Preface

This book introduces five values of people and technology development through the five point Hughes Value Creation Model for Organizational Competitive Advantage. The framework was derived from my 20 years of personal experience within high-performance manufacturing industries, academia, and consulting. The framework depicts opportunities for examining the similarities between technology development and human resource development and how these similarities can be used for value creation within organizations. The model provides a starting point to determine the extent to which location, use, maintenance, modification, and time value creation may be obtained from integrating technology development and human resource development from the cognitive, behavioral, and cultural perspectives (Hughes, 2010).

People as Technology (Hughes 2010) parallels the development of people to the strategic methods senior managers use to introduce new innovations and technology into their organizations. The concept of People as Technology introduces a more proactive, strategic approach to bring employees into and develop them within an organization. Interpreting and accepting this concept requires managers to think of employees as they would think of technology. Technology, equipment, and systems are strategically aligned within organizations. This concept asks managers to, also, strategically develop people throughout the organization so that they can be more successful and the organization will continuously improve.

People are considered the most valuable asset within an organization. How are employees shown that they are valuable to the organization? What are the best location, use, modification, and maintenance of their skills? What is the time value of an employee to the organization? People and technology both have location, use, maintenance, modification, and time value to the organization. How these values are managed determines the competitive advantage of the organization. A detailed explanation of the values and practical examples of their advantage to the organization will be provided.

THE CHALLENGES

Organizations are constantly trying to balance people and technology within the workplace. There have been numerous methods used and billions if not trillions of dollars spent to try and leverage the effectiveness of people and technology within the workplace to increase productivity and ultimately competitive advantage for the organization (Friedman, 1970; NAECBSS, 1991). In today’s highly technological, globalized economy, it is essential that practitioners and researchers understand that people and technology do not exist in isolation of each other within the workplace. Intuitively, it is accepted that people and technology are intertwined within most operations; yet, objectively their value are not clearly known.
Kozlowski and Salas (2010) stated that “There are few or no comprehensive frameworks that help us understand how, why, and when particular individual differences are likely to promote learning” (p.4). The objective and mission of this book is to help leaders within organizations understand how they can value people similar to how they currently value technology within organizations. The purpose of this book is not to treat people like one would treat technology, but to assist with management intent and introduce a new paradigm of thought for leaders as they develop strategies to enhance productivity. Four key challenges are to determine:

1. The intention of management with regards to people and technology development within organizations.
2. The ways that managers currently value people and technology in the workplace.
3. The impact of development initiatives that align people and technology within the workplace.
4. The role of the cognitive, behavioral and/or cultural perspective of organizations’ effect on its people and its technology.

Hatala and Gumm (2006) noted a twofold challenge for Human Resource Development (HRD) practitioners and researchers: 1) Provide training that meets the operational needs of the organization and 2) Ensuring the individual employee receives personalized training for the purpose of performance improvement and self-fulfillment (p. 229). Using the value creation framework will allow organizations to address these challenges.

The challenge of understanding the intention of management with regards to people and technology development within organizations relates to productivity standards and/or goals of the organization (Drucker, 1999). According to Oprah Winfrey, a key to her success when producing her show has been to begin and end with intention. Everyone must understand the intention of what needs to be done to be successful. Productivity occurs through the effective use of people and technology in the workplace. How do managers value people and technology? Is there a better way to value the location, use, maintenance, modification, and time of people and technology in the workplace? To what extent can development initiatives be enhanced by a more effective understanding of the value of people and technology? These are some of the questions that will be addressed within this publication.

The challenge of understanding how managers currently value people and technology in the workplace must be understood to assist organizations as they adjust to technological workplace changes. Change is a constant within organizations. The key is to understand how to adjust and adapt to change in ways that increase the competitiveness and success of the organization (Rogers, 2003; Schein, 1988; Welch, 2005). There have often been broad concepts used to try and understand people in the workplace. The list provided by High (1991) with regards to how to develop a human resource strategy for the people in the workplace is typical throughout many industries:

- Place heavy emphasis on the selection process for capability and skills
- Center around significant investment in in-house and developmental training
- Deemphasize organizational structure and titles
- Emphasize communication
- Allow people in the decision-making process, including pay and disciplinary action
- Create flexibility in employees’ willingness and ability to handle different tasks
- Be contingent upon working in teams
Hold individuals and teams accountable
Be structurally flat
Recognize and capitalize on the benefits of a culturally diverse work force
Get everyone involved in developing approaches to work
Emphasize that all work and all people are valuable to the company
Provide similar benefits for all employees (p. 125)
Although this strategy list may be beneficial, it does not address the value of the employee within the workplace. It leaves open the question of whether or not managers truly understand the value of the employee within the workplace.

The challenge of the impact of development initiatives that align people and technology within the workplace provides an opportunity for organizations to clearly identify and develop initiatives that clearly address organizational needs. This book focuses on people and technology and not the systems that have been developed to manage people and technology. It emphasizes the value of people and why they are the most important asset to the organization. They manage other people, technology, and development strategies. Many organizations work hard to incorporate new people and new technology into the workplace; however, the focus should be on all people and technology not just new people and technology introduction. All people should be valued regardless of the technology.

The challenge of understanding the role of the cognitive, behavioral and/or cultural perspective of organizations’ impact on its people and its technology and valuing them within these contexts is fundamental to improving the competitive advantage of the organization. Increasing employee motivation and their alignment within the organizational culture (cognitive, behavioral and/or cultural) is also essential (Schein, 1988).

Cognitive theorists believe that a complete view of human behavior cannot be understood “without studying the internal mental and perceptual processes of specific individuals” (Gall, Gall, & Borg, 2007, p. 492). Determining and leveraging employees’ cognitive perspective of their location, use, maintenance, modification, and time value within the organization can lead to needed development of teaching, learning, and motivational procedures and processes. Schmidt, Hunter, and Outerbridge (1986) showed cognitive ability as the single most important cause of job performance.

The behaviorist’s tradition originated from Skinner’s (1957) operant conditioning and has three basic assumptions about learning. They are:

1. Observable behavior, rather than internal mental events or verbal reconstruction of events, should be the focus of study.
2. Behavior should be studied in terms of its simplest elements, i.e., specific stimuli and specific responses.
3. The process of learning is behavioral change. That is a particular response becomes associated with the occurrence of a particular stimulus (Gredler, 2009, p.37).

Understanding employees’ location, use, maintenance, modification, and time value to an organization from the behaviorist perspective may lead to a better understanding of technology’s environmental impact on specific employee behavior within the organization.

Cultural researchers study the relationships that mediate experiences and realities with the contextualist/realist investigation of historical, social, and political structures of power (Bolman & Deal, 2008; Gall,
Gall, & Borg, 2007; Kontogiorghes, 2004; Pfeffer, 1994; & Pfeffer & Sutton, 2004). Comprehending the influence of historical, social, and political structures on location, use, modification, maintenance, and time value of employees may provide: (1) An understanding of the culture that is embedded in the workplace environment; (2) How employees adopt cultural norms of the organization; (3) How leadership by inspiration is effective (Mintzberg, 1998); and (4) How evidence-based management practices are implemented (Pfeffer & Sutton, 2004).

The cognitive, behavioral, and cultural perspectives are important for defining the true value of employees and technology to organizations. Technology value is already an integral part of organizations’ value chain and measurement procedures. Although there are perceived measures of employee value, this author hopes to more clearly define these measures. The following explanation of the five values of peoples and technology (location, use, maintenance, modification, and time) will be explained:

1. **Location Value**: Technology (Capital expense, Engineering expertise, Infrastructure changes) and People (Cohesiveness in assigned environment, Organizational culture, Career development)
2. **Use Value**: Technology (Often, it is known, upfront, how a piece of equipment is to be used before purchasing, Process control, Strategic planning) and People (Selection strategy, Person-Job fit, Job analysis)
3. **Maintenance Value**: Technology (Preventive maintenance systems and processes, Investment in new tools) and People (Training and development, Motivation)
4. **Modification Value**: Technology (Upgrades, Slight modification, Investment to ensure value is derived from this piece of equipment) and People (Growth and change, Job enrichment, Organization development)
5. **Time Value**: Technology (Life span of equipment, Depreciation of equipment expense) and People (Length of time in position, Downsizing/rightsizing)

**SEARCHING FOR A SOLUTION**

It is known from the management literature that the goal of organizations is to be successful within the marketplace in which they compete. Welch (2005) notes that “Winning companies and the people who works for them are the engine of a healthy economy, and in providing the revenues for government, they are the foundation of a free and democratic society” (p.4). This holistic view may not be popular but is necessary if organizations would like to successfully compete within the global economy. Revenue that is generated by organizations is valued by governments and society who benefit from that revenue. The amount of revenue is easily measured and appreciated; however, the contribution of the people who perform the work that generates the revenue is less understood and their value not truly known. Competition revolves around three key things in business: cost, quality, and service. Thus, the solution to valuing people and technology may be related to a measure of cost, quality, and service. Although this may not be quantifiably done with people, it is done with technology.

There has historically been a competition of either technology or people within the workplace. This need not be the case. Researchers who support strategic technology management (Betz, 1993; Snell & Dean, 1992) believe value is created through technology development while those in human resource management and economics (Becker, 1964) believe it is created through human capital investment.
Integrating the literature from strategic technology management, strategic human resource management, and human resource development and exploring how this integration can provide competitive advantage to organizations for better implementation of people and technology development initiatives is a potential solution. The opportunity of equivalence for the key connections between technology development and people development can only enhance the interactions that occur within the workplace. This book provides a comprehensive framework that can be used to develop and design case studies that could measure the identified values that people, technology, and strategy can provide to the organization.

ORGANIZATION OF THE BOOK

The book is organized into fourteen chapters. A brief description of each of the chapters follows:

Chapter 1 identifies the existing challenges in the management of people and technology within the global workplace. The chapter introduces the five point Hughes Value Creation Model for Organizational Competitive Advantage and sets the scene for discussion of the model concepts.

Chapter 2 establishes the need to understand organizations and the perspectives from which organizations develop their initiatives for performance. The author contends that the cognitive, behavioral, and/or cultural perspective is present within all organizations and can influence the productivity gains and competitive advantage of the organization.

Chapter 3 introduces the concept of people as technology and describes technology development and people development within organizations. This chapter explores how these development initiatives may or may not relate to one another. The author examines some challenges of management to recognize these similarities and differences and leverage them to create strategic advantage for the organization.

Chapter 4 reviews the cognitive initiatives including teaching, learning, procedures and processes, and motivation that play a role in the effective execution of organizational goals. The author discusses ways that organizations which focus on cognitive initiatives succeed in the competitive marketplace through its people and technology.

Chapter 5 reviews the behavioral initiatives including technology environmental impact and behavior within organizational culture. The author provides an analysis of how organizations that use behavioral perspectives align their people initiatives with their technological goals.

Chapter 6 reviews the cultural initiatives including embedded in environment, adoption of cultural norms, leadership by inspiration, and evidence based management. The author presents an analysis of issues and concerns related to managing people and technology in an environment that focuses upon cultural initiative on the organizational process.

Chapter 7 addresses the issues of technology location value which includes capital expense, engineering expertise, and infrastructure changes against people location value which includes cohesiveness in assigned environment, organizational culture, and career development. The author suggests that there seems to be reluctance on part of the organizations to fully commit the same resources for people location value as they do for technology location value.

Chapter 8 introduces the concept of use value and analyzes and compares technology use value including the idea that it is often known before purchasing ?how a piece of equipment is ?to be used, process control, and strategic planning with people use value including selection strategy, person-job fit, and job analysis.
Chapter 9 introduces the concept of maintenance value and analyzes and compares technology maintenance value including preventive maintenance systems and process and investment in new tools to people maintenance value including training and development and motivation.

Chapter 10 introduces the concept of modification value and compares technology modification value including upgrades to equipment, slight modifications, and investment to ensure value is derived from this piece of equipment to people modification value, which includes growth and change, job enrichment, and organization development.

Chapter 11 presents the concept of time value and analyzes and compares technology time value including life span of equipment and depreciation of equipment expense with people time value including length of time in position and downsizing/rightsizing.

Chapter 12 explores Strategic Human Resource Development (SHRD) and the extent it has for the potential to embark on the challenges of integrating and enhancing the relationship between people and technology in the workplace.

Chapter 13 explores how the five values can be used to expand performance and workforce interpersonal diversity.

Chapter 14 concludes and presents competitive advantage examples and possibilities for organizations that value people and technology within the workplace.

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REFERENCES


