Technological innovations are giving rise to structural changes in the economy that are in turn creating profound changes in the nature of work and work organizations. Predicted changes are: traditional hierarchical organizations in the workplace will give way to network or weblike forms of organization; customary vertical divisions of labor will be replaced by horizontal divisions characterized by collaboration among autonomous teams; customized manufacturing will replace mass production; new service industries and occupations will evolve; the numbers of specialists and integrators will increase; and a "freelance economy" will emerge. The following are some implications of these changes for education and training: more occupations will deal with abstract information and procedural or mathematical reasoning; preparation for work will include formal education plus contextual or craft knowledge; formal education may impart just a disciplined way of thinking and the habits/skills of lifelong learning; the increased value of experiential learning will require new forms of tech prep and apprenticeship for youth and adults alike; and individuals will need to develop new attitudes about the cyclical nature of careers, career paths, and continuous learning. (An annotated list of 17 related publications is included.) (MN)
The education and training issues associated with these changes include the following (Barley 1992; Kiechel 1993; "The New Economy" 1994; Zemsky and Oedel 1994):

- More occupations, including current blue-collar ones, will deal with abstract, symbolic information and procedural and mathematical reasoning.
- "The new crafts challenge the tradition of managers being educated at universities while workers below them rely solely on high school education" (Gapper 1992, p. 2). Preparation for the new kinds of work will include formal education plus contextual or craft knowledge—the most valued skills appear to be those developed in a hands-on conversation with materials and techniques" (Barley 1992, p. 15).
- Formal education may impart just a disciplined way of thinking and the habits and skills of lifelong learning.
- Higher education may be able to confer status on the emerging new occupations by providing new credentials and degrees.
- The increased value of experiential learning suggests a need for new forms of tech prep and apprenticeship, both for youth and adults in career transition.
- Individuals will need to develop new attitudes about the cyclical nature of careers, career paths, and continuous learning.
- New organizational forms will necessitate learning new ways to manage (coordinate) autonomous teams.

Print Resources


The trend toward an increasingly technical work force has not only necessitated better educated workers but has challenged the ways in which the work force and the workplace are conceptualized and organized.


By 2000, professional and technical occupations will be the largest occupational sector. The division of labor between technicians and professionals is more collaborative (horizontal) than hierarchical (vertical) and the two groups command substantively different knowledge and skills.


Examines trends and implications around seven themes: diversity, family-work relationship, global economy, restructuring, knowledge-based work, rising employee expectations, and corporate social responsibility.
Although technology is fostering the evolution of new occupations, identifying them is challenging because of the difficulty of distinguishing between new careers and existing careers being changed by technology.