Computers in The Workplace

Opportunities and Problems

Impact on Jobs

- Job Loss:
  - Increased efficiency leads to fewer jobs

- Job Creation:
  - New jobs
  - Support jobs
  - Lower cost raises demand, creating jobs

- Unemployment rates are less now than at the beginning of the 20th century!

<table>
<thead>
<tr>
<th></th>
<th>1970</th>
<th>1997*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average new home size (sq. ft.)</td>
<td>1500</td>
<td>2150</td>
</tr>
<tr>
<td>New homes with central heat and air conditioning</td>
<td>34%</td>
<td>81%</td>
</tr>
<tr>
<td>Households with 2 or more vehicles</td>
<td>29.3%</td>
<td>61.9%</td>
</tr>
<tr>
<td>Households with color TV</td>
<td>39.9%</td>
<td>97.9%</td>
</tr>
<tr>
<td>Households with VCRs</td>
<td>0</td>
<td>89%</td>
</tr>
<tr>
<td>Households with microwave oven</td>
<td>less than 1%</td>
<td>89.5%</td>
</tr>
<tr>
<td>Housing units lacking complete plumbing</td>
<td>6.9%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Median household net worth</td>
<td>$27,038</td>
<td>$59,395</td>
</tr>
<tr>
<td>Shipments of recreational vehicles</td>
<td>30,300</td>
<td>281,000</td>
</tr>
<tr>
<td>Average household ownership of sporting equipment</td>
<td>$769</td>
<td>$1,895</td>
</tr>
<tr>
<td>Americans taking cruises</td>
<td>0.5 mill.</td>
<td>4.7 mill</td>
</tr>
</tbody>
</table>

* A few figures are for 1995 or 1999. All dollar figures in both columns are in 1997 dollars.

Figure 8.1 Living Standards and Leisure in the Computer Age
Effects on Working Hours

- Why people still work many hours:
  - What used to be luxuries are now viewed as necessities
  - Employer encouragement
  - Increased taxes

Effects of Globalization

- Lower cost
- More jobs in undeveloped countries?
- Does this mean less jobs in developed countries?
Skills and Education

- High tech jobs require more specialized education
- People tend to acquire the education necessary for the jobs available
- Technology lowers the cost of training and education
- Continuous retraining is/will be necessary

The Impact on Employment

- Optimistic Outlook:
  - The educational system adapts rapidly to create newly trained workers.
  - Technology can be used to retrain displaced workers.
- Pessimistic Outlook:
  - Advanced software will eliminate many jobs requiring high skills.
  - Automation and the Web will lead to mass unemployment.

Changes in the Work Environment

- Telecommuting
- Changed business structure
- Creativity
Telecommuting

- Benefits
  - Flexible schedule and work options
  - Reduced overhead
  - Reduction in transportation and parking resources
- Problems
  - Less productive or overworked employees.
  - Lack of belonging (social isolation).
  - Potential distractions are counter-productive
- Side effects
- Regulations

Changed Business Structure

- Smaller businesses.
- More independent consultants and contractors.
- More self-employment.
- Small businesses operating globally.
- Multi-national corporations and mergers.
- Decline in number of employees per firm.
- Flattened hierarchies.
- Empowered workers.

Creativity

- Repetitious or boring jobs are now done with computers
- There is more time for creativity
Employee Monitoring

- Performance Monitoring
- Location Monitoring
- Monitoring of e-mail, voice mail and web surfing:
  - The Electronic Communications Privacy Act prohibits interception of e-mail and reading of stored e-mail without a court order but exempts employers when company systems are used.

Common Reasons for Monitoring

- Find needed business information when employee is not available.
- Protect proprietary information.
- Prevent or investigate possible criminal activities.
- Prevent personal use of employer’s facilities.
- Check for violations of company policy.
- Investigate complaints of harassment.
- Check for illegal software.

Monitoring Guidelines

- Monitoring and evaluation procedures should be explained fully to employees.
- Employees should be told, when they are hired, that business calls may be monitored.
- Only business calls can be monitored, not personal ones.
- Employers should provide unmonitored telephones for personal calls.
- Employees whose performance is criticized should have access to monitoring data and an opportunity to challenge the evaluation.
- Problems uncovered by monitoring should lead to more training. There should be no disciplinary action unless the employee fails to improve.
- Employees should be involved in setting up procedures for monitoring.
Health Issues

- Computer Terminal Radiation
- Cell Phone Use and Cancer
- Toxic wastes from discarded computer parts
- Repetitive Strain Injury (RSI)

Solutions

- Ergonomic solutions
- Management involvement
- Legal solutions?
- Education

Questions to Ponder

- How Have Computer Technology and Other Technologies Affected:
  - Hourly wages?
  - Fringe benefits?
  - Spending on leisurely activities?
  - The number of working hours?
  - The percentage of taxes we owe?
  - Our productivity?
  - Employer productivity?