Human Capital Planning: A Review of Literature and Implications for Human Resource Development

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The shift in the U.S. economy from a manufacturing powerhouse to a service-driven economy has placed a great emphasis on human capital planning within organizations in order to remain competitive in a new global economy. The link between critical business strategy and the successful implementation of strategy has been well documented in the literature. This article examines the literature surrounding human capital, human capital planning, and the implications for human resource development (HRD). The results of the review and synthesis of the literature are provided, and the implications for HRD scholars and practitioners are reported in detail. The research reports an in-depth justification and rationale for the incorporation of human capital planning into practice and research to determine the impact on HRD interventions and organizational performance through the use of a model and process for human capital planning.

Keywords: *human resource development; intellectual capital; human capital; knowledge assets; strategic planning; strategic management*

Although once considered an insubstantial variable, today human capital is recognized as an important factor affecting the success of organizations. As the U.S. economy continues to move from a manufacturing powerhouse to one of service delivery, it is becoming increasingly more important to study the effects of human capital return on investments (Becker, 1993). In addition, it is important to examine the human capital planning process (Brush & Ruse, 2005), the alignment of human capital to business objectives (Kaplan & Norton, 1992, 1993), the alignment of human resources to business initiatives (Becker, Huselid, & Ulrich, 2001), and the metrics and measurements associated with human capital and the allocation of resources to ensure the alignment with strategic business direction (Brush & Ruse, 2005; Weiss & Finn, 2005).

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According to Huselid and Barnes (2002), "little academic work has been completed regarding human capital management systems. Practitioners are relatively light years ahead of the academic work in progress or already completed" (p. 10). Human resource development (HRD) practitioners have recognized the need to align intangible assets to organizational strategy and objectives, and have previously conducted haphazard human resource placements without empirical research to determine the success and failures of these allocations. HRD academicians have virtually ignored human capital theory and intangible assets allocation in view of the fact that human capital theory originated in economics and was thrust upon education and human resource development. Thus, the purpose of this article is to review literature and determine the need for HRD scholars and practitioners to plan for human capital development.

Purpose of the Article and Research Questions

The purpose of this article is to provide a comprehensive review of human capital planning. The concept of human capital planning moves the idea of human expertise as an element of competitive advantage (de Geus, 1989) into the realm of organizational planning. In particular, this approach to planning is in line with Becker, Huselid, and Ulrich's (2001) *Human Resource Scorecard* approach to strategy and this article will outline the ways in which these and other approaches to planning that attempt to account for human capital differ. Given this purpose, the research questions that served as the basis of this article were:

1. What is the historical foundation of human capital and its incorporation into strategic planning?
2. What are the implications of human capital planning for HRD professionals?

Methodology

The methodology for this study was a comprehensive review, analysis, and synthesis of human capital, planning, and related literature. In order to complete a comprehensive and integrative review of the literature surrounding human capital theory and human capital planning, the researchers completed an exhaustive review of referred and nonreferred publications as outlined by Torraco (2005). An extensive database search (ABI/INFORM—Global, ERIC, and PsychINFO) for the keywords *human capital*, *human capital theory*, *planning*, *strategic planning*, *scenario planning*, *strategic human resource development*, and *strategic human resource management* revealed 93 articles were published between January 1993 and June 2006. Only articles with the key terms included in the abstract were utilized for full review by the authors, which resulted in 21 final articles for review and inclusive in the research for this article.

The Emerging Human Capital Science

The emergence of human capital thought began in 1776 when Adam Smith wrote *The Wealth of Nations*. His initial thoughts would later be formulated into the science of human capital (Fitzsimons, 1999). Smith postulated two primary foundations in *The Wealth of Nations*, which would become the principles for all later human capital frameworks (Sweetland, 1996). These two principle components are:

1. Labor inputs are not merely quantitative. They quantitatively include the acquired and useful abilities of all inhabitants or members of the society as well as the state of the skill, dexterity, and judgment with which labor is applied.
2. Ability acquired through education, study, and apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in person. (Sweetland, p. 343)

The growth of human capital and accounting for wealth through acquired knowledge from formal education, on-the-job training, and other informal means continued throughout the 1950s and 1960s. The analysis of training and development as investments in human capital was pioneered through the works of leading economic scholars such as Becker, Denison, Fabricant, Mincer, and Schultz (Nafukho, Hairston, & Brooks, 2004; Sweetland, 1996). These scholars ventured away from the four main factors of the aggregate production model of physical capital, labor, land, and management instead to focus their attention on a residual factor called human capital. These four main factors of production—called the economy growth accounting equations—never balanced (Nafukho et al., 2004). There existed an unexamined variance in income levels, which Schultz in 1967 referred to as the residual factor. "It was the Nobel prize winner, Theodore Schultz, who identified this residual factor as human capital" (Nafukho et al., 2004, p. 6).

Schultz defined human capital theory as "the knowledge and skills that people acquire through education and training as being a form of capital, and this capital is a product of deliberate investment that yields returns" (Nafukho et al., 2004, p. 11). In 1961, Schultz wrote, "Although it is obvious that people acquire useful skills and knowledge, it is not so obvious that these skills and knowledge are a form of capital, or that this capital is in substantial part a product of deliberate investment" (Nafukho et al., 2004, p. 1). Schultz called the body of knowledge that sought to describe, explain, and validate this phenomenon *human capital theory* (as cited in Baptiste, 2001).

Early on theorists emphasized that investments in human capital were major contributors to economic growth (Becker, 1992). According to Becker (1992), human capital analysis starts with the assumption that individuals decide their education, training, medical care, and other additions to knowledge and health by weighing the benefits and costs. "Benefits include cultural and other non-monetary gains along with improvement in earnings and occupations, while costs usually depend mainly on the foregone value of time spent on these investments" (Becker, 1992, p. 43).

Gary S. Becker began his inquiry into human capital in the 1950s with his study that tried to determine the differences in income of college graduates in the United States. According to Becker (1993), schooling, training courses, medical care, and lectures on personal improvement are all capital too because these "improve health, raise earnings, or add to a person's appreciation of literature over his or her lifetime" (p. 16). Thus, Becker argued that these are investments in capital—human capital. Becker notes that the idea of human capital was very controversial in early years, as he noted, "It may seem odd now, but I hesitated a while before I decided to call my book *Human Capital*—and even hedged the risk by using a long subtitle" (p. 16). The term human capital was and remains controversial because it addressed people more like simple laborers owned by the company or inanimate objects.

Becker's (1992) initial work on human capital began with an effort to calculate both private and social rates of return to men, women, blacks, and other groups from investments in different levels of education. Becker defines the theory of human capital "as a form of investment by individuals in education up to the point where the returns in extra income are equal to the costs of participating in education. Returns are both private to the individual in the form of additional income and to the general society in the form of greater productivity provided by the educated" (Nafukho et al., 2004, p. 11). "Education and training are the most important investments in human capital" (Becker, 1993, p. 17). The earnings of the more educated and highly trained are almost always well above average (Becker, 1993).

In a study by Murphy and Welch, the monetary gains from a college education rose sharply to the highest level during the 1980s as in the past 50 years. Earnings of high school graduates over high school dropouts also increased drastically (as cited in Becker, 1993). The negativism previously associated with human capital theory has disappeared and been replaced with a concern for the education and training system in the United States. Becker (1993) notes, "talk about overeducated Americans has vanished, and it has been replaced by concern once more about whether the United States provides adequate quality and quantity of education and other training" (p. 17).

The original aim of the Becker study was to calculate the return on investment (ROI) on college and high school education in the U.S. economy; however, Becker quickly realized that much more needed to be studied to fully calculate the ROI. Becker (1993) expanded his typical definition of education beyond high school and college to include on-the-job training, formal and specific training, general schooling, and other knowledge. These types of education and training required a full explanation before the ROI could be properly calculated since all individuals benefited from education and training with higher income (Becker, 1993).

Types of Education and Training

According to Becker (1993), there are three types of training or knowledge, which are directly related to rate of return and human capital. Becker specified these trainings or knowledge as investments in human capital. These three types of training or knowledge (Becker, 1993) are: (1) on-the-job training—"learning new skills and perfecting old ones while on the job" (p. 31). Broken down into two types of training; (1a) general training—those skills which are "useful in many firms besides those providing it" (p. 33); (1b) specific training—"training that has no effect on the productivity of trainees that would be useful in other firms" (p. 40); (2) schooling—"an institution specializing in the production of training, as distinct from a firm that offers training in conjunction with the production of goods" (p. 51); and (3) other knowledge—any other information that a person obtains to increase their command of their economic situation.

Becker (1992) claims, "One of the most influential theoretical concepts in human capital analysis is the distinction between general and specific training or knowledge" (p. 44). The distinction helps explain why workers with highly specific skills are less likely to quit their jobs and are the last to be laid off during business downturns. It also explains why most promotions are made from within a firm rather than through hiring (Becker, p. 44). Becker has established the rationale for firms to provide highly specific training to their workers. This type of training reaps benefits for the firm through higher productivity and for the worker through higher wages.

The Theory of Human Capital

"The economics of education certainly has a long and distinguished history" (Machin & Vignoles, 2004, p. 3). The original work and initial thoughts of human capital began with British economists William Petty and Adam Smith, however, American economist Gary S. Becker (1993) is credited with completing extensive work and formulating the theory of human capital (HCT) through the publication of his work. "It is Gary Becker who is generally considered the founding father of the economics of education as a distinct research field" (Machin & Vignoles, 2004, p. 3).

Human capital theory suggests that education, training, and development, and other knowledge have a positive impact on productivity and wages. The theory further distinguishes between on-the-job training to include general and firm-specific training. These suggestions have direct implications for HRD. It is the responsibility of HRD practitioners to provide these investments in people (employees) and to determine the impact of these education and training interventions. HRD has the ability to determine ROI on the education and training provided employees.

"Human capital theory suggests that individuals and society derive economic benefits from investments in people" (Sweetland, 1996, p. 341). The theory of human capital has created a uniform and generally applicable analytical framework for studying not only the return on education but also on calculating a ROI for on-the-job training, schooling, and "other knowledge" (Becker, 1992, para. 5). The determination of ROI continues to be the responsibility of HRD scholars and practitioners. According to Fitzsimons (1999), the reformulation of human capital theory can be correlated to significant stress on education and training as a key to participation in the new global economy. Organizational leadership is being able to realize that in order to yield above average returns on strategic direction, investments must include providing education and training to human capital.

The definitions of human capital theory all encompass similar important themes and embody the following: investing in acquired education/schooling, on-the-job training and development, and other knowledge, which have a positive impact on productivity and wages. There are numerous methods to improve human capital, which range from formal education to on-the-job learning or firm-provided training (Machin & Vignoles, 2004, p. 4). Human capital theory can be used to explain investments in schooling, firm-provided training, vocational and technical education and qualifications, and the benefits of informal on-the-job learning (Machin & Vignoles, 2004). Human capital theory can be capsulated into a model to describe the investments or inputs in relation to the output. The model of human capital theory is shown in Figure 1.

The economics of education and the theory of human capital have been monumental developments in the field of economics; however, their impact has not been limited to the study of economics or education. Human capital theory has been applied to many strategic management techniques including by

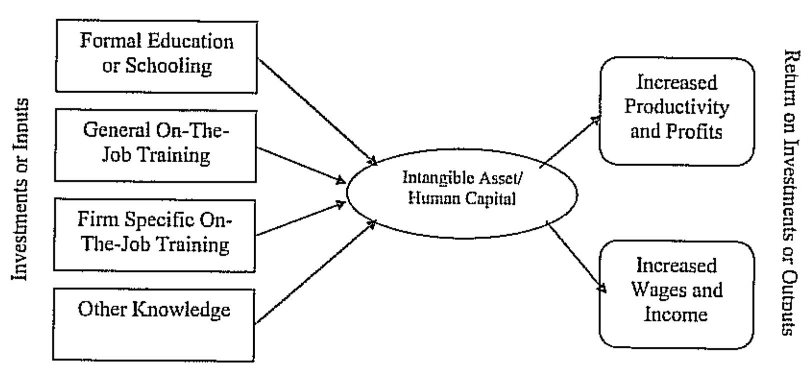

FIGURE 1: Model of Human Capital Theory and the Associated Investments or Inputs and the Associated Return on Investment or Outputs

Kaplan and Norton (1992) in the balanced scorecard (BSC) approach to management. Becker, Huselid, and Ulrich (2001) have borrowed from Kaplan and Norton applying the same approach to the human resource scorecard (HRSC). The far-reaching effects of the study of human capital have also greatly impacted strategic planning resulting in the identified need to plan for the development and alignment of human capital to sustain a competitive advantage and earn above average ROI including investment in intangible assets.

Strategic Approaches to Management and Measurement

Human capital and intangible asset alignment to organizational mission, vision, goals, and objectives begins with the strategic planning process. Further, the validation of the alignment can be assured with the BSC approach (Kaplan & Norton, 1992, 1993, 2005), and the HRSC (Becker, Huselid, & Ulrich, 2001). The scorecard approach to strategy management and measurement many times includes the utilization of human capital planning (Brush & Ruse, 2005).

According to Hitt, Ireland, and Hoskisson (2005), strategy is an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain competitive advantage (p. 7). Competitive advantage is achieved through the exploitation of the firm core competency. In a service and manufacturing setting, the people of the firm develop the most core competency. The intent of a firm to capitalize on its core competency is to achieve competitive advantage in the market and to earn above average ROI (Hitt et al., 2005).

The identification of a strategy to capitalize on the firms' core competency and to earn above average returns is many times achieved through strategic planning. According to Gunn (2001), strategic planning defines long-range goals and objectives that further the organizations mission and vision, providing a solid framework for identifying needed resources in equipment, capital, and personnel. The strategic plan is a set of management decisions about what the organization will do to be successful (Gunn, 2001, para. 3).

Types of Planning

Strategic Planning

According to Chermack, Lynham, and Ruona (2001), there are three overarching schools of thought regarding the approach to strategic management and planning. These strategic management and planning schools of thought are the rationalist, the evolutionist, and the processural (Chermack et al., 2001, p. 12).

Strategic planning conducted under the assumptions of the rationalist school believe that "there is indeed one best solution" (Chermack et al., 2001, p. 12). The strategist or strategic team is thus charged with developing the best solution or finding the one best or closest answer. Strategists and organizations that subscribe to the rationalist school of thought believe that only an elite few within the organization convene and formulate the strategic plan annually.

According to Mintzberg (1990, as cited in Chermack et al., 2001), the evolutionary school focuses on the past and retrospect. It believes that systems (organizations) can develop a memory of successful previous strategies. In this regard, the unsuccessful and successful strategies are filtered; only successful strategies are utilized to drive success.

"The processural school asserts that, although it is not possible to deliver optimal strategies through rational thinking alone, organizations' members can instill and create processes within organizations that make it a more adaptive, whole system, capable of learning from mistakes" (Chermack et al., 2001). The processural school believes that alternative futures are possible through the utilization of change management concepts. Van der Heijden (1997, 2000 as cited in Chermack et al., 2001, p. 13.) suggests that the processural school views the organization as a living organism.

Human Resource Planning

According to Rothwell and Sredl (2000), human resource planning (HRP) "is an integration of all HR activities with overall strategic plans. HRP also involves the coordination of hiring, promotion, training, and other diverse activities" (p. 241). HRP consists of translating organizational plans at various levels into HR plans that guide the long-term acquisition, use, and development of intellectual capital and knowledge assets (p. 242).

A strategic HRP is long-term in nature and integrated with the business strategy. Rothwell and Sredl (2000) developed a model for human resource planning to include the integration of HRP and strategic planning; analysis of future HR demands and supplies; analysis of the environmental trends that will affect the HR supply chain; comparison of HR demands and anticipated supplies; action to match HR demand and supplies; and evaluation of the plans and results (p. 242). These key initiatives identified for the HRP process are strategic (long-term) and will integrate with the business strategies. These HRP initiatives will assist the HR practitioner with narrowing the gaps between present human capital supply and the forecasted human capital demand (p. 253).

For human resource management to succeed, "what is needed is a more systematic and strategic aligning of people, and their creative abilities, to the organization's competitive objectives" (Rao & Rothwell, 2005, p. 112). This requirement of aligning human capital to business strategy will require organization development (OD) integration with HR practice (p. 112). Rao and Rothwell (2005) suggest the use of HR/HRD frameworks to accomplish the integration of strategy, human and knowledge capital, and organization development. It is critically important for the HR practitioner to link the human and knowledge capital of the firm to business strategy. The practice of HR is changing. It is moving from organizational support to taking an active role in the strategic processes of business. According to Rothwell and Sullivan (2005), "a major change has been a movement away from activities or techniques and toward a greater focus on results and on demonstrated, measurable achievements (p. 34). One major force for human resource practitioners to achieve these measurable results is through the use of frameworks and, in particular, through the use of the BSC.

The Balanced Scorecard

Kaplan and Norton developed a strategic tool called the balanced scorecard approach to management and performance measurement in 1992 following the completion of a research study on 12 companies. According to Kaplan and Norton (1992), the BSC is "a set of measures that provides a fast but comprehensive view of the company" (p. 71). The BSC emerged out of the need for effective accounting procedures since "traditional financial accounting," which was developed in the industrial era, did not provide an accurate picture of organizational health. (Kaplan & Norton, 1992). Traditional financial performance measurement methods worked well in the industrial era, however "they are out of step with the skills and competencies that companies are trying to master today" (Kaplan & Norton, 1992, p. 71). The BSC incorporates financial measures already in place and builds on operational measures, such as customer satisfaction, internal processes, and the organization's innovative and improvement activities. Operational measures should be the drivers of future financial performance (p. 71).

"Today's managers recognize the impact that measures have on performance" (Kaplan & Norton, 1993, p. 1). Management may recognize the need and impact that measures or metrics have on performance but rarely have these been translated to strategy. The BSC provides a basic framework for management and leadership to translate metrics into strategy by using four perspectives in critical areas such as product, process, customer, and market development (Kaplan & Norton, 1993). Kaplan and Norton (1992, 1993) have broken down these four perspectives to include broad performance measures such as financial perspective, internal business perspective, customer perspective, and innovation and learning perspective. The innovation and learning perspective has since been renamed the learning and growth perspective (Kaplan & Norton, 2005a).

The customer perspective focuses on how the customer sees or perceives the organization. Customer perspective on organization performance becomes an important measure. Customer concerns tend to fall into four categories: time, quality, performance, and service (Kaplan & Norton, 1992, p. 73). According to the BSC approach to management (Kaplan & Norton, 1992), how a company is performing should and must become a top priority for leaders.

The internal business perspective focuses on what must occur internally to the business to satisfy customer needs and expectations. According to Kaplan and Norton (1992), excellent customer performance derives from processes, decisions, and actions occurring throughout the organization (p. 74). Management must concentrate its attention on those internal components of the operation that drive customer satisfaction. "The internal measures for the balanced scorecard should stem from the business processes that have the greatest impact on customer satisfaction—factors that affect cycle time, quality, employee skills, and productivity" (Kaplan & Norton, 1993, p. 75). The internal business perspective of the BSC provides the point of view necessary for the management and leaders to determine areas for strategic development.

The financial perspective of the BSC provides the "bottom-line" view of the contributions of the BSC. According to Kaplan and Norton (1993), this piece of the BSC shows how we look to our shareholders. Financial performance measures indicate whether the company's strategy, implementation, and execution are contributing to bottom-line improvement (Kaplan & Norton, 1993, p. 77). The typical financial goals of the BSC are centered on profitability, growth, and shareholder value (p. 77).

The learning and growth perspective (redefined from the innovation and learning perspective by Kaplan and Norton in 2005) define the role of the organization's intangible assets and the role that they play in strategy and the linkage to other internal processes. Kaplan and Norton (2005) state the following:

> The *learning and growth perspective*, ... identifies the intangible assets that are most important to strategy. The objectives in this perspective identify which jobs (the human capital), which systems (the information capital), and what kind of climate (the organization capital) are required to support the value-creating internal processes. These intangible assets must be integrated and aligned with the critical internal processes. (p. 54)

"Employees' skills, IT systems, and organizational cultures are worth far more than tangible assets" (Kaplan & Norton, 2005, p. 52). Although, financial and other tangible assets are important to strategic success, it's the intangible assets that are hard for competitors to imitate; thus these (intangible assets) are the most powerful source of competitive advantage (Kaplan & Norton, 2005). Intangible assets such as human capital rarely create a source of competitive advantage alone. Human capital is the skills, talent, and knowledge or know-how of the organization's employees or strategic competencies (Kaplan & Norton, 2005). An organization cannot put a price tag on an intangible asset such as human capital "because value can be derived only in the context of strategy. What the company can measure, however, is whether its workforce is properly trained and motivated to pursue a particular goal" (Kaplan & Norton, 2005, p. 54). According to Kaplan and Norton, the measurement and close alignment of intangible assets with the organizations strategic goals is referred to as strategic readiness (p. 54).

The Human Resource Scorecard

Building upon the BSC framework of Kaplan and Norton (1992), Becker, Huselid, and Ulrich introduced the human resource scorecard (HRSC) in 2001. According to Becker et al., HR's emerging strategic potential hinges on the increasingly central role of intangible assets and intellectual capital in today's economy (p. 7). The importance of aligning HR management and measurement with the strategy of the organization is as important as aligning the people. The benefits of HR as an asset are usually only recognized once aligned with another intangible asset such as the organization's strategy implementation (Becker et al., p. 7).

As the United States continues to shift from a manufacturing powerhouse to a service-driven economy, there will continue to be an increasing reliance on human capital as a source of competitive advantage, which have led firms to develop measurement systems to help to manage resources (Huselid & Barnes, 2002, p. 2). According to Huselid and Barnes (2002), the HRSC is an additional resource in the development of human capital measurement systems (HCMS). "When designed and implemented effectively, HCMS are integrated measurement systems that focus on predication and feedback of the firm's people-related assets" (Huselid & Barnes, p. 4). HCMS are those measurement systems that attempt to describe how human capital creates value for the organization.

Human Capital Planning and Measurement

Human capital planning emerged as a key to strategic success following the shift in the economy of the United States. The U.S. workforce requires a higher skill set, including technology-based skills. These changes have led to a growing need for human capital planning and measurements to determine their effectiveness.

Human Capital Planning

Human capital planning (HCP) is a critical business process because of its transformational impact on the value the function delivers to the business (Brush & Ruse, 2005, p. 49). HCP is used to identify the human capital needs of goals and objectives tied to the business strategy. According to Zula (2007), HCP involves the recruitment, selection, allocation, and retention of human talent (intellectual and knowledge resources), including the training and education of these resources, which are linked to critical business strategies; and goals and objectives to gain competitive advantage in order to earn above average ROI.

Brush and Ruse (2005) purported a model of human capital planning based upon their work in industry. The model proposed by Brush and Ruse detailed limited integration of multiple organizational systems to the alignment of human capital to business strategy. The model recommended by the authors suggests an integrative systems approach to HCP. Much of the literature suggests that HCP needs to be interdisciplinary within organizations, and although education, and training and development inputs are primarily the responsibility of HRD, there must be coordination between systems and a top-down approach is necessary for successful HCP. The proposed model of HCP (Figure 2) suggests a comprehensive, top-down approach utilizing HRD as the catalyst to success in the planning and integration process in order to align human assets to the critical business strategy.

To successfully link the HCP process with business strategy, Zula (2007) suggests the following major elements: (a) leadership driven approach to planning; (b) a detailed assessment of the current organizational status; (c) the development of systems for measurement, accountability, and feedback; (d) organizational learning and buy-in; (e) integrated organizational competency models; and (f) a detailed assessment of the human resource capabilities and capacities. Figure 2 describes the cyclical process of HCP.

Leadership-driven approach to planning. In order to ensure the success of HCP, it is essential to have the commitment of the organizational leadership

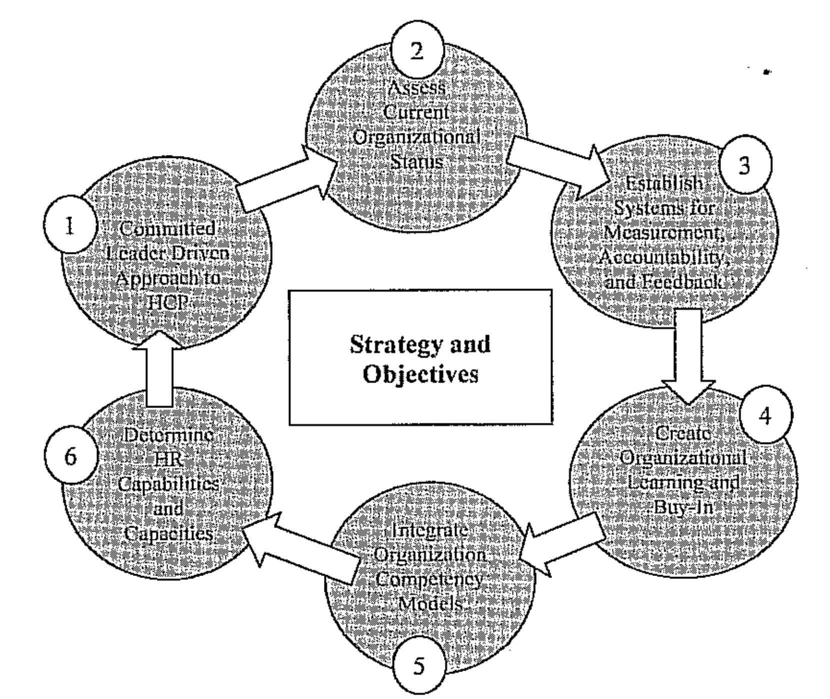

FIGURE 2: Model and Process of Human Capital Planning

(Rao & Rothwell, 2000). HCP requires leadership participation to successfully allocate resources. If the leadership of the organization does not participate in the planning process, the plan will not flourish (Zula, 2007).

Current organizational status. The success of the HCP process can be linked to the internal and external environment of the organization (Weiss & Finn, 2005). For example, it is critical to adjust and procure human resources (staff) to fit the operational and tactical requirements of the business strategy. It is equally important to assess the external labor market to source talent for the business, and for the organization to have the internal capability to develop and train talent.

Systems for measurement, accountability, and feedback. The success of HCP can largely be related of the successes and failures of the process (Lawson & Hepp, 2005). The organization will gauge success and failure based upon the desired outcomes of the HCP process. It is important for the organization to develop and install monitoring and measuring processes for intended and unintended consequences of the action and for continuous feedback; to establish ways to track and evaluate the results of the human capital effort and to compare them regularly and systematically to the measurable goals and objectives of the business strategy; and to have a clear policy to encourage and recognize employees for their contribution to organizational productivity and success.

Organizational learning and buy-in. The organization learning strategies are necessary to succeed in the HCP process, which involves both leadership and employees (Huselid & Barnes, 2002). Leaders should initiate and promote the notion of a learning organization paradigm as a strategy to get employee buy-in and ownership in the HCP process.

Integrated Organizational Competency Models. It is a necessity for the organization to develop, and integrate competency models into performance management systems for all employees. (Rao & Rothwell). The organization must ensure that the performance management system is integrated with the competency models and/or job descriptions and establish methods to assess employees' current competencies against the requirements for future competencies at a higher level of responsibility.

Human resource capacities and capabilities. In order for human capital planning to be successful, the HR and HRD practitioner must be cognizant of the human resource supply chain, the talent management capabilities of the organization, and the capacity to adjust nonhuman systems to meet human resource needs (Rothwell & Sredl, 2000). The success of HCP can be gauged against the ability to adjust nonhuman systems (technical, infrastructure, processes, and organization design) to fit operational and tactical requirements of strategy and human resources (Yeung & Berman, 1997).

Human Capital Measurements and Metrics

"What gets measured gets managed" (Weatherly, 2003, p. 4). Managing human resource practices and processes strategically is a method to gain competitive advantage by utilizing the organization's greatest assets: its people (Lawson & Hepp, 2005). Important to managing the human capital of the organization is the measurement or metrics utilized to gauge the success of this endeavor. If the measurement or metric is inappropriate or measures the wrong thing it is useless. According to Kaplan and Norton (1992, p. 71), "What you measure is what you get," thus, implying the necessity for the right measures.

The indication of successful measures in HR and ultimately human capital are grouped into three categories: "(a) building critical organizational capabilities; (b) improvement in employee and shareholder satisfaction; and (c) new clusters of HR measures ... should be developed to capture and drive the impact of HR on business performance" (Yeung & Berman, 1997, p. 321). These categories emerge from the BSC approach to management (Kaplan & Norton, 1992). The BSC approach defines what it takes for a business to succeed (Yeung & Berman, 1997).

Human capital and human resource metrics and measurements of the future are geared in a strategic direction. These measures must align with the critical business initiatives to be valued by the organization. The impact of human resource practices must be measured based upon strategic results, either directly or indirectly based organizational strategy, or organizational capabilities (Cabrera & Cabrera, 2003). A firm's human capital is believed to meet all the requirements of a strategic asset ... because "it is scarce, valuable, nonsubstitutable, and hard to imitate" (Cabrera & Cabrera, 2003, p. 49).

Implications for Human Resource Development

The planning and allocation of tangible assets has been well documented in planning literature and research. However, little has been documented in the literature regarding the planning of intangible assets such as human capital. And even less has been documented in human resource development literature about how the HRD scholar and practitioner can contribute to the field regarding intangible assets. The majority of the scholarly work regarding human capital has been completed in the field of economics and not in education; however the implications for HRD are vast.

Implications for HRD Practice

According to Nafukho et al. (2004b), "the field of HRD could benefit from a greater understanding of how human capital scholars have clearly defined methods of quantifying returns of investment in education and training" (p. 549). However, it is critically important that prior to determining the ROI on education and training, HRD practitioners must utilize a proper planning methodology and empirically researched instruments for human capital planning. This immediately provides an opportunity to explore the ways in which organizations are accounting for human capital in their planning processes, if at all. At the very least, practitioners should take note that future planning successes will depend on the ability to account for and leverage human capital in their planning efforts, although we are in the beginning stages of understanding how best to do so. In addition, in order for HRD to continue to develop credibility among other fields, HRD must develop systematic and uniform approaches to determining ROI through the utilization of instruments and standardized measures for human capital planning.

Implications for HRD Research

Human capital theory has provided a great footprint for establishing an HRD research agenda regarding human capital theory and planning. The link between human capital and HRD is clearly stamped into the footprint, but little research has been conducted to establish credibility of the work conducted by HRD in organizations. The demands for "proven value added" to the organizational bottom line will continue to drive HRD research regarding human capital. Human capital inputs such as on-the-job training, job specific training, formal education, and other knowledge has proven to increase productivity, wages, and organizational income. The role and value of HRD must be further researched to determine effectiveness and cost along with the organizational impact on intangible assets and ultimately wages and income.

Specific opportunities for research include case studies of innovative or cutting edge practices for including human capital in organizational planning processes. Simple descriptive studies that document how organizations are able to include human capital in their plans are a critical first step. More advanced studies could include the development of surveys and instruments that measure the extent to which human capital is featured as an explicit part of strategic planning. Surveys could be distributed widely to gain some understanding of general practices and preferences with regard to how best to handle human capital on the balance sheet.

Implications for HRD Theory

The field of HRD is evolving from "anecdotal interventions" to an evidence-based field from external and internal organizational demands. No longer is it acceptable to inform stakeholders about the impact of interventions; these stakeholders now insist on factual evidence to demand impact based upon measurable outcomes. The effects of HCP on HRD theory will only enhance the once assumed anecdotal evidence of the impact of HRD on the organization. HCP can provide and develop evidence- and research-based outcomes for further theory development and enhancement. HRD has long theorized that interventions have improved organizational performance, however, HCP may be the method to provide the evidence necessary, such as quantifiable data, to support this theory.

Specific opportunities include developing a theory of HCP. Since HRD scholars have significantly advanced the thinking on theory development (see Lynham's issue of *Advances in Developing Human Resources*, 2002; Swanson, 2007), clear methods of theory development are gaining prominence in the HRD literature. The next steps in exploring HCP as a viable and long-term area of research and practice may include the development of a theory of the phenomenon and, thus, the development of a research agenda to explore the theory. Theories of human capital provide much of the groundwork already and extending these already highly used economic theories of HRD into a clear and concise theory of how these elements apply in organizational planning would be valuable indeed.

Conclusions

The purpose of this article was to determine the link between human capital theory, human capital planning, and HRD. The article has provided these links and shown some evidence that economic theory has an impact on HRD. Multiple theories (psychological, systems, and economic) have had their impact on HRD (Swanson, 2007). This article specifically focused on the impact of economic theory on HRD and has shown that proper planning for human capital can benefit the organization through increased profits by providing education and training to intangible assets. The intangible assets of a firm are its employees. Humans add value to the bottom line through increased education and training, and planning these assets can assist HRD in determining their value to the bottom line.

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