

**The New Economy and Labor  
Market Requirements**

**Presented By  
Dr. Philip D. Gardner**

**Collegiate Employment Research Institute  
Michigan State University  
113 Student Services Building  
East Lansing, MI 48824  
Phone: (517) 355-2211**

**WHERE WILL I USE WHAT YOU ARE  
TEACHING ME TODAY?**

**-students**

# **IS THIS TOMORROW'S WORKPLACE?**

## **Performance:**

- **Output up 80% in six years**
- **Absenteeism 2%**
- **Employee turnover 1%**

## **Environment:**

- **No time cards**
- **No supervisors**
- **No job classifications**
- **No definite work assignments**
- **No hourly workers**

**Fact: Work has increased 12% in six years; workers do the work equivalent to an operation 33% larger.**

## **Participation:**

- **Production scheduling**
- **Solving quality problems**
- **Evaluating performance**
- **Recommending new equipment**
- **Undertake disciplinary actions**
- **Hire and train other workers**

**System: Worker teams**

**TRW's Oil Well Division has operated this way since 1982**

**Productivity, September 1982**

**Workplace 2000**

## **SURVIVAL SKILLS IN THE NEW** **WORKPLACE**

- **Work in a "value-added" piece of the business**
- **Be flexible**
- **Locked into a specialty - become a consultant**
- **Avoid routine decision making jobs**
- **Be creative - identify new business**
- **Expect periods of unemployment**
- **Know financial performance of company/what industry is doing**
- **Expect to work harder/longer if want leadership role**  
**(Catch 22: want more leisure time)**
- **Search for the right fit**

## **SKILLS DEMAND FOR EDUCATION**

**No place for the functionally illiterate/under-educated/untrained**

**Why is education so important now?**

**1. Entering a knowing-doing age**

**2. Change in workplace practices**

**Quality control: statistical process control**

**3. Change in respect to how and what type of human effort is valued - physical vs mental**

- "Intellectual capital continues to overtake physical capital as the key asset of the corporation..."**

**Robert Reich, The Work of Nations**

**4. Recognition of work for itself**

**"People's orientation toward work has shifted from an instrumental view of work (means to an end) to an intrinsic view where work is valued for itself. Work is one of man's higher aspirations."**

**Peter Senge, The Fifth Discipline**

# **BASIC SKILLS NEEDED BY EVERYONE**

## **1. Learning to learn**

**Each person acquires the self-knowledge concerning when and how he or she learns best**

**Tailor education to each student**

**Top**

**Middle < L O S T >**

**Special**

**Why? with constant change need to retain competency by learning new skills**

## **2. Competence in reading, writing, math**

**Tasks: write for information**

**interpret graphs/diagrams**

**identify relevant information**

**What kind of learning is important?**

**Point: math will be conceptual rather than computational**

**3. Communication: verbal, listening**

**team members, express ideas,  
convey information**

**4. Personal management: self-esteem,  
motivation**

**Why? risk takers**

**deal with failure**

**generate ideas**

**no supervision**

**(individual/group evaluation)**

**5. Adaptability**

**creative thinking**

**problem solving**

**innovative solutions**



## **6. Group effectiveness**

**interpersonal - team skills**

**handle stress**

**resolve conflict**

**share in accomplishment**

## **7. Influence**

**organization effectiveness**

**leadership**

**Why? how organization works (informal vs formal)?**

**why organization exists**

**internal - external forces affecting organization**

# **THE GREAT LAKES ECONOMY**

## **Strategic Issues**

### **1. Restructuring**

- a. Global mergers (interlocking ownership)**
- b. Economic clusters - disintegration to integration - webs**
- c. Value-added**
- d. Management of human resources across national boundaries**

### **2. Adjustment of labor markets to new competitive standards**

**cost - quality - time  
(all will transcend geographic location)**

### **3. Technological integration**

- a. From "just-in-time" to "any time/any place"**
- b. Blurring the lines between manufacturing and services**

- 4. Global integration**
  - a. Canada/US free trade**
  - b. Mexico/US free trade**
  - c. Europe**
  - d. Japan and Asia**
- 5. Within region changes**
  - a. Outward bound to rural areas**
  - b. Labor markets in small towns**

**Donald Iannone**

**Cleveland State University**

# **GREAT LAKES HUMAN RESOURE**

## **ISSUES**

- 1. More creativity required in recruiting**
  - a. More testing/screening**
  - b. Right skills/right aptitude/right attitude**
- 2. Implementing new technologies**
  - a. Retraining older workers**
  - b. Integrating technological systems**
- 3. Labor cost structure**
  - a. Engineering out high price labor**
- 4. Reducing/redefining middle management**
  - a. Manufacturing**
  - b. Service**

- 5. Obtaining training/acquiring education requirements**
  - a. Growing pressure on schools, colleges, universities**
  - b. Training of all types**
- 6. Diversity management**
  - a. Minorities**
  - b. Women**
  - c. Cultures**
  - d. Languages**
- 7. Reality of education/business partnership**

## **MICHIGAN'S ECONOMY**

### **1. Big 3 from 1979 - 1989**

- **Workforce went from 480,000 to 290,000**
- **Another 60,000 by 1995**

### **2. Net loss of jobs (230,000)**

- **Represented 5% of unemployment**

### **3. In manufacturing: besides Big 3**

- **Number of jobs created = number of jobs lost**

### **4. 80% of jobs in 1989**

- **Did not exist in 1980**
- **Were created by employers with less than 100 people**
- **Majority of losses from firms greater than 500**

- 5. Manufacturing: firms less than 500 employers**
  - **MI grew by 14% in the 1980s**
  - **US grew by 2.4%**
  - **Most in industrial services**
- 6. Per capita income: now equivalent to national average**
- 7. Drop outs & unemployment (1990 Current Population Survey)**

## **DESCRIBING SCHOOLS**

- **Punctual**
- **Small Workforce (self-control)**
- **Rote (over/over)**

**How do these characteristics fit tomorrow's workplace?**



## **EDUCATIONAL TRAINING**

**1900 - 1920 Farmers**

**1920 - 1960 Laborers**

**1960 - 1990 White Collar**

**1990s - ? Knowledge Worker**

### **School Reflects Society**

**Farmers . . . . .School Calender**

**Laborers . . . . ."Taylorized Curriculum"**

**White Collar . . . .College Prep**

**Knowledge . . . .Thinking and Doing**

## **PARADOX OF OUR YOUTH**

**Majority work part time vs have no work ethic**

**Many youth working vs few good jobs**

**Most going to college vs about 50% graduate  
(within 5 years)**

**75% receive high school diploma vs possess poor basic skills**

**Ample spending money vs can't support self**

## **WHAT SHOULD BE DONE**

- **Teachers need to gain a better understanding of the world of work**
- **Students need to gain a better understanding of the world of work**
- **Skills taught in the classroom need to include skills needed in the workplace (everyone!)**
- **Curriculum revision/rethinking is needed instead of setting higher standards for existing curriculum (avoid the standardized test trap)**
- **Need to decide who trains youth in "technical skills" and to what level**

## **ACTION REQUIRES PARADIGM SHIFTS** **(crush the boxes)**

- **Systems thinking (fifth discipline)**
- **Quality criteria**
- **Attention to the middle (customized education)**

**for the average student**

**for the average teacher to excel**

**IMPROVE THE SYSTEM -  
QUIT BLAMING THE INDIVIDUAL**

**YOU CAN'T SOLVE TODAY'S PROBLEMS**

**WITH YESTERDAY'S SOLUTIONS**

**OR**

**IT'S NOT YOUR FATHER'S EDUCATION**

**OR**

**IT'S A NEW PRODUCT**

# V I S I O N

**IS THIS EDUCATION FOR SOMEONE  
ELSE'S CHILD OR MY OWN?**

**for parents, teachers, administrators**



## **Achieving Educational Goals/Expectations**

- **Involvement of family**
- **Share the vision**
- **Don't count on education technology**
- **Don't count on state legislatures**
- **Don't count on business (alone)**
- **Sponsor educational experiments:  
allow kids to explore  
remove climate of failure**
- **Seek/provide social-financial incentives  
to improve**

## Employment vs Education

### 1979 ALL POPULATION

	<u>% Pop Emp</u>	<u>% Unemp</u>	<u>% Emp</u>
< 4 Yrs HS	55.6	9.1	20.6
HS Grad	68.1	5.9	39.5
Some Coll	72.2	3.6	21.1
Coll Grad	85.8	1.3	18.9
All	69.0	5.3	

### 1989 ALL POPULATION

< 4 Yrs HS	44.7	14.6	10.1
HS Grad	68.4	6.4	41.4
Some Coll	76.7	3.9	23.2
Coll Grad	86.5	1.8	25.2
All	70.1	5.6	

### 1979 MALE POPULATION

< 4 Years HS	71.8	8.5	22.9
HS Grad	87.6	5.5	35.1
Some Coll	89.2	4.1	21.2
Coll Grad	96.3	0.5	20.7
All	85.2	4.9	

### 1989 MALE POPULATION

< 4 Yrs HS	56.6	18.0	11.6
HS Grad	76.2	8.9	37.2
Some Coll	86.4	4.4	22.3
Coll Grad	93.4	1.9	28.8
All	79.3	7.2	

### 1979 FEMALE POPULATION

	<u>% Pop Emp</u>	<u>% Unemp</u>	<u>% Emp</u>
< 4 Yrs HS	38.3	10.3	17.1
HS Grad	54.3	6.3	46.0
Some Coll	60.8	2.8	20.8
Coll Grad	70.9	2.6	16.1
All	53.7	5.8	

### 1989 FEMALE POPULATION

< 4 Yrs HS	32.7	8.1	8.2
HS Grad	62.2	3.8	46.9
Some Coll	68.1	3.4	24.4
Coll Grad	76.9	1.5	20.8
All	61.4	3.6	

### AVERAGE ANNUAL EARNINGS

	<u>\$ 1979</u>	<u>\$ 1989</u>	<u>% Change</u>
< 4 Yrs HS	10,364	14,042	35.5
HS Grad	12,593	19,517	55.0
Some Coll	14,310	24,039	68.0
Coll Grad	20,683	39,543	91.2
CPI	73.0	129.1	76.8

## How Do People Find Jobs?

	<u>%</u>
<b>Applied directly to employer</b>	<b>35</b>
<b>Asked friends:</b>	
• jobs where they worked	13
• jobs elsewhere	6
<b>Asked relatives</b>	
• jobs where they worked	6
• jobs elsewhere	2
<b>Answered newspaper ads</b>	
• local	12
• nonlocal	1
<b>Private employment agency</b>	6
<b>State employment office</b>	5
<b>School placement office</b>	5

	<u>%</u>
<b>Civil service test</b>	<b>2</b>
<b>Union hiring hall</b>	<b>2</b>
<b>Teacher/professor</b>	<b>2</b>
<b>Other</b>	<b>7</b>

**Source: U.S. Department of Labor**

### **What Are Local Labor Markets?**

#### **"A Stew"**

- **Net effect of actions and decisions made by thousands of uncoordinated, independent employers**
- **No centralized place where employers and perspective employees meet**
- **Job seeker must deal with many people before finding a new position**
- **Much effort required to find information**

# **Approaches To Assist in Job Placement**

## **Three Approaches**

- 1. Job solicitation for specific clients**
- 2. Job matching**
- 3. Career learning**

## **Learning that Empowers**

### **Components**

- 1. Career and occupational exploration**
- 2. Job experience**  
"spending money" or "tuition"
- 3. Job characteristics/expectations "realistic"**
- 4. Resume and interviewing assistance**

## **5. Labor market entry - "targeting"**

- networks**
- direct contact**
- matching**

## **6. Reevaluation**

### **Adding a Dash of Reality**

**Unemployment**

**Harassment**

**Politics**

## **Catch 22 of the "Job Mismatch"**

### **New Economy View:**

**Rapid growth of high-skilled professional and technical occupations will rapidly upscale the job mix skills**

### **Misleading (Mishel and Teixeira)**

**Upskilling within occupations, primarily a result of technology change, not as widespread as thought, more potential than actual**

**Projected changes in the job structure will increase skill requirements; yet experiencing a decrease in compensation levels**

**Whites (non-Hispanic) will still comprise the majority of entrants to the labor market through the 90s**

**Wage structures are very sluggish**

### **Must**

**Improve the types of jobs already available**

**Reexamine composition of jobs and those being created**



## **Contend**

**Future labor force only 30% need a college degree (up from current 25%)**

**Surplus of college graduates (at least until baby-boomers retire)**

**\*Improve the jobs, pay, and skills of the non-college-educated workforce**

# **The New Economy and Labor Markets**

**What does work mean to you? (Joe)**

**Lessons from the 1980s**

**The dynamics of economic activity**

**People: our biggest challenge**

**New forces in the economy (Alice)**

**A. Structure: what will the economy look like**

- 1. flat-lean**
- 2. why the middle is gone**
- 3. role of technology**
- 4. dynamic view - enterprise web (Luke)**
- 5. role of the "small organization"**

**B. What will the work place look like**

- 1. is this tomorrow's work place**
- 2. characteristics of the work place**
- 3. expectations of the new work place**
- 4. survival skills in the work place**

**C What type of jobs will there be**  
**D. Skills required in new economy**

- 1. Reich's general framework**
- 2. basic skills**
- 3. Daggett's New York Study**

**E. Who will be participating**

**F. Quality of jobs: Catch 22**

**National economic trends (slides)**

**Great Lakes economy**

**Michigan's economy**

**Entering the labor market**

- A. Where do jobs come from?**
- B. How do people find jobs?**
- C. What are local labor markets**
- D. Government data: state and federal**
- E. Institutional data**
- F. Supporting resources**

## **Approach to assist in job placement**

- A. Three approaches**
- B. Learning that empowers**
- C. A dash of reality**

**Looking to education**

**Quit blaming the individual**

## **What Does Work Mean To You?**

### **\*Prisoner of Circumstances**

**Charlie Chaplin      Modern Times**

**Necessity of life - food, shelter, belonging**

### **\*Intrinsic Need to Work**

**Higher aspirations**

### **\*Play - What we like to do**

**Fun is a part of work**

**Elements that lead to work**

**Spontaneity ----- Compulsion ----- Effort**

**(within)**

**(outside)**

**(mastery)**

**Fun/spontaneity is the key**

**Is this the way we educate?**

## **Lessons From The 1980s**

**\*Our expectations were/are too low**

**"In the early 1980s about 92 percent of the parts coming into our Webster, New York plant were defect-free. From a competitive standpoint that is absolutely abominable. We're now at 99.5 percent, which is absolutely unsatisfactory... We believe 100 percent defect-free is possible, and that is our expectations now.... We cut our inventory from about six months of in-process inventory to one month's, and that's just absolutely awful... We have reduced unit manufacturing costs by about 50 percent, but that is not nearly good enough. We have reduced our product development cycles by 25 percent to 50 percent. That's terrific, but it is still not nearly good enough. Our revenue per employee is up 20 percent, but that is not nearly good enough. Still, we have made a lot of progress and I have very good feelings about the Xerox people who have done this.**

**David Kearns**

**Chairman, CEO**

**Xerox 1989**

**\*"Okay quality" isn't good enough**

**Poor quality drives up costs**

**\*Outstanding customer service is essential**

**Lose business**

**Ripple effect**

**\*Innovate faster and faster**

	<b>Where</b>	<b>% Market</b>	<b>% Share</b>
<b><u>What</u></b>	<b><u>Invented</u></b>	<b><u>1970</u></b>	<b><u>Now</u></b>
<b>Phonographs</b>	<b>America</b>	<b>90</b>	<b>1</b>
<b>Colored TV's</b>	<b>America</b>	<b>90</b>	<b>10</b>
<b>Video Recorders</b>	<b>America</b>	<b>10</b>	<b>1</b>
<b>Semiconductors</b>	<b>America</b>	<b>89</b>	<b>64</b>
<b>Computers</b>	<b>America</b>	<b>97</b>	<b>74</b>
<b>Telephones</b>	<b>America</b>	<b>99</b>	<b>25</b>

**-Demise of the sequential process of manufacturing and marketing**

**-"Over the divider" mentality**

## **The Dynamics of Economic Activity**

**Traditional view: the factors of production, capital (money), technology, factories, and equipment relatively immobile.**

**Today: move effortlessly across borders, in milliseconds**

**Consider these facts: (from Reich)**

- **Average net after-tax profit rate of America's largest nonfinancial corporations was 10% in 1965 - has declined ever since, except briefly between 1982 to 1985.**
- **The highest Dow Jones in the 1980s occurred in 1987, adjusted for inflation, this figure fell below the peak of January, 1966.**
- **Fortune 500 companies failed to add jobs between 1975 and 1990, dropping from 17% to 10% of the workforce; by 1995 will be at 8% (Wegmann).**
- **Organized labor from 35% of non-agricultural labor in 1960. Today only 17%; excluding government employees, less than 13% - same as early 1930s before unions protected.**



- In 1977, 3.5% of manufacturing capacity in U.S. owned by non-Americans; in 1990, 11% of manufacturing, which employed 10% of manufacturing employees, foreign owned.
- Compensation has changed
- 1960 CEO (Top 100 Companies) at \$193,000 was 40 X average factory worker by after taxes only 12 X
- 1989 CEO earned \$2 million or 93 X average factory worker; after taxes 70 X
- Between 1977 and 1990, average pretax income of poorest fifth declined 5% - same period richest fifth increased 9%
- Income disparity has widened fastest between people who graduated from college and those who have graduated from high school or dropped out

**Income disparity has increased**

**Dramatic change in composition of middle class**

**Some trends also occurring in other industrialized countries**

**What factor of production is left?**

**P E O P L E**

**Challenge**

**"The real economic challenge facing the United States in the years ahead - the same as that facing every other nation - is to increase the potential value of what its citizens can add to the global economy, by enhancing their skills and capacities and by improving their means of linking those skills and capacities to the world market."**

**Robert Reich, p. 8**

**What is happening in the national economy that will influence the well-being of us all?**

## **Structure: What Will The Economy Look Like**

**Today: Flat - Leaner - Aggressive**

- **Need flexibility to respond to rapidly changing customer demand**

**Why must the middle disappear?**

- **The "big is better" philosophy goes bust!**
- **The story of GM and Sears**

## **What Technology Has To Do With It**

- 1. Dispenses with the filtering process**
- 2. Can perform routine tasks and decisions**

**Thus: "first contact" employee can make decisions**

**For example:**

**Sales person (point-of-sales computers)**

**Prepare proposals**

**Conduct margin analyses**

**Do credit checks**

**Enter orders**

**Establish delivery schedules**

**Initiate billing**

**Customize product**

# **Enterprise Web**

## **Dynamic View of the Flat Organization**

**Center:** Strategic Broker will create settings in which problem-solvers and problem-identifiers can work together.

**Nodes:** Creative teams or units that are linked together to solve and identify problems. Coordination is horizontal and communication is frequent and mutual learning the key. Comprised of a few people to several hundred.

**Dynamics:** New webs continually being spun; nodes and center can be involved in multiple webs.

**Skills:** Each node represents a unique combination of skills. Higher demanded skills closer to the center.

**Status:** The outer nodes will be occupied by suppliers of standard inputs (factories, equipment, bookkeeping, janitorial service, data processing--any thing routine).

**For Example: Polaroid**

**Director of purchasing at center purchases from 8,000 suppliers through 95,000 contracts high tech parts to janitorial service; accounts for 50% of companies revenues**

## **Advantages of the Web:**

- 1. Emphasis on speed and agility**
  - **Not weighed down by overhead, equipment, etc.**
- 2. Flexible**
  - **Can switch directions; pursue options**
- 3. Labor Fluidity**
  - **Individual moves to more advantageous positions**
- 4. Reduce high price labor and benefits**
  - **The further from the center, less costly labor**
- 5. Risk-venture oriented**

## **Web Forms**

### **1. Independent profit centers**

- **Eliminate middle managers**
- **Authority given to teams of engineers/marketers, etc. for product development and sales with salary tied to profit**
- **Brokers provide financial and logistical assistance**
- **i.e. Johnson & Johnson comprised of 166 autonomous companies**

### **2. Spin-off partnerships**

- **Brokers act as venture capitalists nurture ideas that bubble-up from problem-solvers and problem-identifiers**
- **Ideas works, spin-off group as separate business**
- **i.e. 3M**



### **3. Spin-in partnerships**

- **Problem-solvers outside web come-up with idea**
- **Brokers form partnership**
- **i.e. computer software**

### **4. Licensing**

- **Brokers contract with independents to sell and market; ensure the web is secure, ensures quality, provides bulk services**
- **Licensees in control**
- **i.e. franchises (provide just about everything)**

### **5. Brokering**

- **Contract with independent businesses for problem solving, identification, and production**
- **i.e. Compaq Computers, movie studios**

## Global Web

**Consider purchasing a Pontiac Le Mans from GM for \$20,000. The distribution of that payment could go like this:**

- - **\$6,000 South Korea for routine labor and assembly**
- - **\$3,500 Japan for advanced components**
- - **\$1,500 West Germany for styling and design**
- - **\$ 800 Taiwan/Singapore for small components**
- **\$ 500 Britain for advertising/marketing**
- - **\$ 100 Ireland/Barbados for data processing**
- - **\$7,600 Detroit for strategists/lawyers/lobbyists/insurance/shareholders**

**What are the COSTS of a flat-lean-aggressive web? affect on careers**

- **Advancement**
- **Security**
- **Benefits**
- **Fail-rate**

**What are the ADVANTAGES of a flat-lean-aggressive web? affect on careers**

- **Maximize performance**
- **"Family" - the term**
- **Profit sharing**
- **Meaning**

**American workers face big changes in going from big to small**

**Corporate jobs will disappear**

- **by 1995 Fortune 500 will directly employ only 8% of the workforce; will have little influence on hiring**

**Type of worker preferred**

- **routine workers; not contributing to value--out**
- **problem-solvers and problem-identifiers--in**

**Managerial/supervisory jobs will disappear**

- **"span of communication"**

**Traditional paths for career advancement closed**

**Companies will disintegrate**

- **"rejection of vertical integration"**

**Speciality and staff functions spun to outer edge of web**

## **What Type of Jobs Will There Be**

**Be ready for lose of routine jobs**

- **bank teller**
- **fast food servers**
- **word processors - paralegals**

**Jobs will be upgraded**

- **auto mechanic**
- **cashier**

**Classification of workforce (Reich)**

**1. Routine production (33% of all jobs in 1990)**

- **repetitive tasks (both manufacturing/service)**
- **i.e. data processors**
- **work with many other people**
- **work in enclosed spaces**
- **guided by standard procedures and rules**

- **overseen, regularly, to see if work is performed accurately and as to how much**
- **skills: read, perform simple calculations**
- **values: reliability, loyalty, capacity to take direction**
- **pay: function of hours worked/amount of work performed**

## **2. In-person services (30% of all jobs in 1990)**

- **simple repetitive tasks**
- **pay function of hours worked or amount of work performed**
- **closely supervised**
- **provide person-to-person, indirect contact with beneficiaries of their work**
- **immediate object - customers**
- **virtues - punctual, reliable, tractable, pleasant (smile, exude confidence, good cheer, courteous, helpful, make others feel happy)**

**In 1980s, 3 million new in-person jobs created more than routine production jobs still existing in automobile, steelmaking, and textile industries combined**

**3. Symbolic - analytical (20% of all jobs)**

- **(problem-solving, problem-identifying, strategic brokering)**
- **manipulator of data, words, oral & visual representations**
- **solve, identify broker problems**
- **simplify reality into abstract images that are rearranged, juggled, experimented with, and communicated to others**
- **not in contact with beneficiaries**
- **have partners or associates not bosses**
- **income varies from time to time**
- **careers will not be linear or or hierarchical**
- **work done in small teams**
- **teamwork is critical**
- **have college/graduate degrees**

- **conceptualize problem, devise solution, plan for execution**
- **creative use of knowledge**

#### **4. Others**

- a. **farmers - miners/foresters 5%**
- b. **government/public employees 12%**
  - **including teachers**
  - **protected from global competition**

**Question: classify these four jobs into the above**

- **secretary**
- **sales**
- **competitor programmer**
- **manager/professional**

**Point: traditional SIC/SOC classifications tell us better about what a person really does**



## **Job Titles**

**Job titles no longer reflect what type of work is actual being done.**

**Seeing new linguistic idioms that express title as status.**

<b>Communication</b>	<b>Management</b>	<b>Engineer</b>
<b>Systems</b>	<b>Planning</b>	<b>Director</b>
<b>Financial</b>	<b>Process</b>	<b>Designer</b>
<b>Creative</b>	<b>Development</b>	<b>Coordinator</b>
<b>Business</b>	<b>Strategy</b>	<b>Consultant</b>
<b>Resource</b>	<b>Policy</b>	<b>Manager</b>
<b>Product</b>	<b>Application</b>	<b>Adviser</b>
	<b>Research</b>	<b>Planner</b>

**Two terms signify status and authority (can drop one from first or second column)**

**Obtaining a qualifier as chief, principal - one has made it.**

**Ultimate skill: where lies one's comparative advantage is in solving, identifying and brokering new problems**

## **Education framework of symbolic analysts (Reich)**

### **1. Abstraction: jumble of noises, shapes, colors, smells, textures**

- a swirl which needs order
- need to discover patterns and meanings
- simplify to understand and manipulate

**Question:** does education allow students to construct meanings for themselves or does it impose meanings upon them?

**Virtues:** skeptical, curious, creative

### **2. Systems thinking: reality as a system of causes and consequences**

**Tendency to view reality as a series of static snapshots with relationships left unexamined**

**Question:** does education offer knowledge in compartments, i.e. history, math, distinct and unrelated to the others? Or is one presented with a whole and allowed to gain an understanding of the processes by which reality is like? Subjects can not be understood in isolation

**Challenge:** rather than teach a student to solve a problem given them, teach to examine why the problem arose, and how it was connected to other problems.

**3. Experimentation:** trial and error/tests to create order out of a bewildering collage of sensations; to understand cause and effect (consequences). Take risk/expect failure/experience frustration, disappointment, fear. Many different points of view.

**Question:** does education take a prescribed route, beginning and ending in a text book/lecture? Are students given the opportunity to explore for themselves?

**Challenge:** self-guided exploration is ineffective given the compulsion to complete what "must be covered" in the text.

Equip students with tools which will allow them to find their own way. Accept responsibility for their own way. Accept responsibility for their own continued learning.

**4. Collaborate:** sharing problems and solutions/approaches may often seem undirected in search for new solutions to identify new problems. Thus, need to communicate and listen.

**Question:** does classroom place attention on achieving quiet and solitary performance of specialized tasks. (no talking/no passing notes! individual desks!)

**Challenge:** can we overcome our fears of not being able to determine if a student has mastered specific materials, do we have the energy to master group assignments?

**In groups students gain:**

- ability to articulate, clarify, restate to one another how they find answers
- ability to seek and accept criticism from peers, solicit help, and give credit to others
- learn to negotiate, to explain own needs, to discern what others need and how they view things (perspectives)
- find mutually beneficial solutions

**What is at issue?** schools (some) provide this type of foundation--problem is that it is only offered to a narrow group of students

## **Who Will Be Participating**

**Workforce 2000 (Hoover Institute)**

**National: Bureau of Labor Statistics**

## National Income Distribution

**Key problems to income distribution: quality of jobs, level of education**

	<u>1987</u>	<u>1973*</u>	<u>%</u>
<b>Male:</b>			
<b>H.S. Group</b>	<b>\$27,733</b>	<b>\$31,677</b>	<b>-12%</b>
<b>(Black)</b>			<b>-44%</b>
<b>Drop-out</b>	<b>\$16,094</b>	<b>\$19,562</b>	<b>-18%</b>
<b>College Grads</b>	<b>\$50,115</b>	<b>\$49,531</b>	<b>1%</b>

**\* 87 \$**

**If you drop-out of high school or have no more than a high school diploma, do not expect a good routine production job to be waiting for you.**

**Middle level manager, dealing with routine tasks are obsolete.**

**In-service workers face increasing competition from labor-saving technologies.**

**off-set by:**

**rate of growth of American workforce slowing**

**aging - require more health related services**

**Catch 22: standard of living of those they serve**

**"trickle down effect"**