencer, McClelland, & Spencer, 1994). These advances provided the catalyst for development of job-specific competency models in high-level management and leadership positions (Hollenbeck, McCall, & Silzer, 2006), as well the selection and development of high potential individuals (McClelland, 1994). Competency models have also been incorporated into job analysis instruments to identify the characteristics required for success in various jobs under study (McLagan, 1997).

Most recently, competencies have been applied in areas such as emotional intelligence (Boyatzis, 2007; Boyatzis & Sala, 2004), coaching (Boyatzis, 2006), and linking performance to intelligence and personality (Heinsman, de Hoogh, Koopman, & van Muijen, 2007). In sum, over the last 40 years, competencies have appeared across a number of contexts where the fundamental question involves identifying individuals who possess the underlying characteristics likely to lead them to success (Boyatzis, Stubbs, & Taylor, 2002; Rubin et al, 2007; Spencer & Spencer, 1993).

Panel Discussion Summary

There have been a number of SIOP presentations on competencies in recent years. For the most part, these sessions have focused on (a) developing competency models for specific job types or organizations, (b) predicting competency-based behaviors using a variety of measures, or (c) using competencies to align multiple organizational functions, such as selection, development, and training. However, because research in our field often follows behind business practices (Cascio & Aguinis, 2008), these sessions have largely focused on how science can *assist* business instead of how proper research can *drive* business efforts. With this panel, our goal is to explore how to reverse this trend.

For example, unlike the job analysis methods they often replace, many applications of competency models lack scientific rigor. As such, panel members will discuss the reliability, validity, and legal defensibility of competency modeling methods. They will outline potentially rigorous procedures for developing and using competencies and discuss the variability in standards of practice for competency modeling. This will include practices for updating competency models to ensure their continued relevance, obtaining buy-in from organizational stakeholders, and examining differences in the level of detail covered within a model. For example, whereas one competency model may include “Interpersonal Skills,” another may break this up into multiple competencies such as “Influence,” “Communication,” “Presentation Skills,” “Persuasion,” and “Sensitivity” as separate competencies. Panelists will discuss how to address and overcome these challenges in applied practice across contexts.

The panel will include the following discussants and chair, representing academic, applied, and internal functions:

Dr. Blaine Gaddis serves as Senior Manager of Product Research for Hogan Assessment Systems where he has worked since 2007. He is responsible for maintaining existing assessments, developing new solutions, and assessment- and competency-based selection and development research for global clients. Dr. Gaddis previously worked for a Dallas-based consulting firm where he conducted job analyses and competency modeling efforts for job family redesign, training improvements, and modifications to selection systems and development initiatives. He earned his Ph.D. in Industrial/Organizational Psychology from the University of Oklahoma, where he managed funded research contracts with the Department of Defense and the National Institutes of Health.

Dr. April Cantwell serves as Vice President of Consulting Services at FurstPerson. In this role, she oversees consulting services such as those related to job analyses, competency modeling, validation studies, and leadership development offerings. Before coming to FurstPerson, April directed talent management consulting services at pan (Performance Assessment Network), was a consultant to the National O*NET Center project, worked as an executive educator for NC State University's Executive Education program, and developed an independent consulting practice. April has served as a subject matter expert to organizations such as the Center for Innovation Management Studies (CIMS) and the Industrial Research Institute (IRI) on topics related to research methodology, organizational culture, innovation, and organizational development. April earned her degree in Industrial/Organizational Psychology from North Carolina State University.

Mr. Steve Nichols is the Manager of International Research at Hogan Assessment Systems. His work primarily centers on providing general research support for Hogan's international partners and distributors. In his time at Hogan, Steve has conducted over 50 validity generalization and criterion studies representing a wide range of industries, organizations, and jobs around the world. He has developed and updated numerous international norms and facilitated the translation and maintenance of over 40 adaptations of the Hogan assessments. His experience has facilitated collaborations with researchers and consultants from over 50 countries across every continent. Steve received his M.S. in Industrial/Organizational Psychology from Missouri State University.

Dr. Juan Sanchez is a Professor of Management and International Business and the Knight-Ridder Byron Harless Eminent Chair of Management at Florida International University. He has served as an elected member of the Academy of Management's Human Resource Division Executive Committee, and is an APA and SIOP Fellow. His research has received awards from the International Personnel Management Association and the National Society for Performance and Instruction. He serves on advisory boards for HRMC, based in Florida, and SkillsNet, based in Texas. He is a Public Member of the U.S. State Department's Board of Examiners of the Foreign Service, and a former advisor of the U.S. Social Security Administration's Occupational Information Advisory Panel. Dr. Sanchez has published approximately 20 book chapters and 100 articles in refereed journals including the *Academy of Management Journal*, *Journal of Applied Psychology*, *Personnel Psychology*, *Journal of Organizational Behavior*, and *Journal of*

International Business Studies. He has also served as associate editor for the *Journal of Occupational and Organizational Psychology*, and on the editorial boards of the *Journal of Applied Psychology*, *Personnel Psychology*, *Group and Organization Management*, and the *International Journal of Selection and Assessment*. Dr. Sanchez occasionally serves as an expert witness in cases involving human resource management disputes, and has consulted with multiple organizations in the U.S., Latin America, and Europe. He has also consulted with government agencies such as the National Academy of Sciences, the Federal Aviation Administration, the U.S. Army, the U.S. Department of Labor, and the Veterans Administration.

Dr. Tom Stone is a Full Professor in the Department of Management at Oklahoma State University, where he teaches courses on organizational behavior, Human Resource Management, and performance management among other topics. Prior to his work at Oklahoma State, he served on the faculties of the University of Iowa, McMaster University, York University, and the University of Texas. Tom earned his doctorate in Industrial/Organizational Psychology from the University of Minnesota. His research has appeared in journals including the *Journal of Applied Psychology*, *International Journal of Selection and Assessment*, *The Leadership Quarterly*, *Business and Psychology*, *Journal of Business Ethics*, *Basic and Applied Social Psychology*, *Psychological Reports*, *Career Development International*, and *Canadian Journal of Administrative Sciences*. Tom has served as Associate Editor for *Career Development International* since 2008, and is certified as a Senior Professional in Human Resources (SPHR).

Dr. Kari Strobel is the Director of HR Competencies for the Society for Human Resource Management (SHRM). In this role, she is responsible for overseeing key initiatives around professionalism and competencies to include the assessment and implementation of SHRM's Competency Model, and setting the research agenda for developing additional competency-based selection, assessment, performance management, and career-pathing tools. Prior to joining SHRM in 2013, Dr. Strobel worked at the Department of Defense where she was responsible for leading the development, assessment, and implementation of competencies for the total force. Kari has also been responsible for managing organizational development projects for the Chief of Naval Operations, Surface Warfare Enterprise and the Naval Mine and Anti-Submarine Warfare Command. With over 30 journal articles, technical reports, and national and international conference presentations, including published works in *Journal of Applied Psychology* and *Human Performance, Situation Awareness and Automation*, Dr. Strobel has received national recognition for her contributions to the field. She was the first recipient of the American Psychological Association Division 19 (Military Psychology) Research Award, and received Honorable Mention from the Virginia Academy of Science for her team performance research. As a consultant, she has worked with Hewlett Packard, Motorola, Royal Dutch Shell, Deutsche Bank, National Aeronautics and Space Administration, The United States Army, and the State of Virginia's Peninsula Aids Foundation. Dr. Strobel received her Doctor of Philosophy degree in Industrial-Organizational Psychology from Old Dominion University.

Panel Discussion Format

The chair will open the session with a five-minute introduction of the topic and the panelists. The remainder of the session will focus on addressing a list of questions the chair will present to the panel. Each panelist will have an opportunity to offer commentary on each question. The

chair will remain mindful of time constraints, ensuring that all panelists are given adequate time to respond, yet moving the discussion along as necessary to address all pertinent questions. Audience members will be encouraged to ask questions throughout the session. The list of questions will include the following:

1. Are the competency models with which you have worked based more on scientific research or business jargon and/or trends?
2. How do you address requests by organizations to help them evaluate the reliability, validity, and/or legal defensibility of their competency model?
3. How can I/O psychologists drive a more rigorous, evidence-based approach to using competencies in various phases of competency modeling, such as:
 - a. Identification of competencies based on reviews of extant competency taxonomies and organizational, strategic, and job factors
 - b. Communication and reporting of competencies in ways that impact employees
 - c. Considering group- and organizational-level factors when evaluating individuals on competencies
 - d. Developing evidence-based feedback practices to incorporate into competency evaluations
4. To what extent are competency-based solutions addressing McClelland's (1973) original goal of forecasting effective performance in a given role using culture-free dimensions?
5. How do you obtain organizational buy-in for using science instead of business to drive competency-related work? What difficulties do you face?
6. How can I/O psychologists influence a more consistent construct level with competencies?
7. How do you address or align programs and practices to create a standard language when different agencies use different competency models?
8. What emerging trends do you see in the science and practice of competencies?

References

- Barnes-Nelson, J. (1996). The boundaryless organization: Implications for job analysis, recruitment, and selection. *Human Resource Planning*, 20, 39 - 49.
- Boyatzis, R. E. (1982). *The Competent Manager: A Model for Effective Performance*. New York, N.Y.: Wiley.
- Boyatzis, R. E. (1994). Rendering unto competence the things that are competent. *American Psychologist*, 49, 64 - 66.
- Boyatzis, R. E. (2006). Core competencies in coaching others to overcome dysfunctional behavior. In R. E. Boyatzis, *Linking Emotional Intelligence and Performance at Work: Current Research Evidence with Individuals and Groups*. Mahwah, N.J.: Lawrence Erlbaum Associates Publishers.
- Boyatzis, R. E. (2007). Developing Emotional Intelligence competencies. In R. E. Boyatzis, *Applying Emotional Intelligence: A Practitioner's Guide*. New York, N.Y.: Psychology Press.
- Boyatzis, R. E., & Sala, F. (2004). The Emotional Competence Inventory (ECI). In G. Glenn (Ed.), *Measuring Emotional Intelligence: Common Ground and Controversy* (pp. 147 - 180). Hauppauge, N.Y.: Nova Science Publishers.
- Boyatzis, R. E., Stubbs, E. C., & Taylor, S. N. (2002). Learning cognitive and emotional intelligence competencies through graduate management education. *Academy of Management Learning and Education*, 1, 150 - 162.
- Campion, M., Fink, A., Rugeberg, B., Carr, L., Phillips, G., & Odman, R. (2011). Doing competencies well: Best practices in competency modeling. *Personnel Psychology*, 64, 225 - 262.
- 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.
- Cook, K. W., & Bernthal, P. (1998). Job/role competency practices survey report. Bridgeville, P.A.: DDI.
- Heinsman, H., de Hoogh, A. H. B., Koopman, P. L., & van Muijen, J. J. (2007). Competencies through the eyes of psychologists: A closer look at assessing competencies. *International Journal of Selection and Assessment*, 15, 412 - 427.
- Hollenbeck, G. P., McCall, M. W., & Silzer, R. F. (2006). Leadership competency models. *Leadership Quarterly*, 17, 398 - 413.

- McClelland, D. C. (1973). Testing for competence rather than for “intelligence.” *American Psychologist*, 28, 1 - 14.
- McClelland, D. C. (1994). The knowledge-testing-educational complex strikes back. *American Psychologist*, 49, 66 - 69.
- McClelland, D. C. (1998). Identifying competencies with behavioral-event interviews. *Psychological Science*, 9, 331 - 339.
- McClelland, D. C., & Boyatzis, R. E. (1982). Leadership motive pattern and long-term success in management. *Journal of Applied Psychology*, 67, 737 - 743.
- McLagan, P. (1997). Competencies: The next generation. *Training and Development*, 51, 40 – 47.
- Olian, J. D., & Rynes, S. L. (1991). Making total quality work: Aligning organizational processes, performance measures, and stakeholders. *Human Resource Management*, 30, 303 - 333.
- PeopleFluent (2012). About PeopleFluent. Retrieved from http://mktg.peoplefluent.com/rs/peopleclick/images/IDC_Marketscape_Integrated_2013.pdf
- Rathbar-Daniels, D., Erickson, M. & Dalik, A. (2001). Here to stay: Taking competencies to the next level. *Worldatwork Journal*, Q1, 70 - 77.
- Rubin, N. J., Bebeau, M., Leigh, I. W., Lichtenberg, J. W., Nelson, P. D., Portnoy, S., Smith, I. L., & Kaslow, N. J. (2007). The competency movement within psychology: An historical perspective. *Professional Psychology: Research and Practice*, 38, 452 - 462.
- Sanchez, J. I. (1994). From documentation to innovation: Reshaping job analysis to meet emerging business needs. *Human Resource Management Review*, 4, 51 - 74.
- Sanchez, J. & Levine, E. (2009). What is (or should be) the difference between competency modeling and traditional job analysis? *Human Resource Management Review*, 19, 53 - 63.
- Schippmann, J. S., Ash, R. A., Battista, M., Carr, L., Eyde, L. D., Hesketh, B., Kehoe, J.,...Sanchez, J. I. (2000). The practice of competency modeling. *Personnel Psychology*, 53, 703 - 740.
- Schippmann, J. S. (2010). Competencies, job analysis, and the next generation of modeling. In J. C. Scott & D. H. Reynolds (Eds.), *Handbook of workplace assessment* (pp.197 - 231). San Francisco: John Wiley & Sons.

- Schoonover, S., Schoonover, H., Nemerov, D., Ehly, C. (2000). *Competency-based HR applications: Results of a comprehensive survey*. Unpublished study.
- Spencer, L. M., McClelland, D. C., & Spencer, S. (1994). *Competency assessment methods: History and state of the art*. Boston: Hay-McBer Research Press.
- Spencer, L. M., & Spencer, S. M. (1993). *Competence at Work: Models for Superior Performance*. New York, NY: Wiley.
- Stone, T., Webster, B. D., & Schoonover, S. (2013). What do we know about competency modeling? *International Journal of Selection and Assessment*, 21, 334 – 338.

Participant List (Alphabetical Order)

Blaine Gaddis, Ph.D. (Chair)

Senior Manager | Product Research
Hogan Assessment Systems
bgaddis@hoganassessments.com

April Holland, Ph.D. (Panelist)

Vice President | Consulting Services
FurstPerson
april.cantwell@furstperson.com

Steve Nichols, M.S. (Panelist)

Manager | International Research
Hogan Assessment Systems
snichols@hoganassessments.com

Juan Sanchez, Ph.D. (Panelist)

Knight Ridder Byron Harless Eminent Scholar Chair in Management
Professor, Department of Management & International Business
College of Business
Florida International University, Modesto A. Maidique Campus
sanchezj@fiu.edu

Tom Stone, Ph.D. (Panelist)

Professor, Department of Management
Spears School of Business
Oklahoma State University
Tom.stone@okstate.edu

Kari Strobel, Ph.D. (Panelist)

Director, HR Competencies
Society for Human Resource Management
Kari.strobel@shrm.org