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USING A HUMAN PERFORMANCE TECHNOLOGY AND IMPROVEMENT INTERVENTION TO MITIGATE HUMAN RESOURCE BUSINESS PARTNER SKILL GAPS

ABSTRACT

Action learning and action research often receive combined attention. This action research project used a team of human resource (HR) professionals to pilot using action learning to train them about implementing human performance technology (HPT) and human performance improvement (HPI) concepts into their daily work processes. Skills development has become a central focus of most HR teams since the end of the pandemic. Thus, learning professionals have emerged as leaders in HR departments, including as chief learning officers, although some show gaps in their ability to provide transferable learning to their employees. This case study described a pilot training process. It showed that learning and transferable knowledge could occur by using the Revans' L = P + Q (learning equals programmed knowledge plus questioning) equation along with action research principles, where the researcher actively facilitates the scenarios of the research project. Findings included a positive increase in participants' confidence levels in using HPT and HPI in the workplace. The case had practical implications by offering a process for new HR teams and learning directors to establish, create, and facilitate an action learning program.

Keywords: action learning, action research, human performance technology, HPT, human performance improvement, HPI, skills gaps, skill gaps, human resources, chief learning officers

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Introduction

Since the close of the pandemic, the economy and jobs reports have filled the news with talk of workers' skills or skills gaps. The concept of retraining and reskilling an entire population to do the work that stopped during the two-and-a-half-year pandemic shutdown has become a new industry (Michel et al., 2022). A plethora of jobs with the names "Director of Learning and Development," "Director of Learning Services," "Learning Director," and other similar titles emerged during and postpandemic, rendering the term "trainer" archaic. These individuals' roles mirror the roles that training managers and Directors of Training held – but with a twist. Learning directors are expected to create a systemic, continuous process of learning that uses adult learning models and theories combined with a sound training process to embed the system into an organization's culture (Haight, 2017). Their job demands that the title holder understand needs assessment, evaluation, training motivation, transfer of training, pre- and post-testing procedures, career development, enrichment, and role enhancement. Yet, of all the aspects of human resource (HR) management's role in employee development, evaluation of transfer of training and return on investment, along with quality measurement of performance, are the least understood and most often underperformed HR functions in nearly all organizations. It does not have to be so.

This article converts a difficult topic into an understandable paradigm, creating a replicable process to allow organizational learning and training directors to implement real-world, useful, pragmatic, and measurable training exercises and learning programs for their businesses. It uses data from an intervention action research project to showcase how hands-on learning programs work in real organizations (Wash, 2009). A case study of that project culminates in a step-by-step set of instructions showing how to implement active learning and includes forms, process maps, and measuring tools. A final call to action geared toward learning officers ends the paper.

Background

Over the last decade, the United States has experienced two recessions, including a "Great" one, a pandemic that impacted the supply chain in unprecedented ways, significant political turmoil, a Great Resignation (Iacurci, 2023), rampant *quiet quitting*, and a skills gap crisis that has led to massive overhauls in how people work, how people perceive work, and how people want to work. The U.S. Chamber of Commerce's June 9, 2023 report on the status of workers noted these critical facts: (a) the pandemic resulted in the loss of nearly 2 million workers who may never return to work; (b) 9.9 million job openings exist with only 5.8 million unemployed workers; (c) the majority of openings exist in manufacturing industries, sales, and leisure and hospitality; and (d) the predictions of the exodus of baby boomers retiring has finally come to fruition, leaving massive knowledge and skills gaps throughout every industry (Cates & Ferguson, 2023; Ferguson, 2023). While skills gaps have been normal since the technology revolution modernized work, over the past decade, the gaps have become universal, widespread, and in many instances, unfilled.

Ferreira et al. (2023) surveyed marketing and advertising practitioners in 2019 (pre-pandemic) and 2020 (during the pandemic), requesting information about skills gaps in their industry. Over the year, the gaps noted changed from technology-based hard skills to soft skills like communication and adaptability (Ferreira et al.; Stewart & Preiksaitis, 2023). Ferreira et al. also noted that data analytics, user experience, and digital content marketing skills were lacking in 2020, more noticeably than in 2019. They predicted that the pandemic's aftermath would contribute to a trend of skills gaps caused by remote work.

Adaptation has become the new buzzword for chief learning officers (Vincent, 2021), along with balancing learning with the democratization of learning (making it available throughout the organization), infusing content that is inclusive, diverse, equitable, and focused on allowing all employees to feel they belong (whether remote or in-office) and making the content of learning skills-based. Deloitte and The Manufacturing Institute partnered on a study that showed why inclusive cultures are critical toward filling the skills gaps: women left the workforce in greater numbers during the pandemic to care for children, and organizations need them to return, trained, to assist with the missing skills of retired workers (Wellener et al., 2021). Vincent also noted that training people on "skills like resilience, empathy and agility" (para. 5) is paramount to organizations staying relevant and competitive.

Business Problem and Gap in Practice

Businesses know their business, but when changes to practice, goals, products, supplies, vendors, technology, personnel, or even customers occur, organizations must pivot, reskill their employees, and change processes. In today's rapidly changing environment, the agility of organizations relies on quick thinking, resilience, and a continuous improvement culture (Crnogaj et al., 2022). Crnogaj et al. noted that employees who feel empowered to grow and develop create a more agile and resilient workforce. Offering learning opportunities helps build such a team of workers. Many businesses were unprepared for the overnight change to world practices during the pandemic. The return to "normal" has been anything but that, and trainers, learning officers, HR managers, and leaders generally need guidance on implementing a rational, affordable, manageable, and feasible way to maintain continuous learning in their organizations. The specific business problem is that employees who feel their career paths and development are unclear may not be willing to change rapidly, react to new organizational needs, or operate efficiently. Knowing how to create learning opportunities that offer validated transfer to career-based skills is a gap in practice that this article seeks to fill.

Applied Framework

The case study that ensues as part of the process map and tutorial created by this article was guided by a framework that used elements of human performance technology (HPT), action learning, human performance improvement (HPI), and adult learning (andragogy) as envisioned by Malcolm Knowles (1980) and further refined by Swanson

and Holton (2001). The case study operated using the concept of action learning, governed by Kurt Lewin's model using the elements of planning, acting, observing, and reflecting (Hart & Bond, 1996; Meyer, 1993).

HPT/HPI

Chevalier (2004) began the HPT/HPI conversation, describing it as a systemic approach where multiple stakeholders implement "interventions drawn from many other disciplines including behavioral psychology, instructional systems design, organizational development, and human resources management" (p. 1). Sanders and Ruggles (2000) stated, "If we view HPI from the standpoint of the interventions that are offered, there's a tremendous overlap with other disciplines such as HR, OD, and training" (p. 28). Fast forward to 2023, and Directors of Learning and Development have been handed the baton to carry HPT/HPI into a new dimension, using technology, online tools, structured assessments, and quality training evaluation mechanisms.

The HPT Model

The applied framework that guided the case study was the HPT model. This model was created by Van Tiem et al. (2004). The model includes the processes that Directors of Learning should employ to increase the skills of their employees: performance analysis, cause analysis, intervention selection (i.e., training, testing, observations, coaching, mentoring, or education), intervention, and evaluation. Missing any of these important steps breaks the interactivity and systemic effect of the model. The HPT model was described and diagrammed by Van Tiem et al. (2004) and copyrighted by multiple parties that have sequentially sold the rights over time. The initial copyrighted model appeared in the *Fundamentals of Performance Technology, Second Edition* (Van Tiem et al.), sold to Wiley and Company, and returned back to ISPI. Requests to ISPI to reproduce the model were unsuccessful, and therefore, the model does not appear here, although it can be found in the original, published dissertation by Wash (2009), wherein permissions were, at the time, granted.

The HPT model envisions the use of a performance analysis, by using a typical environmental scanning process (organizational and environmental analysis) and then a needs assessment to create a gap analysis. Then, a cause analysis is conducted, an evaluation of the causes ensues, and then an intervention is designed and implemented. Once the implementation occurs, an analysis of whether positive, neutral, or negative impacts on the problem (or gap) is assessed. Then, a determination of whether more interventions (i.e., solutions) are needed is made and the cycle repeats until the gap is filled.

Literature Review

Three topics covered by the study include HR processes and practitioners, HPT/HPI, and learning paradigms related to adult professional development. Each topic has had years of coverage, but the literature review will summarize the ideas while converging them into an understandable foundation for how the study was conducted.

HR Processes and Learning Practitioners

Historically, human resources were understood as a function governing and supporting the people aspects within organizations, driving HR processes. For decades, HR strived to earn the place of strategic partner (Ulrich et al., 1989, p. 315; see Table 1). HR assists organizations in achieving their goals by selecting skilled and motivated people or reskilling those who need updated skills. A successful HR team creates a competitive advantage for their organizations (Bohlander et al., 2001; DeSimone et al., 2002). Bohlander et al. perceived a holistic HR view of the industry, making people the variable of how one organization performs over another. They considered humans to be the unique and difficult-to-imitate resource that HR oversees. When HR creates a team of highly and uniquely skilled employees motivated to employ those skills for the benefit of their organization, they contribute to a high-performing organization. High-performance systems of practice include selection, training, evaluation, and compensation (Alqudah et al., 2022).

Table 1

HRM as a Strategic Partner

Roles	Goals	Deliverables
Business Partner	Help to move strategic planning from the conference room to the marketplace.	Execute strategies that meet business needs.
Administrative Expert	Improve the efficiency of both HR functions and the entire organization.	Administrative efficiencies that reduce costs while maintaining quality.
Employee Champion	Represent employees to management: increase employee contributions and commitment.	Increased employee contributions and commitment.
Change Agent	Shape processes and culture that improve an organization's capacity for continuous improvement.	Increased organizational capacity for change.

Note. Adapted from Ulrich, 1998, pp. 124-129; Ulrich, 1997, pp.37, 232-233. In D. M. Van Tiem, J. L. Moseley & J. C. Dessinger. (2001). *Performance Improvement Interventions* (p. 145).

Senge's (2006) ideas about learning organizations have morphed into roles that help create such organizations. Haight (2017) introduced the concept that chief learning officers (CLOs) create learning organizations, finding no other scholarly literature that discussed such a process at the time. Haight indicated that action learning, or "learning by doing," is critical to creating a CLO-based learning organization (p. 44). She relied on Marquardt's learning model, which provided five elements for creating a learning organization: learning, organization, people, technology, and knowledge. She listed their role descriptions as including strategy development, corporate university leaders, learning developers, and leading the organization's learning (p. 58). Learning practitioners are a somewhat new player in the team of HR professionals. Based on a review of job openings and position descriptions for learning officers and directors on Indeed (June 2023), in Florida alone, over 6,000 openings existed, with annual pay scales ranging from $90,000 to $250,000.

HPT/HPI

In 2007, Rothwell et al. explained that the difference between performance and behavior is that performance measures a result, and behavior leads to the result. Stolovitch and Keeps (2007) felt the term HPT was dry and mechanical and proposed changing the conceptual perception of HPT from technology to improvement, or HPI. Many studies use the terms interchangeably or concerning the same thing: when an organization's workers apply a system or model that adds value through improvement, this is HPT or HPI. Both are important fields of practice that have provided salient underpinnings of current learning and continuously improving organizations. Sanders and Ruggles (2000) attributed the HPT/HPI field founders to Thomas Gilbert, Joe Harless, Geary Rummler, and Robert Mager (p. 27). Pershing (2006) further explained that Chris Agyris, Bill Coscarell, Danny Langdon, and Allison Rossett have also heavily influenced the HPT field. Mager's invention of learning objectives as statements of conditional performance measurements designed for performance improvement may be one of the most influential tools in the learning practitioner's repertoire. Van Tiem et al. (2001) described HPT as both a science and art that strives to improve "people, process, and performance" (p. 2). Van Tiem et al. (2004) created the HPT model (Figure 1) that includes five key components: (a) performance analysis, which includes the needs assessment; (b) cause analysis; (b) intervention selection, design, and development; (d) intervention implementation and change; and (e) evaluation.

Needs assessment, also called business analysis, was defined by Wilmore (2002) as a three-staged process (entry, data collection, and agreement) performed by a performance consultant and organizational client where business performance problems are discussed. During data collection, the consultant asks key goal-oriented questions through interviewing, reviewing documents, and meeting with employees in groups or through written survey questions. Once data has been collected and analyzed, a meeting with the client must occur to discuss findings and agree on needs. Boyd (2002) described these needs as the performance gap). Root cause analysis remains pivotal to the needs

assessment or gap analysis process (Doggett, 2005). Answering the question, "What is causing the problem?" often leads to a solution.

Once the needs assessment delineates the gaps, the intervention should be described, planned, and implemented. Interventions reduce performance gaps and can be as simple as a job aid or as complicated and structured as a new organizational design (Spitzer, 1999). Van Tiem et al. (2001) noted that the types of interventions possible are nearly endless and should be used to improve performance and provide business-related solutions. Intervention analysis can take as long or longer than the actual needs assessment. Güzeldereli et al. (2017) recommended including a feasibility analysis to ensure the intervention made sense among time, cost, and value categories.

The evaluation process should begin once an intervention has been established, planned, and prepared for implementation. Since solid evaluation requires foreplanning, failing to incorporate this into the planning stage will result in, at worst, low-quality or, at best, low-level evaluations. Donald Kirkpatrick created the most often cited and used quality evaluation processes. His company, recently renamed Kirkpatrick Partners, remains a number one influencer for training evaluation, using his four levels of evaluation to guide learning directors and trainers through proof of value, return on investment, and transfer of training results.

Adult Learning Paradigms

Adults learn differently from children and teens. While andragogy has become a way of speaking about adult learning, the concepts of action learning and action research remain somewhat new to many learning professionals. Every adult has a unique learning style, but what remains mostly innate for most adults is that hands-on experience helps cement learning into memory; showing the relevance of a skill's connection to a work need will increase motivation to learn the skill (Brockbank, 2004). Revans, often seen as the founder of action learning, developed his learning formula to assist organizations and their workers to use past knowledge and leverage it into new solutions; he also felt that action learning systems could create meaningful change. His formula's equation, learning (L) = programmed knowledge (P) + insightful questioning (Q), formed the basis of his action learning process (Fairlax, 2003) and created the foundation for the intervention established in this study's case. In many ways, $L = P + Q$ mirrors the Socratic method implemented for decades in law schools worldwide (and made popular through the infamous *The Paper Chase* movie and TV series from the 1970s). However, unlike *The Paper Chase*, adult training and learning processes do not seek to humiliate or isolate learners among a group; successful learning processes provide positive feedback and reflection to assist people in enjoying learning so that later skill implementation will have positive associations.

L = P + Q

Action learning and research processes implementing $L = P + Q$ require planning and organization. The equation has examples of success that are useful in showcasing how a learning officer or trainer can use it to guide the training and learning process. Yacine (2023) described two action learning cases that used the equation and process to help entrepreneurs develop value-add and solution-based thinking and self-efficacy. These sessions included sharing experiences and reflecting on learning, knowledge, business models, and challenges. Incorporating concepts from the Business Model Canvas, trainers showed that action learning assisted entrepreneurs by identifying feasible actions for success, avoiding hidden bias or assumptions from blocking potential innovations, and creating real-life proof of concept outcomes.

Pedler (1997) used tasks or activities to drive learning. Zuber-Skerritt (2002) explained that action learning uses experience and group discussions and applies these to work problems to provide potential solutions. Action learning differs from action research, where the researchers are part of the organizational learning process, taking part in or even driving the process and reporting results as the research findings. The action research concept, begun by Lewin (1948), required social interactions and group discussions to rise to the level of research. Newman (2000) included in her definition of action research that a problem is identified, a search for causes or solutions ensues, those solutions are tested, and then findings are disseminated. In Newman's example, the *Q* aspect of the equation is central to the learning that occurs. Other researchers, like Mills (2005), pointed out the cyclical nature of action learning, where learning uncovers other gaps, contributing to a new cycle of the process beginning.

Knowles

Adult learning and training seem always to return to Knowles' (1980) initial assumptions about adult learning:

- Teachers (trainers, learning officers) must instill in adults a desire to become self-directed when learning new skills.
- Adults have vast experiences and knowledge to draw upon as a rich learning resource.
- People become motivated to learn by connecting the training or learning to problems experienced.
- Adults see education, learning, and training as methods to increase competence.

St. Clair (2002) demonstrated that intrinsic motivation drives adults to learn more than extrinsic motivation and that adults need to know why they should learn something to try to learn it.

Glanz Cyclical Approach

Gall et al. (2003) described a cyclical action research approach created by Glanz in 1998. This approach identifies a performance problem that needs a resolution, collects pre-intervention data for a baseline, analyzes baseline data to determine gaps, creates and implements an action learning plan, collects and analyzes post-intervention data, reviews the gap changes, creates a modification, and restarts the process. Glanz (2016) explained that action research does not need to stop – as its cycle can continue endlessly.

Some elements of action research that Glanz (2016) explained as pertinent included the following:

Action research does not rely on advanced statistical techniques to analyze data.
Action research is utilized primarily by practitioners to solve specific problems.
Findings from action research are often not generalizable to other groups and situations. (p. 7).

Further, Robinson et al. (2023) explained that participant-focused action learning is "participatory, collaborative, and inclusive" (p. 3). Glanz and Robinson et al. noted that this cyclical process works well for professional development.

Literature Review Summary

Adult learning and action learning concepts help explain why and how modern learning officers and trainers can create better outcomes when implementing a learning opportunity for workers. These concepts, plus the idea of L = P + Q, were combined into a small, pilot, intervention-based training opportunity in a small governmental organization that experienced a problem needing a solution. A participant-focused process using the action-learning cyclical approach was designed and implemented. The foundation of this literature review helped guide the creation of the intervention, the evaluation, and the ultimate results of the training.

Research Technique

The study (as pilot) used a mixed method, quasi-experimental, pre-and post-test with intervention action research design. While action learning and action research are two separate concepts, the concepts blur in some respects in this study because the research was conducted on action learning. This study was conducted in a Georgia city's HR department and aimed to "research a specific...situation with a view toward improving practice" (Creswell, 2005, p. 552, from the definition of action research). The Glanz (1998) cyclical approach was enacted to train the employees and gauge the utility of the training.

Research Questions

Four research questions (RQs) guided the study:

RQ1. What was the current level of knowledge and understanding of HPT/HPI in the city HR employees?

RQ2. How well did the training support action learning knowledge acquisition for the HR employees?

RQ3. How strongly did the HR professionals perceive they learned HPT/HPI skills from the training?

RQ4. What was the confidence level of HR professionals, post-training, regarding their ability to transfer the training back to work?

Permissions and Ethical Concerns

The Capella University Institutional Review Board and the city government office's Chief Human Resources Officer (commissioner) approved and oversaw the study. I disclosed that I was an office staff member, and it was determined that no harm to participants would occur due to this potential conflict. The commissioner oversaw the pre-and post-test and was part of the overarching team implementing the intervention.

BKAT: Pretest Instrumentation

I created the Baseline Knowledge Assessment Tool (BKAT) to collect initial participant data using the principles of Berdie et al. (1986) to craft a tool with brief, clear, and understandable questions that appeared in a logical sequence. Along with demographic data (as detailed in Tables 1 and 2), the instrument included statements with three choices of responses, where 3 = *to a great extent*, 2 = *somewhat*, and 1 = *to a lesser extent*. The goal of the instrument was to elicit the level of participant self-awareness about their confidence in their understanding of basic HR principles, skills, and activities. An example statement included: *I can identify causes of performance issues and participate with leaders (or my team) to propose or recommend improvement interventions.* Three high-level HR individuals administered a pilot version of the pretest instruments to their employees. Information from the results of the pilot testing aided in making the instrument stronger, by revising the questions to read as statements and by revising the scale statements to align better with Likert-scale principles. The full BKAT appears in Appendix A, whereas the instrument statements appear in Table 4.

Organization and Participants

The participating organization was a city office located in Georgia with 60 HR professionals in the HR department, who handled compensation, employee relations and development, policy and planning, and business operations. A random sample of 20 of the 60 employees (using names drawn from a fishbowl) provided the participants for the study. Respondents received notification of the opportunity to participate in the training exercises, and everyone agreed to participate in the study. During the briefing room meeting, I conducted the BKAT to assess the selected participants' familiarity with HPT/HPI. All participants signed informed consent forms.

The participants had various roles and experiences in the organization, as self-revealed by taking the BKAT and provided in Table 2. Participant demographics appear in Table 3. Half of the participants worked as individual HR contributors, while the other half were leads, supervisors, or manager-level HR professionals.

Table 2

Roles and Experiences of Participants

HR Area		HR Functions		Decision-Making Authority	
Areas	*n*	Titles/Roles	*n*	Scope	*n**
Compensation/Payroll	2	Individual	10	Budgeting/Spend	3
Diversity Management	2	Team Lead/Supervisor	7	New Initiatives	10
Recruitment/Relations	3	Manager/Director/Executive	3	Work Accomplishment	20
HR Benefits	3			All Areas	3
HR Business Office	3				
Organizational Development	3				
Policy and Planning	4				

Note. *Total for scope > 20, since participants could choose more than one scope of authority.

Table 3

Participant Demographics

Participant Code	Age	Years of Experience		Percentage of Years in Government
		T	G	
A	56	30	10	33
B	47	20	13	65
C	32	4	3	75
D	35	11	3	27
E	50	15	6	40
F	28	2	2	100
G	44	7	7	100
H	52	20	13	65
I	46	10	6	60
J	50	24	20	83
K	44	20	3	15
L	36	8	8	100
M	42	9	9	100
N	47	13	8	62
O	49	5	5	100
P	29	5	2	40
Q	29	3	3	100
R	33	7	4	57
S	34	6	4	67
T	30	4	3	75

Note. T = total years of HR experience; G = years of government HR experience; 100% of participants had taken professional development before this experience.

Case Study and Process Map

The BKAT elicited baseline information to answer Research Question 1. In action learning, the research questions proceed through a logical, cyclical progression of data collection, analysis, more data collection, analysis, and so on (Glanz, 2016). Table 4 provides the results of the initial round of data collection. This part of the study was the pretest segment, designed to answer RQ 1: What was the current level of knowledge and understanding of HPT/HPI in the city HR employees?

Table 4

BKAT Responses

Statement	Frequencies			Central Tendency Statistics			
	3	2	1	*M*	*Mdn*	*Mo*	*Wavg*
1. Statement(s) in the organization's mission, vision, goals, and/or values reflect organization and/or employee performance improvement as driver(s) for success.	1	8	11	1.5	1	1	1.5
2. The HR function uses various strategies to communicate the importance of human performance improvement in process/program effectiveness.	3	14	3	2	2	2	2
3. The HR function employs performance consultants or espouses a performance/customer service mentality.	0	11	9	1.55	2	2	1.55
4. I understand the terms "Human Performance Technology" (HPT) and/or "Human Performance Improvement" (HPI).	2	11	7	1.75	2	2	1.75
5. Since business goals are critical drivers for the organization, I engage with leaders (or my team) in conducting business analysis.	5	9	6	1.95	2	2	1.95
6. I understand and have a regular role in the organization as it relates to diagnosing performance issues, or gap analysis (conducting performance analysis).	1	8	11	1.5	1	1	1.5
7. I am capable of identifying causes of performance issues.	7	10	3	2.15	2	2	2.2
8. I participate with leaders (or my team) to propose or recommend improvement interventions.	4	9	7	1.85	2	2	1.85
9. I prioritize and determine what programs/solutions will be considered for implementation.	2	8	10	1.6	1.5	1	1.6
10. I initiate and/or participate in conducting evaluation strategies for interventions, programs, etc.	2	9	9	1.7	2	2	1.65

Note. Response numbers mean the following on the instrument scale: 1 = *to a less extent*; 2 = *somewhat*; 3 = *to a great extent*. Total respondents $N = 20$.

Pretest Discussion

Table 4 shows the breakdown of the level of agreement each participant had with the statements. A set of statistics shows how a learning director, HR leader, or trainer can evaluate the results. The mean score (*M*) typically depicts the central tendency value (Gall et al., 2003). However, in this case, with only three choices and the choices representing categorical meanings using ordinal data, each Likert item on the scale should be analyzed by using

frequencies, mode, or median statistics (Alkharusi, 2022), saving mean data for a consolidated scale item set, which this set did not include.

Pretest Limitations

Providing the full set of statistics shows that very little difference appears among the three numbers (*M*, *Mdn*, or *Mo*), but part of that relates to the low sample size combined with only three choices. However, in a larger study, a conscious decision to choose a specific central tendency statistic should be made using relevant facts and data. Following Alkharusi's (2022) suggestion to differentiate between item and scale data will assist in making that decision. Using a three-point Likert scale meant that participants had no choice but to pick a level that may not have entirely reflected an accurate depiction of their perceptions (i.e., there were no options for *not at all* or *mostly*, which a 1 and a 4 choice might have provided; these options could have provided more delineation in results).

Pretest Noteworthy Datapoints

The two lowest scores included participants feeling that the organizational strategy was not part of the performance improvement process and having little input into the gap analysis for the organization (Q1, 1.55 mean and weighted average score, 1 median and mode score, which meant *to a lesser extent).*

Before the training, the participants were most confident that they could identify causes of performance issues (Q7, 2.15 mean score, 2.2 weighted average, and 2 as both the median and mean score). As the highest score of all statements, this answer meant *somewhat*.

No statements earned *to a great extent* as mean, median, mode, or weighted average.

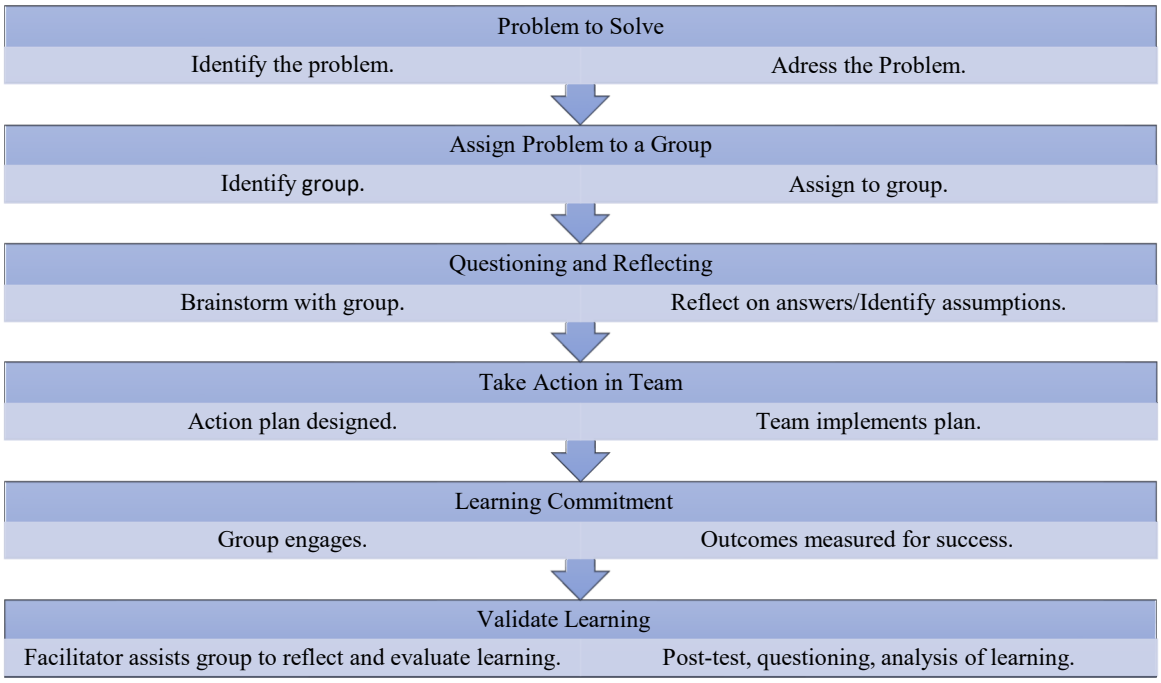
As a result of this pretest, an action learning intervention was designed to provide learning about HPT/HPI. Table 4 answers RQ1 by showing the study's HR professionals' levels of understanding (self-reported).

Intervention

An intervention process and implementation plan ensued after the pretest completion to answer RQs 2 to 4. The process incorporated steps from the World Institute for Action Learning, designed to facilitate action learning in teams, as Volz-Peacock et al. (2016) described. The components and their relationship to action learning are provided in Figure 1.

Figure 1

Components of Action Learning



Facilitating an HPT/HPI Intervention Created by the Teams

To start the process, the groups were asked to fulfill the roles of the departments to which they were assigned (i.e., training, benefits, employee relations, etc.). Each team member was asked to write one performance-related problem they were experiencing in their daily organizational life and include it on a slip of paper, which we put into the fishbowl. Thus, 20 problems were put into the fishbowl, and we pulled one out for each of the five groups. The remaining part of the intervention surrounded my assisting each team with creating an HPT/HPI-related plan and solution for their assigned problem.

Bens (2000) suggested that facilitators should empower learners and encourage collaboration. Thus, I acted as facilitator of the group interactions to ensure that all participants felt comfortable participating and no specific individuals took on dominating roles. Marquardt's process steps were also implemented with the actions noted in Figure 1. My initial role included creating and naming five groups, providing them with appropriate tools (e.g., room to work and laptops for each group), designing the training curriculum, and implementing the learning. The program used a 20% facilitator/80% participant design structure, and the actual intervention steps included these:

1. The instructor provided a foundation of knowledge for the action learning group to work from with a more traditional learning approach but fostering personal reflection and critical thinking.
2. The instructor transitioned to "model" the process.
3. The instructor reviewed the project agenda with timelines and expectations; teams consulted with the instructor at each step.
4. The instructor consulted with teams regarding the reflective inquiry process, "not knowing "approach, group dynamics, and dialogue.
5. Each team generated objectives and goals for learning and problem-solving via reflective inquiry and dialogue.

6. Each team analyzed the information and solutions involved in solving the stated real-world issue within the given time frame.
7. Each team identified specific timeline strategies for meeting objectives and goals.
8. Teams implemented their plans.
9. After the project, teams presented their work to the larger group, sharing what they learned regarding making a difference, what went well, what they would change, and why.

Post-Test

A post-test measured the participants' assessment of the overall intervention's success and their levels of self-confidence in taking their new knowledge back to work. Two instruments collected these data: a Level 1 assessment called the *moderate intensity assessment* (MIA) that measured how well the participants perceived the intervention had succeeded, and a Level 2 assessment called a *self-efficacy assessment* (SEA), which measured the participants' level of self-confidence in using the skills covered by the training intervention. Appendices B and C provide the MIA and SEA forms, respectively.

MIA Quantitative Results

A 3-point Likert-styled scale provided options for the participants to choose responses to questions. First, the participants were asked whether the strategies they were taught or used in the intervention seemed similar to real work, where 3 = *simulated real work,* 2 = *minimally applied to my real work,* and 1 = *did not apply to my real work.* While everyone felt the intervention simulated work somehow, $n = 15$ ranked the intervention at a 3-level, and $n = 5$ ranked it at a 2-level (minimal application). Participants rated the training's time value as well; ten (half of the) participants felt the training time exceeded the time they needed to learn the concepts, six felt their time spent was the same as the value they received, and four felt they needed more time in training to learn the concepts. Finally, when asked if they planned to transfer what they learned to their daily work, the responses were similarly divided, with $n = 11$ saying they planned to meet with their manager and establish new goals for themselves, $n = 5$ said they planned to talk with other trainees about the training, and $n = 4$ said they had nothing from the training to apply to their work.

MIA Qualitative Results

Two sets of compound questions elicited qualitative responses from the participants. The first set were: *What were the strengths of the action learning?/What was most valuable to you?* The second set were: *What were the weaknesses of the action learning?/What would you recommend to improve this for future sessions?* The responses, shown in Table 5, were analyzed using a segmented labeling system (Creswell, 2003).

Table 5

MIA Codes and Themes

Codes	Representative Participant Comments	Theme	*n* (%)
Technology	Web searches for idea generation were useful.	Group learning using search engines.	7 (35%)
Learning by Doing	Learning the difference between action learning and regular training was extremely helpful in understanding why we were learning the way we were during the intervention.	Self-learning and problem-solving.	11 (55%)
	Discussing our issues openly (reflection) and questioning to gain move in another direction.	Discussion through reflection and questioning.	3 (15%)
	Working with a large group was interesting.		
Time	Did not appear to be enough time to navigate through all activities. Too much time spent on the computer finding answers.	Value of content less than time.	4 (20%)
Participation	Instructor participation appeared to be too minimal.		
	Some participants seemed unfocused and, at times, unwilling to participate. Not used to the action learning format.	Lack of focus/participation	2 (10%)

Note. N = 20 participants, n = 12 contributed, and n = 8 did not contribute to the MIA qualitative questions.

SEA Quantitative Results

The self-efficacy exam allowed the participants to self-reflect on their confidence in using the HPT/HPI action learning from the program within their daily work lives. Results are provided in Table 6.

Table 6

Results From SEA

HPI Components	5	4	3	2	*M*
Business Analysis	9	11	0	0	4.45
Performance Analysis	3	14	3	0	4
Cause Analysis	6	7	7	0	3.95
Intervention Selection	6	12	2	0	4.2
Intervention Implementation	10	9	1	0	4.35
Evaluation	5	13	1	1	4

Note. No participants chose 1 for any answer. Likert-styled answers were 5 = *extremely confident of ability to apply and assist others with applying*; 4 = *confident of applying learning independently*; 3 = *moderately confident of applying learning but might need help*; 2 = *moderately unsure of how to apply learning and will need periodic help to do so*; 1 = *unsure of how to apply and will need help.*

After the training, the participants felt most confident about their ability to perform business analysis and implement an intervention. They were least confident in performing a cause analysis, although, in the BKAT, the participants

had stated they felt comfortable with cause analysis. However, during the action learning process, it was apparent that many had not seen cause/effect diagrams before the training and were unaware of scientific or structured process maps for determining causation (i.e., fishbone diagrams).

SEA Qualitative Results

Similar to the MIA, qualitative, open-ended questions allowed participants to provide comments about the strengths and weaknesses of the training. From this set of qualitative information, themes emerged that assisted with considerations of how well the training met the needs of the participants, along with some of the activities they planned to take with them to their roles. Themes included the following, with a representative quotation from the qualitative feedback:

Sharing With Managers. "We will discuss concepts learned with managers to include the overall leadership teams in the HR function. The discussion will center on overall topics, emphasizing gap and cause analysis."

Sharing With Teams. "Learning and discussions from the training will be shared with teams…mostly peers. Before discussing with managers, I will convince teams that concepts will work in our processes."

Continuous Learning. "To transition learning effectively, I will need to keep learning more about HPT. Doing so will make it simpler to include concepts in work processes."

Affecting Change as a Result of Learning. "I am willing to change how we work to include HPT but realize this will only occur if managers are exposed to and support HPT concepts."

Other Comments. "Overall, the information from the action learning intervention was good. I believe good opportunities exist as they relate to HPT. Maybe managers should receive the same training."

Research Questions Postintervention

The BKAT pretest answered the original research question. The remaining questions were answered by the MIA and SEA, as well as the observed behaviors during the training. RQ2 asked about what learning paradigms support action learning. The hands-on training with a live, team-approach paradigm worked well in this case study. RQ3 asked about the HR professional participants' reaction to learning new HPT/HPI skills during an action learning process. While the reactions were mixed, more than half of the participants planned to return to their work and managers and establish new working goals. While some participants expressed that the training needed to be longer, was not exactly tied to their work goals, or seemed unfocused, most seemed to appreciate and enjoy it. RQ4 asked about the level of confidence that HR professional participants had in applying their new knowledge at work. The results of this were positive; on all but one of the skills, the participants scored their confidence levels at *confident of applying learning independently*; no participants chose a 1 (*unsure of how to apply and will need help*) for any of the questions, and overall, the participants reacted with positive ideas for how they might continue learning about and using HPT/HPI in the future.

Discussion and Practical Implications

When this case study was implemented in a government organization (2009), HPT and HPI were fairly unknown processes. By involving an entire professional team in hands-on training, the concepts and new paradigms were provided to the organization in a way that did not threaten the work being done and showed how solutions to daily problems could be found using the processes.

Today, high-performance organizations have become not just the norm but required. HR teams must always be ready to encourage performance improvement while baking continuous improvement, learning, skill development, and skill building into the daily culture. Practically, this case has identified a potential way for HR teams struggling to implement new skills into their organizations. While many HR teams fear the cost and time commitment of a pretest, intervention, or post-test-styled training, the opportunities that arise due to such an endeavor are significant, even if difficult to measure.

While the study was limited by scope, time, and number of participants, the outcomes showed that even training for a day or two can lead to positive results. Action learning has, as one of its limitations, the lack of statistical

significance from the collected quantitative data. However, adding the information gleaned by working with the participants and asking for their qualitative feedback can lead to meaningful results.

Future Research Ideas

The Revans' $L = P + Q$ formula remains available for more research. While quite a bit of this study's training included the programmed knowledge of HPT/HPI and the thoughtful and reflective questioning as envisioned by Revan, perhaps another study where a more structured preliminary approach of what those questions might look like before the start of the study would be helpful. Using this study as a guide, creating a more robust set of pre-and post-test questions that would test the same concepts might also be a consideration.

A Call to Learning Officers

The new model that uses "learning officers" to oversee curriculum and training content and development in organizations has arrived. As a result, HR teams have "boots on the ground" that can provide meaningful feedback about returns on investment, transfer of training, and data analyses that lead to greater insights into training needs, training outcomes, trainee motivations, and the skills gap situation in organizations. Finding ways to share this knowledge is critical. HR teams and leadership must be encouraged to admit they have skills gaps in these areas. Learning styles, training styles, metrics and evaluation practices need modernization. The HPT/HPI process is one way of doing this – what others are being used today? Please reach out to the primary author if you have ideas, thoughts, or wish to provide feedback on this topic.

Conclusion

This case study depicted a real-world training exercise within a governmental organization where HR professionals were the participants (instead of the trainers). As can be seen by the results, some HR professionals were pushed beyond their comfort zone when asked to think outside their normal box of how training should look, and their responses (and, in some cases, lack of responses) showed just that. *Train the trainer* styled training is typically needed when new ideas, concepts, or skills are introduced to an organization. This case helped show how to do this with HR professionals, who can bring their new skills back into the organization and begin filtering them through their teams.

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Appendix A: Baseline Knowledge Assessment Tool (BKAT)

The following is a template for creating a pretest to gauge the trainees' baseline knowledge. Replace sample content with content from the organization's goals for the training, most likely as determined from a validly conducted needs assessment. Current content shows how the original case study BKAT was presented to participants of the study.

Using Microsoft Forms or other survey tools, this can be quickly automated with data responses monitored by department, team, individual, or other methods. Anonymous data for the self-assessment may be appropriate to ensure more honest responses.

Section 1. Demographics

This section would request information pertinent to the company's participant pool. Often age, experience in years and positions held, education level, and sometimes gender or race might be captured. Roles could be asked to determine breadth of working groups.

Section 2. Self-Assessment

Each statement would include choice options; the original BKAT used a 3-point Likert of 3 = *to a great extent*, 2 = *somewhat*, and 1 = *to a lesser extent*. Recommended changes could be using a 5-point Likert of 5 = *always, as a regular part of my job duties*; 4 = *usually, but not always*; 3 = *sometimes, as a member of a larger team or as an irregular part of my duties*; 2 = *previously in a different role or not often*; and 1 = *never*.

Statements

The organization's mission, vision, goals, and/or values reflect organization and/or employee performance improvement as driver(s) for success?

The HR function uses various strategies to communicate the importance of human performance improvement in process/program effectiveness?

The HR function employs performance consultants or espouse a performance/customer service mentality.

I understand the terms human performance technology (HPT) and/or human performance improvement (HPI)?

Since business goals are critical drivers for the organization, I engage with leaders (or my team) in conducting business analysis?

I understand and have a regular role in the organization as it relates to diagnosing performance issues, or *gap analysis* (conducting performance analysis)?

I am capable of identifying causes of performance issues?

I participate with leaders (or my team) to propose or recommend improvement interventions?

I prioritize and determine what programs/solutions will be considered for implementation?

I initiate and/or participate in conducting evaluation strategies for interventions, programs, etc.

Appendix B: Moderate Intensity Assessment (MIA)

This sample MIA shows the content for the case study discussed in the article. Content should be tailored to the unique training conducted by the organization using the form. While this form shows 3-point choices, a 5-point choise option can easily be created by adding more content.

ADVANCING HUMAN PERFORMANCE TECHNOLOGY THROUGH PROFESSIONAL DEVELOPMENT

Directions: This self-assessment is to be completed after the action learning intervention on HPT/HPI. The purpose of this assessment is to obtain your reaction to the training immediately after training is completed.

Please select only one response for questions 1-3. Provide comments for question 4 & 5. The results of this assessment will remain confidential.

1. What was the value of the HPI objectives in terms of practice and review?
    - The HPI strategies simulated real work world
    - The HPI strategies had minimal application to my job
    - The facilitated session did not reinforce content
2. What was the value of the facilitated session to your time?
    - Value exceeded time
    - Value was equal to time
    - Value was less than time
3. What will you do when you return to the job to begin the process of applying what you have learned?
    - Meet with my manager and set goals for myself
    - Talk with others who took the class
    - Nothing; Learning does not apply to my specific job roles

4. What aspect of the training was the most valuable to you? [Fill in blank].

5. What would you recommend to improve future sessions? [Fill in blank].

Appendix C: Self-EfficacyAssessment (SEA)

This self-assessment is to be completed after the action learning intervention on HPT/HPI. Rate your perceived confidence in applying the knowledge and tools presented in the training.

Section 1: Quantitative Ratings

Select a response that rates your level of confidence using this scale for each item below.

1 = Unsure of how to apply and will need help in doing so
2 = Moderately unsure of how to apply and will need periodic guidance
3 = Moderately confident of how to apply but may need assistance in doing so
4 = Confident of how to apply and will be able to do so independently
5 = Extremely confident of how to apply and will be able to assist others in doing so.

Human Performance Improvement Components/Categories

Business analysis in general.

- Identifying important goals
- Determining specificity and measures

Performance analysis in general.

- Desired vs. Actual state
- Diagnosing issues

Cause analysis in general.

- Root Cause
- 5-whys

Intervention selection in general.

- Matching interventions to causes
- Recommendations

Intervention implementation in general.

- Manage the project
- Adapt to change

Evaluation in general.

- Formative
- Summative

Section 2: Qualitative Open Ended Responses

Please answer the following by explaining your thoughts on these questions:

- What would it take to change the way you approach performance improvement in your department?
- How would you get management to "buy-in", at a minimum, to reviewing and considering human performance technology/improvement methods in HR practices?
- What can/will you do to share human performance technology/improvement methods with co-workers, supervisors and managers?