PERFORMANCE ANALYTICS: THE MISSING BIG DATA LINK BETWEEN LEARNING ANALYTICS AND BUSINESS ANALYTICS

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Big data analytics technology is changing the human capital development landscape. Global benchmarking trends reveal a gap between what executives expect from our profession and what we are currently capable of delivering. Emerging big data performance analytics technology offers our profession the capability to answer this growing executive expectation to diagnose the current and projected strengths and vulnerabilities of their workforce. It provides real-time evidence that our performance improvement solutions optimize human and organizational performance.

AS PERFORMANCE IMPROVEMENT professionals, we are dedicated to applying our 10 international standards (Figure 1) to improve organization outcomes or results (Standard 1) by improving the daily practices and worthy performance of the organization’s human capital. We consider the work, worker, workplace, and world (i.e., society, culture, marketplace) and take a systemic view (Standard 2) to define a need or opportunity (Standard 5) and then determine the underlying root causes (Standard 6) of the symptoms that typically trigger us to take evidence-driven action. Whether our assessment/analysis inquiry begins with a requested or mandated learning solution (i.e., Kirkpatrick/Phillips Level 2) or solving a results/impact mystery (i.e., Kirkpatrick/Phillips Level 4), it is the daily practices of the people in the organization (Kirkpatrick/Phillips Level 3) that produce the consequential results and impact that executives are paying us to diagnose and remedy using instructional and/or noninstructional solutions. Figure 2 represents the Kirkpatrick/Phillips Levels of Evaluation.

LOOKING BACK

Our profession’s journey over the past 50 or more years is noteworthy. Pioneering thought leaders and practitioners (e.g., Gilbert, Harless, Rummler, Kaufman, Tosti, Brethower, Mager, etc.) established the foundation from which our ten international standards emerged (Van Tiem, Moseley, & Dessinger, 2012). Their work, and the work of others who have advanced our principles and practices, have been well documented over the years in our Society’s journals, Performance Improvement and Performance Improvement Quarterly, as well as in a multitude of books.

Performance Improvement recently published a “Looking Back to Look Forward” series that republished the early writings of our profession’s pioneers. These reading gems were originally published by ISPI in a series of books (Dean & Ripley 1997). It is interesting to note that in the Pathfinders edition of this series, our profession’s unique value, as envisioned by our pioneers in one way or another, is that we are about leading a learning organization by applying systematic, systemic thinking and reflection to improve worthy performance (Dean & Ripley, 1997).

During the early 1990s, I used to teach my Air Force officer candidate cadets that good leaders make bad decisions when they are given inaccurate or incomplete information. This is where I believe we can add unique value to these decision makers by applying our 10 international standards to help them solve problems and lead...
successful change. Organizations are led by intelligent people. However, Dean suggests in the Pathfinders preface that “intelligence is not synonymous with thoughtfulness and systemic thinking,” and that the missing piece is critical reflection for continuous learning (p. iv). Insightful, systemic thinking and critical reflection for continuous learning are embedded in our 10 international standards. We are about reflection and action. Looking back provides us an opportunity for reflection to improve our perspective for taking action on the road ahead for our profession through the eyes of our founding and emerging pioneers.

LOOKING FORWARD
Turning our gaze toward the future, unfolding workplace challenges caused by increasingly volatile, uncertain, complex, and ambiguous environments offer new opportunities for us to apply our 10 international standards to help decision makers and stakeholders diagnose, improve, and sustain human capital and organization performance. Phillips and Phillips (2015) identify 12 major human capital challenges facing organizations today, such as the changing nature of work, workforce demographics, and workplace technologies. Mourino-Ruiz (2014) refers to these changing workplace challenges as the perfect human capital storm. Burkett (2016) suggests that it is more important than ever for performance improvement professionals to adapt proactively to this volatile, uncertain, complex, and ambiguous environment if we expect to optimize our performance to optimize organizational performance that makes a measurable, value-added difference to the stakeholders we serve. If we don’t adapt to this volatile, uncertain, complex, and ambiguous environment, we risk falling prey to what McLuhan and Fiore (1967) observed 50 years ago: When faced with a new environment, especially one involving new technology, we tend to look at our present environment through a rearview mirror, marching backward into the future and experiencing disorientation. It is worthwhile to look back to see where we have been, if it is a grateful glance. It is more important for us to fix our gaze on what lies ahead of us as today’s pioneering pathfinders.

The last strategy that Phillips and Phillips (2015) list as one of the 12 forces that have a significant impact on an organization’s human capital strategy for today’s volatile, uncertain, complex, and ambiguous climate is the use of analytics and big data to make human capital investment decisions that drive value. Organizations have been using business analytics for years in different functional domains to gain insights for investment decisions hidden in big data at Kirkpatrick/Phillips Level 4. Learning professionals are starting to use learning analytics to find meaningful data typically captured by a learning management system at Kirkpatrick/Phillips Levels 1 and 2 (i.e., end-of-course survey results and assessment scores) as well as what Phillips classifies as Level 0 data (e.g., course enrollments, completion data, etc.). What is missing from this big data analytics chain is behavior/application performance analytics at Level 3 that links the Level 4 results/impact analytics with the Levels 1 and 2 reaction/learning analytics (Figure 3). Big data analytics is here to stay; human capital/people analytics now encompasses most of the talent management cycle from talent acquisition, employee branding, onboarding, training, performance management, incentive systems, succession planning, and turnover/retention programs to talent out-processing. Performance analytics remains the missing link. How are we going to adapt our

| FIGURE 1. 10 INTERNATIONAL STANDARDS OF PERFORMANCE IMPROVEMENT |
|--------------------------|-----------------|
| 1. Focus on Outcomes or Results |
| 2. Take a Systemic Perspective |
| 3. Add Value |
| 4. Partner with Stakeholders/ Clients |
| 5. Identify Need or Opportunity |
| 6. Identify Root Cause |
| 7. Design Solutions including Implementation and Evaluation |
| 8. Ensure Solutions’ Conformity and Sustainability |
| 9. Implement Solutions |
| 10. Evaluate Results and Impact |

| FIGURE 2. KIRKPATRICK/PHILLIPS LEVELS OF EVALUATION |
|--------------------------|-----------------|
| Level | Description |
| 5 | ROI (Phillips only) |
| 4 | Results/Impact |
| 3 | Behavior/Application |
| 2 | Learning |
| 1 | Reaction |
performance to integrate big data analytics technologies into our practices and principles? It is important to stay current with the latest technology trends that affect our human and organization performance improvement capabilities. It is now our turn to pioneer how we will integrate this 21st century big data analytics technology into our 10 international standards, principles, and practices.

EXECUTIVE HUMAN CAPITAL EXPECTATIONS

Multiple human capital trend studies reveal a growing shift by executive-level decision makers to design and measure their human capital strategy using big data analytics technologies. For example, two independent studies reveal human capital has been the top issue of executives around the globe for multiple years (Deloitte, 2015; Mitchell, Ray, & van Ark, 2015). Ninety percent of executives expect those of us in the human capital profession to be proficient in workforce analytics, with 35% saying this proficiency is absolutely essential (Harris Poll, 2015), yet only 8.4% of executives believe they possess strong human capital analytics capabilities (Deloitte, 2015). In addition, 53% of executives indicate that workforce data is a key competitive differentiator, yet only 38% of these executives believe they have ample workforce data to understand their organization’s talent strengths and vulnerabilities (Oxford Economics, 2014). Human capital analytics is becoming the linchpin of human capital investments (Borudreau & Lawler III, 2016). Sondergaard describes this human capital analytics shift with his statement, “Information is the oil of the 21st century, and analytics is the combustion engine” (Pease, Byerly, & Fitz-enz, 2013, p. 13).

It is tempting to dismiss these benchmark studies as not relevant to what we have traditionally done or are doing today. On the other hand, the implications are real when viewed from an executive-level perspective. A simple search of the Internet will reveal that competency-based human capital management is a critical part of a growing number of strategic master plans. Shrinking budgets, workforce fatigue, sagging morale, and generational shifts, as well as recruitment and retention challenges, are forcing executives to dig deeper for data and insights to learn how to simultaneously minimize costs and optimize their human capital capabilities today and tomorrow (Ginsberg & Conley, 2015). To do this, these decision makers must have meaningful and actionable human capital data, which brings us back to the Sondergaard quote.

The operative question is this: Where does what we do for our internal and external customers fit within their human capital strategy, specifically within the performance improvement domain of human capital systems? Can we offer executives and key stakeholders meaningful and actionable evidence about the strengths and vulnerabilities of the human capital capabilities of their enterprise that is scalable to inform proactive, targeted, prioritized performance improvement decisions that attain and sustain required outcomes and results? If anybody should have their finger on the strengths and weaknesses pulse of an organization’s human capital workplace behavior and performance capabilities, it is today’s performance improvement professional. This analytics capability seems to support our value-added principle (Standard 3) to help executives make better decisions to improve the daily behaviors and practices of their workforce, the nature of their work, and the worthy results/impact they produce. What we lack is the next-generation technology that enables us to operate at an enterprise level to identify and address human performance needs and opportunities required to

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optimize the speed, focus, and agility of a business. This is where big data performance analytics enters the picture.

TALENT DEVELOPMENT IMPERATIVE

According to the World Economic Forum, of all the human capital domains, talent development is the most critical factor “linking innovation, competitiveness and growth in the 21st century” (World Economic Forum, 2015, p. v). When it comes to performance improvement, our focus areas within the larger human capital domain are the behaviors, practices, and performance of individuals and teams. Therefore, it seems reasonable to conclude that our human capital niche must (a) target limited human capital performance improvement investments to address current, real-world competency deficiencies in the work environment and (b) measure the performance results of these investments at the workplace to determine the effectiveness of the initiative. The results of our instructional and/or noninstructional initiatives will inform or drive the decision as to whether to continue funding these initiatives or make corrections during implementation to achieve the required results. To do both, we must ensure that our programs are aligned to meet organizational objectives, satisfy various stakeholders in this alignment chain, and establish the metrics we will use to determine if we meet the objectives of each stakeholder.

Big data analytics technology is changing the human capital development landscape. This business intelligence capability has become part of many functional domains in organizations but has been lagging in our human performance improvement discipline. If “information is the oil of the 21st century, and analytics is the combustion engine,” it is incumbent upon today’s performance improvement pathfinders to recognize the implications of this changing landscape and integrate talent development intelligence analytics that matter into their value-added capabilities. This means going beyond learning analytics that uses end-of-course survey ratings and comments, course assessment scores, and courses completed data typically extracted from a learning management system to actual workplace behavior/performance analytics that help identify real-time, real-world practice competency gaps. Adding this workplace behavior/performance analytics technology to our professional capabilities will enable us to help organizations identify hidden human performance improvement opportunities using leading Level 3 performance indicators revealed by big data analytics rather than waiting for lagging Level 4 result/impact indicators. I propose that these 21st century global challenges are important opportunity indicators that should compel us to rethink how we can apply our 10 international standards to develop a competent, adaptable, innovative, and resilient workforce (i.e., human capital) and organization. In the remainder of this article, I will summarize an emerging big data performance analytics capability emerging in healthcare in response to government mandates associated with the Affordable Care Act.

THE WORKFORCE PERFORMANCE ANALYTICS CHALLENGE

An emerging trend from healthcare that has significant implications for our profession is the use of big data analytics technology that focuses on identifying and improving daily Level 3 behaviors to improve Level 4 results. The shift from a pay-for-service model to a pay-for-value model, as mandated by the Affordable Care Act, requires hospitals to reduce costs by improving efficiencies without sacrificing patient safety or the quality of care. In addition, healthcare technologies have become more complex, and patients are more sophisticated and demanding. This is creating new, unprecedented workforce development and performance improvement challenges and opportunities.

A study by the Institute of Medicine reports that uneven performance on nurse-sensitive outcomes was a symptom of registered nurse (RN) confusion about their role-based practices involving accountability, responsibility, and authority. This confusion resulted in RNs taking a task-based focus versus a profession focus (Institute of Medicine, 2011). This role-based practice confusion was considered a root cause to explain why there is a variation in practice and a lack of consistency of care that decreases the quality of care and wastes money due to practice inefficiencies and errors. The Institute of Medicine stated this lack of professional role competence was a barrier to optimizing RN role scope that leads to practice excellence. Healthcare performance improvement professionals are ideally positioned to address the Institute of Medicine workforce behavior challenge and are providing new insights we can apply in nonhealthcare settings that gives us an enterprise-wide perspective and greater impact potential.

We see evidence of this variation in practice every day. Imagine you or someone you care about is lying in a hospital bed, being cared for by two different nurses, and one of the nurses walks into the room. We typically respond one of two ways: “OH, GREAT!” or “Oh, great.” Both nurses are licensed, both may have even completed the same training, academic program, and continuing education courses, and have the same number of years as a nurse. One nurse is practicing at the top of the nurse license (OH, GREAT!) and the other one is not (Oh, great.). Now substitute the word “nurse” with program manager, technician, lead engineer, manager, or any other position.
On paper, they may meet all of the criteria for their position or for a promotion. The people who work with and for them know where they fall on the “OH, GREAT!” to “Oh, great.” continuum. Learning their real level of practice competence (not just individually but also from a scalable enterprise perspective) positions us to add a new level of value to our internal and external customers, especially to senior leaders and executives.

Earlier in this article, I cited the results of global research reports that document a shift in executive expectations regarding human capital analytics. The Oxford Economics report is most disconcerting, in that only 38% of executives reported that they have ample workforce data to understand their organization’s strengths and vulnerabilities. This lack of understanding has a direct impact on our ability to identify and offer the right performance improvement solutions based on current, real-world Level 3 workplace performance vulnerabilities. It is particularly important to healthcare executives as they navigate the shift from a pay-for-service model to a model that is pay-for-value. This means healthcare executives and performance improvement decision makers must discover where they can minimize medical errors and variation in daily workplace practices to avoid unnecessary costs and inefficiencies. Every organization outside of healthcare faces the same practice variation challenges. We must ask ourselves a fundamental question: Are our current practices helping us move closer to convincing executives that we are part of the enterprise-level solution they seek?

Leigh (2014) discovered from her research of certified performance technologists’ practices that when recommending performance improvement solutions, certified performance technologists do not consistently generate scientifically derived evidence, engage in results-focused reflection, or practice systemic thinking. In addition, about 65% of the time, they do not adapt their thinking about the likely success of the intervention after it is implemented (typically an intervention in which they have the most expertise) as they receive new evidence indicating a different course of action is warranted. This study indicates that too many of those who are certified performance improvement practitioners fail to engage in systemic, reflective thinking for continuous learning. It seems we tend to get stuck in a rut when finding and fixing performance improvement challenges. I learned long ago that the only difference between a rut and a grave are the dimensions. This rut resembles rearview mirror thinking.

The question my research seeks to answer is this: How do we use big data business intelligence analytics technology to diagnose, remedy, and evaluate the Level 3 daily practices of our workforce to close professional role competency gaps and to inform how we apply our 10 international standards? What would happen if we had the capability to measure and evaluate the daily practices of a workforce to proactively diagnose and remedy human performance improvement needs and opportunities that would result in improved organizational performance? How would this capability change our role in an organization and our perceived value at the executive level as well as every other level of the organization?

**ANALYTICS AND BIG DATA DEFINED**

To establish shared meaning, here is how I am defining the terms analytics and big data. The Institute for Operations Research and the Management Sciences (INFORMS) defines analytics as “the scientific process of transforming data into insight for making better decisions” (INFORMS, 2016). Analytics help discover meaningful patterns in data that often favor data visualization to communicate insights (Fitz-enz & Mattox II, 2014). Analytics provide a way to improve human capital investments on both the individual and the organizational level (Pease, Beresford, & Walker, 2014).

Big data refers to data so large and complex from a variety of sources that traditional data processing applications cannot handle the volume and requirement for speedy analysis. It is a new way of thinking that is altering the landscape of every industry (Fitz-enz & Mattox II, 2014). Figure 4 represents the four characteristics of big data known as the four Vs (volume, velocity, variety, veracity) that require analytics tools to demystify the mysteries hiding in the big data that was previously unknown. Big data is confusing if it is not collected through valid and reliable online assessment instruments and a software analytics tool, analyzed through robust algorithms, and
presented in meaningful ways to reveal patterns, trends, and associations, especially those related to human behavior and daily practices. Analytics of big data can lead to more insightful, confident decision making using real-time data for evidence-based decisions. Better decisions can result in greater operational efficiency, cost reduction, and reduced risk. Let’s look at two examples.

**Stanford University Medical Center Research Study**

In 2011, Stanford University Medical Center completed a one-year study using control groups to determine whether improving the professional role competencies of 365 RNs providing progressive care at four infant intensive care units would lead to improved patient outcomes. Their objective was to remedy an internal assessment of nurse-sensitive outcomes that revealed uneven performance despite an active nursing quality program, multiple educational resources targeting nurse-sensitive indicators, experienced nursing leadership, and a stable workforce (Forsey & O’Rouke, 2013).

Where do you start? With a needs assessment, of course. The medical center used a cloud-based, online 360-degree assessment tool to collect data on 41 Level 3 clinical behaviors associated with four professional role competencies (Figure 5) to determine whether improved role clarity would reduce their Level 3 variation in daily practices, which would then improve Level 4 patient outcome quality measures. This analytics software tool generated real-time dashboard displays and comparative reports using aggregated data along the Dreyfus/Benner five-level novice-to-expert skill development model (Benner, Tanner, & Chesla, 2009) (see Figure 6). The analytics outputs were scalable for all 41 behaviors associated with the four competencies for each nurse, team, and infant intensive care unit, and for all infant intensive care units combined.

Insights gained from the analytics indicated the greatest practice variation was in the quality of handover content (Level 3), which could lead to errors in medical diagnosis, medical data, medication changes, and other critical care factors (Level 4). Nurses were trained (Level 2) on a new systemized handover practice, which included simulation and ongoing coaching. The initiative

**Leadership** - The ability to influence, motivate, and enable others to contribute to the effectiveness and success of providing safe, quality care. Includes correct delegation and coordination of care.

**Communication** - The effective exchange of patient care plans across interdisciplinary teams, among colleagues, and with patients and their loved ones.

**Science** - Decision-making using evidence-based critical thinking that results in selecting the best courses of action among several alternative possibilities using institution-approved protocols.

**Practitioner** – Performing at the highest level of licensure to deliver the optimal level of safe, quality care to achieve organization, department, and/or individual performance objectives.

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**FIGURE 4.** FOUR Vs OF BIG DATA

**FIGURE 5.** RN CRITICAL BEHAVIORAL ROLE COMPETENCIES

**FIGURE 6.** DREYFUS/BENNER NOVICE-TO-EXPERT SCALE

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also identified and removed application barriers to standardize this practice at all four locations. Level 3 role competencies were then measured again using the same cloud-based, online assessment tool to determine if workplace role competency behaviors improved to the desired level of practice competence using the Dreyfus/Benner scale.

Post-training Level 3 assessments indicated improved staff nurse accountability for practice as evidenced by improved shift handover behaviors ($t < 0.05$). Lagging Level 4 results/impact measures indicated these new handover practices improved nursing work environment using the National Database of Nursing Quality Indicators Practice Environment Scale and improved nurse sensitive outcomes using Hospital Consumer Assessment of Healthcare Providers and Systems patient satisfaction scores (both government-mandated Affordable Care Act quality metrics). It is important to note that this study’s limited scope (and funding) focused on one functional area (IICU) and one behavior, when the analytics indicated multiple role competency gaps existed. What would happen if this competency-based needs assessment and evaluation approach were expanded to an entire hospital system using big data performance analytics?

Healthcare System Examples

A South Texas healthcare system wanted to significantly improve patient outcomes at six of their hospitals. Again, where do you start with such vague Level 4 requirements? They used the same cloud-based, online, psychometrically validated 360-degree assessment instrument and analytics tool used at Stanford to assess 1,157 nurses and their supervisors. This assessment tool measured 167,229 professional behaviors using the Dreyfus/Benner novice-to-expert levels. The big data analytics software generated more than 2.3 million behavioral data points of current workplace practices within 60 days of beginning the data collection process to establish their baseline workforce competence metrics.

Figure 7 represents one way the analytics software provided this organization with a visualization of actionable, real-world baseline behavioral data about the four professional role competency practices at these hospitals. Each bar represents one of the four professional role competencies (Leadership, Communication, Science, Practitioner) that reveal the strengths and vulnerabilities of their entire nursing staff for 51 role-based behaviors. The hierarchy represents how the hospital system could see the daily practice competency levels of their workforce across the enterprise to diagnose previously unknown professional role competency strengths and vulnerabilities for strategic interventions. While the actual data is proprietary, this hierarchy illustrates a visualization of the insights revealed by the big data performance analytics. The top of the hierarchy represents an enterprise-wide representation of the organization’s competencies that executives seek so they can understand their workforce talent strengths and vulnerabilities to drive prioritized talent development.
initiatives to achieve their organization goals and objectives. Below the enterprise level they can see and compare the current competencies of each of their six hospitals. The levels below this can reveal the analytics results for functional areas, care units, shifts, teams, and individuals. The analytics software provides instantaneous, on-demand data.

The big data performance analytics uncovered hidden Level 3 behavioral insights that identified competency gaps in the daily behaviors and practices of their patient care workforce. These evidence-based insights helped explain substandard Level 4 consequence data. For the first time, decision makers could see a timely, data-driven visualization about the strengths and vulnerabilities of their nursing workforce at these six hospitals. They started with the “as-is” daily practices that they never could have captured and diagnosed before to learn what was occurring at each hospital, in each department, during each shift, and on each team. Decision makers gained data-driven insights to develop tailored professional role development solutions and remedy real performance needs that matter from the enterprise to individual levels, based on the organization’s priorities.

Figure 8 represents the ongoing analytics cycle that this healthcare system follows to collect formative and summative behavioral data to focus on accountability for results. The flexibility of this performance analytics technology allows decision makers to purposely uncover and address the previously unknown barriers and enablers required to significantly improve patient outcomes. They can now focus their attention where the evidence-based need is greatest and track their progress toward achieving their desired result, adjusting when necessary.

They are also growing their baseline by 2.3+ million data points at each data collection phase to mature their descriptive analytics capability to predictive and prescriptive analytics.

As a second example, a Southwest Ohio healthcare system wanted to achieve the American Nurse Credentialing Center’s Magnet Excellence status, the gold standard credential awarded for quality patient care, nursing excellence, and innovations in professional nursing practice. They assessed more than 3,700 nurses, measured over 500,000 behaviors, and generated more than 10 million data points to establish their “as-is” baseline for the same 51 role-based practice behaviors. They learned that, of the 500,000 behaviors measured, more than 10,000 scored at either the Novice or Advanced Beginner competence levels, with Scientist and Practitioner having the most behaviors at these two levels. The analytics software identified the specific behaviors systemwide and for each hospital so they could target the greatest evidence-based needs for a performance improvement solution. The performance analytics software allowed them to conduct a real-time comparative analysis of the big data based on type of degree (i.e., associates, bachelors, masters), tenure, department, job type, shift, and the like.

A third example is a world-renowned cancer research hospital located on the west coast. In addition to using performance analytics to achieve the American Nurse Credentialing Center’s Magnet status, they used the same software platform for their staff leadership and management professional development. Their initial baseline cycle assessed 92 staff members, measured more than 13,000 behaviors using a psychometrically validated assessment tool, and collected more than 280,000 data points. The 51 role-based leadership and management behaviors involved four competencies; leadership, communication, decision making, and execution. The insights resulting from these baseline performance analytics are helping the hospital focus its resources on the seven greatest nonclinical performance needs of their leadership and management staff, as well as recognize the six greatest behavioral strengths of their staff. The research hospital is continuing to collect behavioral data to measure the effectiveness of its leadership development program to ensure that its decisions and investments are actually closing prioritized workplace daily practices and resulting in organization performance gaps.

FOCUSING ON RESULTS AND REFLECTIVE THINKING ACCOUNTABILITY

Multiple healthcare providers are using this performance analytics capability in different ways based on their
specific objectives and needs. Those needs extend beyond clinical professional roles and include nonclinical leadership professional roles using organization-specific or basic competency-based behaviors (e.g., leadership, communication, decision making, and execution). Each objective focuses on Level 4 outcomes/results/impact and Level 3 reflective thinking and actions to achieve those desires results. A few examples are:

- Diagnosing gaps in professional competencies to discover talent strengths and weaknesses
- Pinpointing educational/development needs at low-performing facilities
- Using analytics insights to craft ongoing professional role development initiatives to meet real needs and opportunities that lift all healthcare providers to practice at the top of their license and profession
- Optimizing teams for maximum impact and workforce return on investment
- Avoiding costly resourcing mistakes (e.g., research indicates that scrap learning results in 55% to 80% of learning investments having no impact on job performance (Mattox II, 2011)
- Improving constancy of competence and reducing variation in practice to increase the quality of care and patient satisfaction and to reduce errors
- Reducing costly turnover and increasing retention and employee engagement by investing in professional development based on each individual’s evidence-based needs and opportunities for growth
- Achieving American Nurse Credentialing Center Magnet Excellence status
- Improving new nurse on-boarding process to effectively identify practice gaps and maximize the impact on new nurse development
- Identifying undiscovered leaders and effectively promoting from within
- Measuring competency development improvements during and after leadership development programs to make funding and development decisions that produce quantifiable results
- Developing descriptive, predictive, and prescriptive analytics capabilities for professional development and performance improvement programs

A SOCIETY, OR MEGA, OPPORTUNITY
In addition, performance analytics capability that focuses on behavioral competencies offers an opportunity for our profession to add value at the society, or mega, level that has been long advocated by Kaufman (2000; Kaufman & Guerra-Lopez, 2013; Kaufman, Oakley-Brown, Watkins, & Leigh, 2003). This will allow us to mature beyond the current use of our principles and practices by the United States Agency for International Development for their Human and Institution Capacity Development initiatives. For example, in the State of Maine, the Organization of Maine Nurse Executives and the Maine Action Coalition recently endorsed using this competency-based performance analytics technology to benchmark the 11 state nursing core competencies throughout Maine’s state hospitals and education programs to measure and track nurses’ growth and competency development and close the gap between academia and service. The societal quality of care and patient safety implications are significant if adopted nationwide and outside the United States.

ADDRESSING SYSTEMIC BARRIERS AND ENABLERS
Management and quality gurus such as Deming (2000) and Crosby (1980) argued that more than 90% of the problems in an organization are caused by organizational barriers they call the system. Rummler and Brache (1995) state we must spend more time fixing organization systems that are broken and less time fixing people who are not. They further state that executives must manage performance at the organization level. The organization system’s enablers and barriers are birthed and nurtured by people. No matter where you look in an organization, at every level, it all boils down to the daily practices of people who are trying to do their jobs the best they know how at every level of the organization despite these barriers. We reward people who overcome barriers if they are successful, and we reinforce barriers when they are not, stating that these barriers exist to prevent these types of failures. The common denominator is the behaviors (and decisions) of people who, with good intentions, create, sustain, and remove barriers and enablers. Kouzes and Posner (2012) put this into perspective: “You can’t learn very much if you’re unwilling to find out more about the impact of your behavior on the performance of those around you” (2012, p. 85). Abrashoff (2007) echoes this sentiment: “I asked everyone, ‘Is there a better way to do what we do?’ Time after time, the answer was yes, and many of the answers were revelations to me” (2007, p. 15).

Kouzes and Posner (2012) also state that “you have to constantly be looking outside yourself and your organization for new and innovative products, processes, and services” (2012, p. 12). If we are about leading a learning organization at the human performance level, as envisioned by our pioneering pathfinders, we must remain vigilant...
to evaluate new technological capabilities that can provide us with a means to collect needs-based evidence that help us apply our 10 international standards to diagnose and remedy the professional role competencies of individuals and teams up to the enterprise level. Wiseman and McKeown (2010) raise the point that sometimes we allow what we know to prevent us from learning what we don’t know, and that we must grow beyond our current understanding to learn what we don’t know. Put another way, Sinek (2011) writes that when “we make assumptions about the world around us based on sometimes incomplete or false information … our behavior is affected by our assumptions or our perceptions of truth” (2011, p. 11). This reminds me of what I used to teach my Air Force officer candidate cadets back in the early 1990s.

CONCLUSION

Our performance improvement profession is incredibly diverse in how we apply our principles and practices to satisfy our 10 international standards. Our founding pioneers envisioned our profession as offering and enacting change with enterprise-wide potential. A learning organization requires meaningful, timely, actionable data to learn how to best leverage its workforce strengths and minimize its vulnerabilities to grow and survive. Looking forward, we must ask who will stand in the gap to provide decision makers with the evidence they seek and will expect to optimize their talent development and performance improvement programs, projects, and initiatives. I suggest that the 21st-century big data performance analytics capability emerging from healthcare organizations is the right medicine for our profession to position itself as the leading expert in performance improvement and sustainment, the profession that executives representing all industries will turn to for systemic, reflective, real-time data they can use to make evidence-based decisions in a volatile, uncertain, complex, and ambiguous environment. While our standards, principles, and practices remain relevant, we must remain alert to identify emerging technological opportunities that can grow our role-based capabilities to apply our 10 international standards, adding even greater value to achieve worthy human performance outcomes and results at the enterprise and societal levels. I propose that we may have discovered the missing link that can propel us to a new level of relevance and value-added: big data performance analytics.

References


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