

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

Introduction

The past two decades have been a time of truly radical change. But, the next twenty years will encompass even more. In an article in Business Week, the prospects for the future were described in the following way:

"All the ingredients are in place for a surge of innovation that could rival any in history. Over the next decade or so, the New Economy so far propelled mainly by information technology may turn out to be only the initial stage of a much broader flowering of technological, business, and financial creativity."

Business Week/August 31, 1998

In a range of studies conducted globally with business leaders during the past ten years, we have seen the emergence of a consistent set of challenges stemming from technology-driven change. (See Figure 1)



Stephen C. Schoonover is President of Schoonover Associates, Inc., a Boston-based leadership development consulting firm. Founded in 1983, the firm specializes in human resource strategic consulting, competency model-building, and performance development systems.

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

Figure1: The Current Business Environment

- Responsiveness to the market and closer relationships to customers.
- Focus on outsourcing, partnerships and alliances.
- Emphasis on speed, quality, and productivity.
- Shift to boundaryless work groups and global enterprise.
- More emphasis on empowerment, self-direction and diversity.
- Leaner, more streamlined organization structures.
- Focus on core processes.
- Shift from management to leadership orientation.
- Shift to high-performance team philosophy.
- Greater creation and application of expert knowledge to create value.

These represent a true revolution in the dynamics of work driven by breakthroughs in information technology. In today's world, information is more freely shared across all global boundaries in ways that create new forms of value, new ways of working and new stresses and skill requirements for people.

The impact on work practices and productivity has been substantial.

One of the most important outcomes of these trends is the new premium placed on human resources. Some of the trends have made human resources a more important priority

(e.g., downsizing, reengineering, outsourcing) as operational efficiencies stemming from these interventions have reached their limits. Some of the trends shaping HR to be more business-oriented have created a sharper focus on methods for maximizing human assets. Some of the trends in IT, applied vigorously other functions such as finance, manufacturing, distribution, sales, have not been leveraged comparably for HR. This is in part the result of lagging skills of HR professionals and in part, the result of differences in the kinds of data pertinent to human interactions.

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

One universal truth emerges from key trends in HR the ways human resource activities are performed must change substantially to respond to business challenges and individual needs. New technology applications will be the most critical enabler.

Human Resource Trends Affecting Technology Decisions

Why have human resource information systems lagged in generating a significant productivity payoff? Practical HRIS applications face both human resource and technology impediments. Perhaps the most serious of these relate to culture, people and process factors.

Cultural Barriers

Applications focusing on core human resource processes have been neglected, in part, because they are less discrete and more difficult to measure compared to operational processes. In addition, changing people's attitudes and skills is generally a long-term proposition with measurable impact years after major interventions. As a result, management often gives lip service to maximizing human capital, but is overtly or covertly biased against major technology

investments in this area because the payoff is less than other interventions in the near term. For example, studies indicate that "white collar" workers spend 50% of their time communicating and 33% of their time planning, organizing and making decisions. While human resource activities such as assessing and coaching people may have a profound, ultimate impact on an organization, resources for IT applications will be allocated to simplify and support the most pressing priorities first.

People Barriers

The second major factor affecting HR information technology applications is the difference between data that assists or supports HR processes vs. more operational processes. The key difference is that the most critical factors around human performance are ultimately behavioral. For example, behavioral competencies are frequently used in 360^o assessments and job-person matching. Descriptions of key activities are part of job descriptions. Observable evidence of work performance is used in performance appraisals. Descriptions of on-the-job activities are applied in development plans. Traditionally, in HR, these

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

factors have been ill defined at worst; hard to describe, evaluate, and measure consistently at best.

HR Process Barriers

Another key limitation for technology impact relates to the nature of HR processes. In practice, there is wide variability in the flow of actions and information in key processes.

Hiring, selection, coaching, career pathing, appraisal, succession planning and other activities are rarely done consistently within an organization, much less across organizations. This is a critical barrier to progress since technology applications that assist human actions work best when consistent rules or steps apply.

While the above non-technological barriers to progress are substantive, there has been significant progress in each of these three areas. Many of today's top managers truly embrace the concept that a company's key asset is knowledge creation and that this competitive capability is embodied in the talents of employees and their ability to be creative.

In addition, common standards and policies

around human factors are emerging. Quality standards for articulating competency behaviors are now quite common. Methods for measuring behavior change resulting from training and development interventions are being developed. Human resource process definition and reengineering has become a critical focus of both HR departments and operating managers. For example, Lockheed-Martin is currently developing a consistent process and criteria for succession planning across the entire business. One of General Electric's largest businesses is automating and applying a consistent assessment, development and appraisal process for the first time. Oracle Corporation has developed specific success criteria (i.e., competencies) and automated tools to support its core HR processes (e.g., training and education registration and tracking). The trend is clear – human resource activities are increasingly submitted to the same scrutiny and rigor as other business processes. This maturing of HR practices finally opens the way to

Key Trends in Human Resource Information Systems

Ultimately, each organization's success stems from the competence and productivity of its

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

employees. The great promise of technology has always been in its ability to enable each person to be more productive. This, however, was an elusive goal in the past. In the 25 years prior to 1990, investments in IT yielded few substantive productivity payoffs. Why?

In some cases, technology applications were not adequately linked to processes, did not resolve key work problems, or did not focus on critical success factors. In other instances, end-user skill with using the systems was inadequate to realize productivity gains. For example, some studies indicate that significant increase in productivity from IT applications requires mastery by at least a third of end-users in a population. In other words, organizations need a "critical mass" of power users to produce a technology payoff.

More recently, IT applications have achieved enough "penetration" in organizations to produce major efficiencies. Since 1990, the productivity of corporations in all business sectors has risen at rates not seen since the 1960's and early 1970's (2.1% for non-financial corporations; 3.6% for manufacturing organizations). Unfortunately, HR applications have lagged in streamlining key activities.

Most current applications are still quite rudimentary limited to:

- static, one-way communication from company to employee. (e.g., employee communications, policies and procedures, etc.).
- selective one-way communication-based on employee queries (e.g., benefits, access to resources such as job posting).
- automation of HR transactions (e.g., payroll, course registration).

To date these types of intervention have resulted in significant downsizing of HR departments by enabling organizations to decrease staff. They have had little or no impact on the most critical workforce effectiveness opportunities, such as:

- day-to-day employee productivity.
- performance development systems automation (e.g., hiring, selection, assessment, performance management, continuous learning, appraisal, salary administration)
- strategic human resource management.

Emerging technologies, however, are now

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

starting to make practical impact in these areas. IVR (interactive voice response), commonly applied in word processing, is starting to be used in HR for updating records and transaction processing. GroupWare (e.g., Lotus Notes, Microsoft Exchange, etc.) is beginning to have an impact not only for sharing data and plans, but also for group problem solving.

“Smart agents” or “knowledge managers” are being used to assist work flow by automatically routing HR transactions and information such as promotions, salary changes and transfers to the right locations. “Wizards” or electronic “coaches” are being developed to focus employees on key information or to provide on-line ideas or suggestions during transactions. For example, General Electric is developing an automated performance management system that includes coaching suggestions to support manager and employee inputs during the process.

Some companies are now using technology to provide more support for self-directed learning. For example, Lockheed-Martin has started using web-based, performance development “toolkits” (for assessment and

development planning) that include a range of supports such as easily-accessible coaching tips and case examples. Some of these interactive systems offer significant improvement over traditional training and documentation approaches to tool use. End-users can apply these web-enabled systems for “just-in-time” learning that fits their own learning style and level of need.

HR can be divided into discrete functions, such as:

- organization structuring
- HR logistics (recruitment, planning, mobility, transfers, termination)
- compensation and benefits
- performance development
- employee relations
- environmental, health and safety
- organization effectiveness
- HR administration

While separate software to help with each area exists, programs are starting to encompass and integrate many of these activities. For instance, some software applications are starting to incorporate HR strategy, job descriptions, competency profiles, hiring,

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

assessment, development planning, and appraisal processes into a single integrated system using common standards and sharing data across these processes.

Another emerging trend is the application of “query engines” and “data mining” to capture best practices and other intellectual capital.

The World Wide Web and Intranets promise even more profound changes in the way people work. They are already helping organizations share information much more widely. But, in the future, they will be used to develop “electronic communities”. Websites will become destinations in which people will share information and interact creatively to produce new ideas, knowledge, and value for organizations. This information will be captured, refined, and distributed to help people work more productively.

All of the above technologies are currently being applied but in a limited, compartmentalized manner. Perhaps most important, however, these new capabilities provide real support and assistance, facilitating and even enhancing the way people learn, work and perform HR processes.

Practical Recommendations

Changes in the focus on human assets as a competitive advantage and the advent of creative ideas for overcoming cultural, people, process and technical barriers have set the stage for IT applications that will make profound impact.

In recent studies we completed, managers and employees consistently highlighted the following problems with HR activities designed to enhance performance.

Fortunately, technology is starting to provide potential answers to these dilemmas.

However, in these same studies, we found that HR systems design and implementation fail most often because of the following factors:

- Lack of definition of HR processes and “case examples” outlining the manner in which people currently and ideally complete them.
- Lack of a realistic impact analysis and business case for information systems.
- Lack of definitions of which parts of an HR process should be technology-enabled and which should not.
- Lack of appropriate consulting, training,

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

and ongoing support for both technological and non-technological parts of the process.

Most Frequent HR Concerns

- No time for coaching and feedback.
- Lack of access to consistent standards.
- Lack of access to resources for development and learning.
- Lack of a consistent, practical performance development process.
- Lack of tools/aids/suggestions for completing appraisals.
- Poor or no measures to determine performance gaps and chart progress.
- Lack of tools/access to data for strategic human resource planning.

Too often computer system or platform capabilities rather than process excellence HR requirements drive applications. To ensure high payoff from HR systems in the area of individual and group productivity, it is important to develop a focus for change. Project leaders can use a diagnostic checklist such as the one provided on the following page to determine current strengths,

vulnerabilities and areas of opportunity. Beyond developing a focus for change, successful HR applications use a consistent, structured process during implementation. For example, a checklist like the one provided on page 11 can be applied to identify problems and discuss concerns during design and rollout of HR information systems.

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

Summary

Historically, human factors have been neglected in favor of more visible targets for information technology and although the use of technology to maximize human assets is still in its infancy, this is about to change. The convergence of more consistent HR practices and processes with new technology tools will radically shift the focus from backroom operations to core HR processes, from the tactical to the strategic use of information, from methods for eliminating work and jobs to methods for enhancing individual and collective human performance in their organization.

Diagnostic Checklist

Rate each item below for current performance and importance to your business according to the scales provided.

IMPORTANCE FOR SUCCESS



CURRENT PERFORMANCE



Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
 President, Schoonover Associates, Inc.

Employee Productivity	Importance	Performance	Gap
1. We have significant capabilities for sharing project plans and ideas among employees. 2. We have the ability to develop and share best practices across the organization. 3. We use electronic aids (e.g., "wizards", knowledge managers) to seek and sort critical information. 4. We have easy access to critical information (e.g., customer data, performance data, etc.) for day-to-day decision-making.			
Performance Development			
6. We have automated or core HR processes (hiring selection, coaching, training, development and career planning, appraisal, salary administration). 7. We have integrated our core HR processes (i.e., share data, standards, etc. across processes). 8. We review data and specific measures to track effectiveness of programs and processes. 9. We use technology to distribute responsibility for core HR processes to managers and individuals. 10. We use technology to provide "just-in-time" support and coaching for core HR processes (e.g., on-line toolkits and coaching).			
Strategic Human Resource Management			
11. We use technology to expand our access to new ideas both inside and outside the organization (e.g., electronic communities chat rooms, Q & A sites). 12. We access data from various from various sources to determine trends and root causes of HR problems (query engines, data measuring). 13. We use technology to enable ongoing measurement of HR processes and program effectiveness (360 assessments, workforce assessments, customer satisfaction, and process measures). 14. We apply technology to human resource planning (e.g., workforce assessment, succession planning). 15. We use technology to align individual and team actions with organization vision and strategies.			

Applying Technology to Maximize Human Assets

by Dr. Stephen C. Schoonover
President, Schoonover Associates, Inc.

Implementation Checklist

Culture	
<ol style="list-style-type: none">1. Have we defined specific needs and desired outcomes?2. Have we made a realistic business case for the application (e.g., ROI or calculated return on investment)?3. Are our technology goals compatible with our culture, available technologies, and current HR systems?4. Can the organization assimilate and support the proposed change?5. Do we have adequate sponsorship and support?	
People	
<ol style="list-style-type: none">6. Have we adequately defined the content or criteria used in the application (e.g., competencies, skills, goals, development suggestions, etc.)?7. Have we clarified how end-users currently perform targeted HR applications and would ideally perform them (using detailed "case" examples)?8. Have we developed methods for measuring the human and business impact of our application?	
Process	
<ol style="list-style-type: none">9. Have we defined targeted HR processes and workflow adequately?10. Have we identified key areas of opportunity in the HR processes?	
Process	
<ol style="list-style-type: none">11. Have we identified available technologies that can impact process opportunities and problems pragmatically?12. Have we clarified technical and non-technical requirements for success (e.g., training, and process support)?13. Have we developed an approach to integrating new applications with current systems?14. Have we planned for future upgrades and new technologies, etc.?	