Dynamic Spaces in the Contemporary Workplace

Physical environments and furniture components that are flexible and can be adapted to workers’ needs are necessary to foster innovation.

By Stuart Rogers-Brown

Though we didn’t realize it at the time, one of the first spaces we ever “worked” in also happens to be one of the most motivating work environments we ever experienced.

Close your eyes and think back to your kindergarten classroom. Remember the lively group work tables, the comfy and quiet corner for reading, the bright and colorful area where you experimented with arts and crafts? Can you picture the technology area with its cool computer station and interactive video center? During those early school days, we moved throughout the different spaces of our classroom as we progressed from one task to the next. Our teacher also rotated throughout the space, working with individuals or small groups, rarely staying still at his or her desk.

It seems that kindergarten teachers have recognized what it took business executives much longer to figure out: a dynamic physical environment is a significant factor in keeping people motivated and eager to learn and work. The kindergarten classroom can aptly be described as a “dynamic space,” meaning it is an environment that

Learning OBJECTIVES

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After reading this article, you should be able to:

» Identify how the design of dynamic spaces can be adapted to workers’ needs in order to foster innovation.

» Identify how the study of Cognitive Ergonomics (CE) underscores the impact of dynamic spaces on thinking processes.

» Discuss the cognitive, substantive, and emotional/psychological benefits of collaboration and how these benefits enhance creativity and productivity.

» Discuss how organizations can design the three primary environmental workplace “zones” to provide more supportive environments.
facilitates movement, interaction and stimulation. Dynamic spaces accommodate both planned and spontaneous activities, which in turn complement the dynamic work process—a process characterized by vigorous activity and producing or undergoing change and development. Dynamic spaces are flexible spaces that can be adapted to workers’ needs in order to foster innovation.

In fact, the ability to create and evaluate new ideas, and to access and use knowledge and skills to develop these new ideas, is fundamental to innovative business success. “Research is the transformation of money into knowledge, whilst innovation is the transformation of knowledge into money,” says Dr. John Beacham, CBE.

Knowledge stimulates creativity, so it is important to provide as much information to employees as possible, and to make resources available for them to solve problems and complete tasks (this includes the design of dynamic spaces that support a variety of thinking processes and working styles).

**COGNITIVE ERGONOMICS**

We are all familiar with the concept of physical ergonomics. A prolific amount of research in the past two decades demonstrates how the design of furnishings, fixtures and equipment can reduce operator fatigue, discomfort and injury.

The more recent study of Cognitive Ergonomics (CE) underscores the impact of environments on thinking processes. Cognition is the mental processing of sensory information—sight, hearing, smell, touch, and taste—and how it affects our perception of the physical environment. Cognitive Ergonomics strives to make tools and places of work reflect and support how minds work, an especially critical factor in today’s knowledge-based workplaces.

For example, a person’s experience and behavior is affected by his or her visual experience in a space (what they see and don’t see). If a lot of activity is occurring within the space, it may be visually distracting and privacy screens may be a good option for blocking visual disturbances. To satisfy a person’s sensory need to touch, tangible objects should be well within reach and able to be accessed quickly.

Through the study of Cognitive Ergonomics, three primary environmental workplace “zones” have been identified, reports Tim Springer in the article “Messy Desk = Messy Mind? Not So Fast!” which appeared in the April 2008 issue of Today’s Facility Manager. An examination of the three environmental zones (see below) identifies how cognition applies to office work and how organizations can use this understanding to provide more supportive environments.

- **The micro-environment**—the immediate area where a person works
- **The larger environment**—adjacent space, team or work group spaces and the general office environment
- **The broader setting**—the organizational structure and culture

**INDIVIDUAL WORK**

In the article, “Why Office Design Matters,” published in the September 12, 2005 issue of Harvard Business Review’s Working Knowledge, author Thomas Davenport examines the need for knowledge workers to be able to concentrate...
in order to accomplish tasks such as writing, programming and designing. They desire serene and comfortable workplace settings for this concentrated effort. Within the workspace, then, it is important to provide design features that facilitate a worker’s ability to concentrate. Non-stimulating, relaxing colors work best for tasks that are project-based and require focus. Additionally, privacy is recognized as an important design feature to consider. Privacy can be manipulated through the use of partitions or privacy screens and by incorporating flexible, moveable furniture to create different configurations within the space. These flexible configurations allow personal spaces to be customized to an individual’s needs.

Another factor contributing to the ability to succeed at individual work is human memory. People can hold a limited number of “items” in short-term memory (typically between five and 11). As the short-term memory fills, new data displaces stored items. To avoid losing data, most people use reminders (think alphabet charts in the classroom or the ubiquitous Post-it® notes in the workplace) to offload information. Memories and triggers also affect how people organize and store information. The design of the workspace helps support these necessary memories and triggers. For example, the design of the desk, including tackable surfaces and other features, can help support basic cognitive behavior.

TEAMWORK
Like the group work of our early school days, teamwork or collaboration has become an essential contribution to knowledge working.

In its 2006 Global CEO Study, IBM discovered that the shift from a document-focused work style to a people-focused work style is an important step in creating environments that foster innovation. The document-focused style, which connects systems and data, too often produces content for its own sake. But the people-focused style, which connects people and ideas, taps people for knowledge and insight in pursuit of an activity in which content is only one part. In the new collaboration, information is made available to a wider group of people who work together openly, quickly and more cost-effectively. Finding and connecting with subject matter experts are critical steps to the success of collaboration.

Why is this relevant? Because increasingly, work is collaborative and central to the development of new ideas, procedures, products and creations.

The IBM study reinforces this tenet, asserting that true innovation is virtually impossible without collaboration. And innovation is indispensable to success, according to more than three-quarters of the 765 chief executive officers queried who cited collaboration and partnering as very important to their innovation efforts.

Collaboration provides cognitive, substantive, and emotional/psychological benefits. Cognitive collaboration is what we learn from others—different experiences, approaches they take and how they reason. Substantive is a higher level of achievement, a greater level of analytical ability or a higher level of thinking. It relates to how you develop problem-solving techniques and the retention of topics and subject matter. Emotional/psychological collaboration is how you get to know people by working together, overcoming disagreements, and supporting each other. Group work provides all three of these benefits, which can enhance creativity and productivity.

An environment designed to encourage teamwork or working in groups—from two people to hundreds of people—should support a variety of collaborative working styles, including organized teamwork as well as random and spontaneous interactions. Open office designs are meant to facilitate greater communication and collaboration, but group dynamics and communication styles should always be considered when planning these spaces.

The challenge for business managers is to learn how people work together—
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Factoring in individual peculiarities—and how to adjust dynamic environments to promote collaboration.

In addition to collaborative workspaces, organizations also need to recognize the value that social spaces play in generating collaborative encounters. In their article, “FutureVision: Design in 2019,” appearing in the fall 2009 issue of Office Furniture & Design, authors Deb Barrett and Susan Schultz report that the comforts and advancements that were introduced to individual workstations starting 10 to 15 years ago—ergonomics, accessibility, flexibility, attention to materials and wall space, etc.—are now being applied to office social spaces. And these social spaces no longer only mean “first impression spaces” such as fancy lobbies, visitor boardrooms or guest washrooms; they are also areas where company personnel gather, including lunchrooms, breakrooms and, of course, formal and impromptu meeting spaces.

These spaces not only aid on-site workers, but also help better integrate the increasing number of out-of-office “mobile” workers into the corporate environment when they do come in. The number of U.S. employees who worked remotely at least one day per month increased 39 percent the past two years (from approximately 12.4 million in 2006 to 17.2 million in 2008, according to WorldatWork’s Telework Trendlines™ 2009 survey). As a result, today’s workforce is fueled by mobile and remote connectivity, including laptops, wireless systems, smart phones, mobile applications, cloud computing, and videoconferencing. Companies must invest in these modern technologies and the furnishings that can adapt and support mobile work styles.

In these non-traditional and more energetic work environments, bolder colors can be used to stimulate and keep employees energized. In addition, reducing overall horizontal wall heights and furnishings will increase visual access and accessibility.

A number of furniture items have proven to be integral elements in promoting a collaborative work environment through seamless connections to technology, their ability to adapt to mobile work styles and range of uses. Some notable examples include:

- Modular furniture with a kit of parts—tables, seating and accessories—that can be reconfigured quickly and easily without the need for assistance from the facility management staff.
- Movable walls that can change the size of a workspace or re-orient an office according to its use.
- Height-adjustable worksurfaces that allow users to configure desk and surfaces to varying heights.
- Side chairs that encourage visitors to “sit and stay awhile.”
- Mobile storage units and cabinets that can also provide an extra worksurface for increased functionality.
- Mobile desks that provide extra worksurfaces, especially important as hoteling and temporary offices become the norm.

Accommodating adjacencies is also integral to creating successful teaming environments. This relates to the positioning of people and their workspaces in order to reduce an individual’s footprint and increase common spaces. Planning office space with no clear direction as to layout or adjacencies can reduce a worker’s efficiency by as much as 30 percent.

Davenport, in “Why Office Design Matters,” reports that knowledge workers most frequently communicate with people who are close by. He writes that while e-mail and instant messaging may have changed the relationship between physical proximity and communication, workers rarely e-mail or IM intensely with someone they don’t know. He asserts that companies should design work environments so that knowledge workers who need to communicate are physically close to each other in order to facilitate the collaborative process. The positive interactions that result are a significant contributor to how well employees are engaged with their co-workers, and how happy and productive they are at work.

The Organizational Culture
Creating a culture of collaboration isn’t always easy, especially for companies in more conservative fields or with a more traditional management style. However, as more anecdotal and empirical evidence underscores the benefits of teaming environments, increasing numbers of companies from varying industries and of varying sizes are expected to migrate toward this more contemporary culture ... and toward creating the dynamic spaces that support it. Barrett and Schultz argue that “the idea of a ‘corporate culture’ will need to change from the ‘one way we all think’ to the many ways of individuals working together, no longer just one way.” This argument in reinforced in the book, The Culture of Collaboration, in which author Evan Rosen describes 10 elements necessary for a collaborative culture to work (see sidebar on page 64).

Many workplace experts believe that a natural migration toward collaboration and flexibility will occur as younger workers become a more dominant force in the workplace and in future C-level suites. It is estimated that by 2016, 47 percent of the U.S. workforce (as many as 70 million workers) will be Generation Y or younger; these digital native workers react and interact much differently than baby boomers, notes Stephanie Armour in “Generation Y: They’ve Arrived at Work with a New Attitude,” in the November 6, 2005 issue of USA Today. “They’re young, smart, [and] brash. They may wear flip-flops to the office or listen to iPods at their desk. They want to work, but they don’t want work to be their life,” reports Armour. In other words, work/life balance isn’t just a buzzword, but a mandate for a new way of living and working.

Generation Y has some serious expectations when it comes to flexibility in where, how and when they do their work, says Ashley Acker, Ph.D., in “Four Trends Driving Workplace Flexibility.” Acker notes that the Millennial Generation will be pushing for shorter work days with a focus on increased productivity; and...
that they don’t buy into the belief that flexibility is a perk or has to be earned—they expect it for themselves and everyone else from their first day on the job.

Acker also notes another demographic shift impacting the workplace: There are more women in the workforce and more dual-career couples than ever before. “Only 16 percent of families fall into the once common model of the man working outside the home while the woman stays home with the children,” she writes. “Dual-career couples are seeking flexibility in the workplace as an effort to relieve some of the work and family conflict they commonly face.”

The fact remains that multiple generations are working side by side in today’s offices, and can be at odds in impacting how office space is organized, furnished and designed. In “FutureVision: Design in 2019,” Barrett and Schultz examine how older employees tend to maintain the more academic aspects of the work environment, while younger employees advocate for a space they are proud of and comfortable in—a space where they can feel “at home.”

Barrett and Schultz propose that organizations should think of change as a process and a function, both of which are regarded differently by boomers versus younger generations. “For older employees, change is something you have to adjust to. For younger workers, change just is,” they note. As a result, younger workers will often not wait for change to happen but will effect it with/to/on themselves. And the group following Gen Y will bring to the workplace their own set of personal networks that will be a valuable and expected asset to their company.

When looking for furnishings to support these new ways of working, sustainable design features will gain even greater traction in the marketplace. Younger workers will demand environmentally-friendly and flexible products that can adapt to ever-changing on-site work styles for an optimal life-cycle. They will seek products that are manufactured using minimal raw materials, water-based adhesives and with reduced energy and greenhouse gas emissions. They will look for modular furniture systems with a reduced number of “parts” that make it easier and more convenient to disassemble and reuse—a business practice that is both fiscally and environmentally responsible.

**CONCLUSION**

The recent downturn in the economy has helped magnify the importance of identifying how the workplace can empower workers to be more creative and innovative. Business executives are seeking a better return from all their investments, especially from their largest asset: their employees. Real estate, another significant portion of a company’s overhead expenses, is another line item capturing increased attention. It is estimated that companies are cutting costs by downsizing their real estate by 20 percent to 40 percent. They are consolidating offices and looking to “spaceless” growth: smaller, more flexible and multi-functional environments.

This magnifies the importance of fostering increased collaboration and innovation among employees, within a smaller yet more dynamic physical footprint that is filled with more intuitive furniture that provides the best value in both product and service.

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