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**Paper Session I-D - The New Model for Education and Training**

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The workplace is undergoing change at an accelerating rate. One of the most far-reaching changes is the evolution of the organization into a form fundamentally different from that which dominated industry during the 1950's and 1960's. The corporate hierarchy, once stable and slow moving, with the “thinkers” at the top of the pyramid and the “do-ers” at the base, is poorly suited to the fast-moving, competitive environment of today. Instead, corporations are opting for a flat, flexible organization, characterized by decentralized decision making. Organizations are struggling to compete and, in the process, putting a premium on speed and efficiency. Whereas the model for the traditional organization was the army, with its rigid cohesive structure and clear chains of command, the new organization often structures itself as a loosely knit confederation of entrepreneurial units and relies on teams to create value and profit. Compared to the corporate hierarchy of past decades, the entrepreneurial organization is distinguished by more ambiguity, fewer boundaries, and more rapid communication between the company and its employees, suppliers, and customers.

In Figure 1 below, Changing Organizational Patterns in U.S. Industry reflects the implications of the new organizational structures in terms of changed processes, practices, and requirements in companies. Among the implications shown for workers are broader roles and more demanding skill requirements. For example, a characteristic of the old-style organization is many job classifications, with each job being narrowly focused. But today there is multi-skilling, job rotations, and fewer job classifications. Also, in the flat and decentralized work environment of today, the whole notion of basic skills is enlarging. Where having a command of the basic skills (i.e., reading, writing, and math) was once the primary objective, now basic skills are only the platform for developing the higher-order competencies increasingly necessary for survival, such as communicating with co-workers and customers, solving problems, leading a team to success, and ensuring one’s career security as opposed to focusing on one’s job security.
In addition to these changes impacting the rank-and-file worker, the role of manager is also undergoing a transformation. For managers, the emphasis is shifting from administering and controlling work to coaching and facilitating. The old style manager maintained and protected the bureaucracy. But today, a new breed of leader must be able to creatively dismantle an organization and then rebuild it. Figure 2 draws comparisons between the traditional and emerging functions of the old style manager and new breed of leader. Whereas managers were once used to having all the answers, they now must be able to assess which questions are most important. Further, they must be willing to experiment with new ways of learning to develop the capacity of those they supervise to come up with answers themselves. Importantly, they must shift from focusing internally on the organization to directing their energies externally and developing a mindset that is tuned into the bigger picture of what is going on in their business.

The dramatic transformations of roles and skill requirements throughout the organization affect the kind of education and training employees need. Indeed, in the 90's and beyond, the issue is not simply educating and training employees to learn another skill, but rather reeducating and retraining them to perform broader roles in the workplace.

<table>
<thead>
<tr>
<th>Changing Organizational Patterns in U.S. Industry</th>
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<tbody>
<tr>
<td><strong>Old Model</strong></td>
</tr>
<tr>
<td>Mass Production,</td>
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<tr>
<td>1950's and 1960's</td>
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<td><strong>New Model</strong></td>
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<tr>
<td>Flexible Decentralization,</td>
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<tr>
<td>1980's and beyond</td>
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<tr>
<td><strong>Hiring and Human Relations Practices</strong></td>
</tr>
<tr>
<td>• Workforce mostly full-time, semi-skilled.</td>
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<tr>
<td>• Minimal qualifications acceptable.</td>
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<td>• Layoff and turnover a primary source of flexibility; workers, in the extreme, viewed as a variable cost.</td>
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<tr>
<td>• Smaller core of full-time employees, supplemented with contingent (part-time, temporary, and contract) workers, who can be easily brought in or let go, as a major source of flexibility.</td>
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<tr>
<td>• Careful screening of prospective employees for basic and social skills, and trainability.</td>
</tr>
<tr>
<td>• Core workforce viewed as an investment; management attention to quality-of-working life as a means of reducing turnover.</td>
</tr>
<tr>
<td><strong>Education and Training</strong></td>
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<tr>
<td>• Minimal for production workers, except for informal on-the-job training.</td>
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<tr>
<td>• Specialized training for craft and technical workers.</td>
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<tr>
<td>• Short training sessions as needed for core workforce, sometimes motivational, sometimes intended to improve quality control practices or smooth the way for new technology.</td>
</tr>
<tr>
<td>• Broader skills sought for all workers.</td>
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</tbody>
</table>
Traditionally, American companies have focused their employee education and training on upgrading the skills and expertise of professional employees. During the 50's, 60's, and 70's, corporate classrooms sprang up in both large and small companies to teach professional workers how to do their jobs better. These educational infrastructures within corporations proliferated across the United States and became known as corporate universities, institutes, or colleges (not to be confused with Corporate Quality Universities). The goal was, in most cases, to keep professionals abreast of developments or, better yet, ahead of them.

While professional and managerial ranks received abundant opportunities for education and training, other groups did not. Largely overlooked were the front-line workers who make a lasting impression with customers and, more often than not, determine a company’s competitive advantage. These front-line workers - the clerical workers, the receptionist, and the customer service representatives - have traditionally received the least amount of formal education, training, and retraining. Whatever education and training they did participate in was occasional and usually tied to some event, like the installation of a new personal computer, a seminar on a company’s new benefit policy, or orientation and safety regulations for new hires.
Gradually, though, as more American companies experimented with empowering their workers through total quality management programs and high-performance work teams, workers at all levels became more and more valued. Increasingly, front-line workers are being seen as a critical form of differentiation for an organization. In fact, a growing number of companies are now recognizing the need for excellence across the work force, not only in the professional managerial ranks. The theme coming out of a handful of companies in the mid-to-late 80’s was that increasing productivity is every worker’s goal, not just the challenge of professional managers or the expert consultants. Hence, a growing number of companies have begun to perceive a need to shift their training and corporate education efforts from simply educating and training one segment of their work force - managers - to training everyone in the organization and then going one step further by making every employee accountable for continuously learning new skills in the workplace.

The pursuit of customer satisfaction and the need for process improvement, not simply product inspection, has become increasingly prevalent in a growing number of companies. This, combined with the realization that continuous improvement is everybody’s business, is now leading companies to focus on the employee as the critical link in delivering customer satisfaction and ultimately profitability. To remain competitive in a global marketplace, many companies have realized that they must think of their employees as their most valuable assets and provide them with opportunities for continuous learning.

Increasingly, this realization has translated into companies taking a more strategic view of education and training. Corporate classrooms are moving away from offering a cafeteria curriculum of hundreds of courses to concentrate on offering training and self-development programs (in a variety of alternative technologies) aimed at developing the organization’s core competencies. This emphasis on competency-based training is what will enable companies to surpass their competitor’s education and training within this context moves beyond an end in itself to a means of achieving lifelong learning for the entire organization.

Also, in this scenario, employees at all levels must learn to take more responsibility for their own self-development. Instead of waiting for their supervisors to sign them up for education and training, they must develop, in concert with their supervisors, their own individual development plans, outlining the range of competencies they need to be successful at their current jobs and those future jobs they may wish to be considered for within the organization. As employees become more dependent on skill development than on any one employer, the ability to manage one’s career will grow in importance.
Effective Education and Training Is System-wide

The term system-wide education and training may sound like just another grand-sounding slogan for the 90's, but the concept behind the idea is a powerful one. A system-wide approach involves proactively educating and training the key participants in the company’s customer/supply chain. The reasoning behind this practice is that, if all the critical members of the chain understand the company’s vision, values, mission, and quality goals, as well as the individual workplace competencies supporting its competitive advantage, the company is better able to meet its business objectives.

This system-wide approach is continuous and open-ended. In other words, rather than offering X-amount of education and training and then thinking the job is over, companies who adopt this approach develop a learning system which enables employees, customers, suppliers, and key universities to continually engage in learning and development opportunities.

Increased competition and a continuing reorganization of work are the new realities facing today’s organizations and their employees. The limited demands on workers to know only one narrow repetitive job no longer apply. Now, workers from the factory floor to the customer service hot line must think and act for themselves. More and more companies are realizing that is essential to increase performance or be left behind. This direct impact on education and training is listed in Figure 3 below from the old to the new:

<table>
<thead>
<tr>
<th>Shift In Education and Training</th>
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<tbody>
<tr>
<td>Old</td>
</tr>
<tr>
<td>• Building/campus.</td>
</tr>
<tr>
<td>• Audience: Internal employees; largely</td>
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<tr>
<td>professional managers.</td>
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<tr>
<td></td>
</tr>
<tr>
<td>• Goal: Upgrade technical skills.</td>
</tr>
<tr>
<td>• Methodology: Learning by listening.</td>
</tr>
<tr>
<td>• Management initiated.</td>
</tr>
<tr>
<td>• A one-time event.</td>
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Figure 3
What Choice?

Training is an industrial age concept. The world of work is changing rapidly, and we are way beyond the old concepts. Traditional stand-up training and sitting in a skills lab where you count the backsides in chairs and feel good about the smile sheets are outdated. Focusing on activity misses the boat. We have to look beyond the training classroom and look to the action on the floor where the primary business is being accomplished. This drives us to a whole different way of training people, and it certainly changes the role of the trainer.

The following principles form the foundation for the infrastructure of this new training:

- Link training to the strategic needs of the business.
- Train the entire customer/supply chain. This includes key customers, product suppliers, and schools who provide tomorrow’s workers.
- Consider training to be a process and not just an event.
- Experiment with new ways of learning and post-learning reinforcement.

In order to attain a competitive advantage, a company must focus on those core competencies that ensure that they sustain their competitive advantage and meet their strategic needs as a business. More specifically, they must implement the following core competencies:

1. Learning Skills
2. Basic Skills
3. Interpersonal Skills
4. Creative thinking and problem-solving skills
5. Leadership and visioning
6. Self-development/self-management

Implement education and training system-wide. This means proactively educating and training the key participants in the company’s customer/supply chain. If all the critical members of the chain understand the company’s vision, values, mission, and quality goals, as well as the individual workplace competencies supporting our competitive advantage, the company is better able to meet its business objectives.

This new education and training approach doesn’t mean a large control facility or elaborate infrastructure. It is a philosophy, a mindset, which focuses on providing all levels of employees with opportunities to continuously learn new skills and broader roles in order to improve their performance on the job. Traditional education and
training looks at the learning process along a continuum with a beginning and an end. The focus has been on delivering x-amount of education and training and then the job is over. But, the emphasis here is on encouraging employees to strive to continuously learn new skills during their working lives and be accountable for learning these new skills.

Experimenting with new ways to learn sounds risky at first, but it really means looking for new ways to improve productivity - either inside the company or in the best practices of innovative companies. This approach contrasts significantly with the emphasis of education and training in the past, which has been on designing and delivering the most efficient courseware to train a company’s internal employee population. This formal type of education and training, whether delivered in a classroom or by some alternative means of delivery, such as video, computer, or satellite, is still only a small piece of the puzzle education and training is much bigger than that and includes ways for the entire organization to continuously learn.

The Educator and Trainer’s Role

The educator and trainer’s role is changing from classroom guru to a facilitator who is out on the floor working business issues. The educator and trainer are a kind of performance troubleshooter who works with management and workers to identify performance problems and offer solutions. The instructor is no longer just responsible for teaching in the classroom or lab.

This new prototype person will spend time in the classroom, on the floor, and at the computer. He or she will select and supply education and training material available with information technology to meet customer needs. The job now becomes one of facilitating the solution to performance problems by identifying and accessing the best material and programs available combined with the appropriate learning approach to best fit a particular situation.

The old job description was:

- Assess training needs
- Design training
- Deliver training
- Measure impact of training
The new educator and trainer's job description is:

- Stay in touch with workers and work processes to be aware of skill needs
- Meet with management and discuss strategic direction
- Teach line managers how to train
- Know the nature of your organization’s business
- Know information technology
- Know learning styles
- Facilitate problem-solving teams
- Make big picture observations of work processes for problems or potential improvements that people in the trenches might not see
- Push training upstream so that its planned in the front-end of a business initiative
- Author interactive multimedia training programs
- Bring about change

This new model still leaves some room for the old-fashioned, stand and deliver methodology, but not much. There will still need to be some classroom and lab instruction, but the majority of the time will be spent in performing those functions listed under the new education and training job description.

The “New Educator or Trainer” integrates into the business and is an integral part of the team that produces the primary products and/or services. The old method of client request, follow Integrated System Development (ISD) model, build course, offer course, job done just doesn’t fit. The organization, company, needs to establish learning systems, not course-building departments, and integrate learning with other communication systems.

The “New Educator or Trainer” is a key player in helping people do their job better. He or she thinks big. They do not limit themselves to the four walls of a classroom and just the students sitting there. They expand their horizon to business processes and accomplishing the mission.

“New Educator and Trainers” make themselves valuable to customers. What do customers value? They value what educators and trainers pay least attention to: the front-end and the back-end. That is, clients want a good, sharp, businesslike assessment of needs on the front-end and, on the back-end, businesslike dialogue about what happened and whether or not it helped.

The “New Educator or Trainer” gives away skills to line workers and subject matter experts. He or she is out there as part of a Natural Work Team analyzing a problem. Or, the educator or trainer is observing job performance to see if there are
potential problems or possible improvements. They may be assisting employees in their accomplishment of education and training using multimedia Computer Based Training in the work area. They encourage, motivate, and facilitate the learning process.

Where do we go?

Some specific actions are:

- Combine Technical Training and Education and call it Training and Organizational Development
- Get the educators and trainers into the field
- Reshape the entire job of education and training
- Get businesslike
- Become company-wide performance catalysts
- Establish Learning Centers at work sites
- Make maximum use of technology to deliver training and provide performance support systems (CBT, video, Internet, Intranet, etc.)

About the Author:

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Dr. Hosley currently manages the U.S. Space Shuttle United Space Alliance contract’s Technical Training Program at Kennedy Space Center, Florida. The Department manages approximately 400 training courses, 190 videotapes, and 600+ On-the-Job Training packages. The subject areas are systems, safety, environmental, skills, and computers.

Dr. Hosley has over 30 years of experience in the education and training business. Prior to his current position he was Manager of Technical Training for Lockheed Martin Space Operations and Lockheed Space Operations Company. Earlier, he was a Senior Scientist, Institute for Simulation and Training, University of Central Florida.

He has an Ed.D in Educational Administration from the University of Arizona.