A Rose by This or Any Other Name

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Human performance technology (HPT) provides an evidence-based approach to improving the performance of individuals, teams, and organizations. As a complex approach that requires many pages to define and years of experience to master, the future of HPT depends on the discipline of future practitioners as well as their willingness to approach problem-solving in a rigorous way. Given a definition that is based on a synthesis of those from other authors and a list of critical attributes, a practitioner can review any project or approach to determine whether it falls under the HPT umbrella. Continuing with HPT into the future will depend on the context within which we work and whether future practitioners have a willingness to continue with a systematic, system-based approach that relies on evidence or whether there is a strong trend toward basing decisions on superstition and ideology.

Before we can make an educated guess about the future of human performance technology (HPT), we must first define it. There have been a number of definitions, including some from Thomas F. Gilbert (1992, 1996), who is often described as the "father of HPT," as well as those in the various editions of the *Handbook of Human Performance Technology* (Pershing, 2006; Stolovitch & Keeps, 1992, 1999), one that is posted on the ISPI website (International Society for Performance Improvement, n.d.), and various other publications (see, for example, Addison, Haig, & Kearny, 2009; Fuller & Farrington, 1999; Robinson & Robinson, 1998; van Tiem, Moseley, & Dessinger, 2004; Watkins & Leigh, 2009).

One of the best ways to define something is to do a concept analysis (Merrill & Tennyson, 1977). To do that for "human performance technology," we must first have a working definition. From that definition, we can identify HPT's critical attributes, as well as those that can vary, which we can then use to determine whether a practice or methodology (by any name) is an example of HPT. Once we have done that, then we can extrapolate into the future to at least imagine whether HPT will still be with us in, say, 50-years' time.

What follows is a sample of key definitions and critical attributes taken from a number of authors who have written about HPT. Working from those definitions, we can consider a synthesized definition and a working list of critical attributes that can be used to review current practices and to forecast the odds of HPT's survival into the future.

Selected Definitions and Critical Attributes

Over the years, key contributors to the practice of HPT have provided compatible, but not matching, definitions and critical attributes

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TABLE 1 SELECTED HPT DEFINITIONS AND CRITICAL ATTRIBUTES

SOURCE AND DEFINITION	CRITICAL ATTRIBUTES
Gilbert (1992): "a sort of scientific way to improve human performance in the workplace" (p. xiii)	A technology that is grounded in the application of science for practical purposes, a focus on human accomplishment as the valuable output of behavior, a dependence on observation, a practice that is guided by evidence, and one that is grounded in measurement.
ISPI Presidential Initiative Task Force (2004): "an integrated systems approach to improving human performance" (p. 6)	A focus on valuable, measured results; considering the system within which people work; using valid and reliable measures to determine the effectiveness of HPT applications (interventions); and choosing applications that are grounded in (or not discouraged by) prior research or empirical evidence.
Van Tiem, Moseley, and Dessinger (2004): "the systematic process of linking business goals and strategies with the workforce responsible for achieving the goals. PT practitioners use a common methodology to understand, inspire, and improve people; they study and redesign processes leading to increased performance in the workplace. PT systematically analyzes performance problems and their underlying causes and describes exemplary performance" (p. 2)	A systematic process, a link between goals and strategies and the workforce, improvements to people and processes, and problem analysis, including root causes.
Addison, Haig, and Kearny (2009): including "all the variables of human performance," used "to identify the factors that enable workers to perform their jobs and produce desired results" (p. 4)	Tools and processes for identifying opportunities, solutions, and return on investment, and "building blocks to construct new performance environments and systems" (p. 4). They also refer to the critical attributes listed by the ISPI Presidential Initiative Task Force (2004).
International Society for Performance Improvement (n.d): "a systematic approach to improving productivity and competence, uses a set of methods and procedures—and a strategy for solving problems—for realizing opportunities related to the performance of people"	Systematic, improving productivity and competence, problem solving, taking advantage of opportunities, related to the performance of people, the ADDIE model, cost-effectiveness, influencing behavior and accomplishment, performance analysis, cause analysis, intervention selection, and application to groups of almost any size.

of HPT, as shown in Table 1. Gilbert's (1992) definition is from the first edition of the *Handbook of Human Performance Technology* (see also Gilbert, 1996). In 2004, an ISPI task force consisting of a number of long-time ISPI contributors met "to establish a framework to help clarify what HPT is and is not" (ISPI Presidential Initiative Task Force, 2004, p. 1), and worked out a definition together. Academics (see van Tiem et al., 2004) and practitioners (see Addison et al., 2009) have provided compatible definitions. The International Society for Performance Improvement

(2011), which is dedicated to promoting HPT, provides a definition on their website. They describe the process that performance consultants use to execute projects:

> It is a process of selection, analysis, design, development, implementation, and evaluation of programs to most cost-effectively influence human behavior and accomplishment. It is a systematic combination of three fundamental processes: performance analysis, cause analysis, and intervention selection, and can be applied to individuals, small groups, and large organizations.

For the sake of looking forward to the future of HPT, here is a definition that synthesizes many of the attributes listed above: HPT is the systematic application of a system approach to improving the performance of individuals, teams, and organizations. The means for doing this must be grounded in observation and supported by evidence. The results must be measured to ensure that the desired ends were obtained.

Using this as a working definition, we can also combine the various lists of critical attributes into one list that we can use to compare various approaches by whatever name:

> *Systematic:* having a "fixed plan or system" (New Oxford American Dictionary, Version 2.1.3, definition of *systematic*), such as including performance analysis, root-cause analysis, and intervention analysis, or following a problem-solving model, for example, the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model (if one of the identified gaps is a lack of knowledge or skills, plus, this model is also sometimes used as a framework for noninstructional efforts). This is in contrast to following an unstructured, unplanned, or disorganized approach. Following a systematic process should not mean that the solution (or solution set) for every problem would be the same. HPT must be solution-neutral (Rummler, 2007).
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> *System approach:* characterized by taking into account the interdependence and interactions of elements within an integrated whole (such as an organization), including goals, inputs, processes, and outputs. This is in contrast to attending to problems or opportunities in isolation, without considering the ways that elements within a system influence each other.
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> *Focus on performance:* the results of actions, as defined by goals, which are known by a variety of terms, for example: "worthy accomplishments" (Gilbert, 1996), "business needs" (Fuller & Farrington, 1999), "desired workforce performance" (van Tiem et al., 2004), or "closing the gap between 'is' results (what exists now) and 'should' results (what the client desires)" (Rummler, 2007, pp. 2–3). The performance we seek to improve may involve the job performance of individuals, the results of a process, or the performance of organizations. This is in contrast to focusing primarily on behavior

(the means of achieving results) or on the performance of tools or software, for example.

Observation: sometimes referred to as "data driven," as opposed to basing analysis or evaluation on tradition (what we have always done) or guesswork.

Supported by evidence: choosing solutions that have been shown, via research or respected practice (we cannot point to research evidence, but in a number of cases these solutions have provided the desired results), to be helpful in similar contexts. Trying new solutions is permitted, provided there is not strong research evidence to suggest that they will not work (ISPI Presidential Initiative Task Force, 2004). This is in contrast to choosing solutions without considering available evidence, based on "snake oil" (Clark & Estes, 2008; Farrington & Clark, 2000) or ideology (Pfeffer & Sutton, 2006).

Measured results: direct, comparative, or economic measures that quantify results in terms of quality, quantity, costs, or other valued factors. This is in contrast to assuming or guessing that a solution or set of solutions has resulted in meeting the business need, as intended.

Given this or a similar list of critical attributes (see also Lane, 2000), we should be able to sort both existing and potential future approaches that people use for performance improvement into examples and nonexamples of HPT. To the extent that an approach possesses the critical attributes, then it can be an example of HPT, regardless of what it is called, and depending on appropriate execution. If it does not possess these attributes, then it may have some elements in common, but it should not be classified as an obvious example of HPT. HPT is flexible and can be adapted to the customs of different organizations and cultures as long as the critical attributes are maintained.

Examples of HPT

Can we recognize HPT when we see it? To take a contemporary example, let us compare a generalized look at instructional design (ID) to our list of criteria for HPT:

Systematic: The design follows the ADDIE model (or problem-solving models that can be mapped to ADDIE). Competent instructional designers will start with an assessment, perhaps adding another *A* to *ADDIE* (Kaufman, Watkins, & Guerra, 2001) to identify the barriers leading to performance gaps for a particular project, and they will not recommend training if there is not a barrier to performance that includes a lack of knowledge or skills.

System approach: The best practitioners consider the system within which knowledge and skills must be learned and applied. They also build their programs based on goals, and they determine whether the root cause of the business problem or opportunity they are solving for involves a lack of knowledge and/or skills. The best of them consider inputs, processes, and outputs as they conduct a task or cognitive task analysis to analyze the content that must be taught.

Focus on performance: Again, the best instructional designers start with the business problem or opportunity, and move forward with training only if there is a lack of knowledge and/or skills in the way of desired results. The purpose of an ID project is not primarily to *provide training,* but instead to improve performance to help achieve a worthy goal.

Observation: Although conducting an "armchair analysis" based on imaginary practices within a company may be tempting, instructional designers recommend observation of current practice before deciding what people already know or do not know related to the business issue at hand.

Supported by evidence: Instructional designers can, and we hope that they do, base their decisions about how to approach a knowledge and skill gap on a mountain of available evidence, from whether objectives assist learners to learn to whether writing an action plan at the end of a training program improves learning transfer.

Measured results: Instructional designers have well-documented measures for their programs, at a variety of levels, from reaction to ROI (Kirkpatrick & Kirkpatrick, 2007; Phillips & Stone, 2002). Although instructional designers are sometimes discouraged from measuring training results due to a lack of resources or interests, those measures are part of the instructional design process.

Given that well-executed instructional design projects can meet all the critical attributes for HPT, we can say that such instructional design projects do fall under the HPT umbrella. Other candidates for inclusion under this umbrella include (but are not limited to): human factors engineering (including ergonomics), organization development, Six Sigma, and sociotechnical systems. The best practitioners in each of these disciplines use a systemic, systematic approach, and they are results driven, include observation versus guesswork, make decisions that are supported by evidence, and provide measured results.

Can we find nonexamples of HPT? Yes: a project that does not follow the critical attributes listed here—one that is not systematic, does not follow a system approach, does not focus on performance, does not include observation or a reliance on evidence, and does not provide measured results—does not follow an HPT approach. A practitioner who has a "bag of tricks" that she applies with an "I have a hammer; therefore, you need

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a nail" mentality is not using an HPT approach. Practitioners who use solutions that have been shown not to work, such as, for example, employing certain personality inventories for personnel selection or basing design decisions for training on learning styles (Wallace, 2011), are not employing an HPT approach.

More important than whether any idealized description of a particular solution's *methodology* explicitly meets a particular set of attributes for HPT is whether a practitioner, often called a "performance consultant" (Rummler, 2007), *uses an approach* that meets the critical attributes for HPT. It is the *approach* that a consultant or team uses that meets or does not meet the critical attributes that qualify a project as one that we would call HPT, not the specific method of analysis, choice of solution(s), or methods of evaluation.

HPT has many variable attributes. These include the models used to carry out a project, the type of problem or opportunity for any given project, how a system is studied and considered before deciding on a solution, the methods used for observation and analysis, the type and size of organization, the culture(s) within which the organization resides, the internal and external factors that affect performance, the particular solution(s) chosen to remove barriers to achieving desired goals, and how the results of the project are measured.

However, a performance consultant who is following an HPT approach (Rummler, 2007) can employ solutions that do not in themselves meet the critical attributes for HPT inside the larger framework of an HPT project. That is, given the appropriate focus on results and a systemic, systematic process, the solutions recommended by a performance consultant may not fit within the "usual" set of solutions that we employ. For example, recommendations for solutions might include implementing a new dress code or moving employees to a new building. But the project itself may meet all the criteria and therefore be labeled as HPT.

Looking to the Future

HPT is still a fairly young set of practices (Stolovitch & Keeps, 1992). In 50 years, will people be more or less prone to using a systemic, systematic, evidence-driven approach, or will they abandon science and technology in favor of superstition, ideology, and beliefs? This is difficult to predict, as the principles underlying what people accept as evidence that something is or is not true has varied over the centuries. Great periods of discovery and enlightenment are sometimes followed by long periods of turning away from evidence-based approaches.

Even today, in our corporate and educational institutions, a variety of refuted approaches continue to thrive (Clark & Estes, 2008; Pfeffer &

Sutton, 2006). Following scientific evidence rather than acting on beliefs can be an uphill struggle (Mooney, 2011), despite living in a society that we hope is moving beyond relying on snake-oil remedies. If we collectively abandon evidence-based approaches, then HPT, by whatever name, will fall by the wayside.

As has been noted elsewhere in this special issue (Kaufman & Bernardez, this issue), HPT has grown in complexity and changed over the years as research and practice provide more insights. Processes and methodologies that meet the critical attributes to fall under the HPT umbrella have been discovered or invented many times under many different names in a number of contexts. Does HPT have a future? As long as we have systemic, systematic processes for improving performance that meet our criteria, then, yes, HPT will survive. Will it be called *HPT*? That is difficult to predict, but approaches that include HPT's critical attributes will survive unless we enter a historical period where ideology predominates and evidence-based problem solving becomes a thing of the past.

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