

ARE COLLEGE STUDENTS PREPARED TO WORK?

THEY MAY NOT BE AS READY AS WE THINK!

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"Democracy has to be born anew in each generation, and education is its midwife."

John Dewey, 1916

The global economy, as the new structure of production and services is often referred, changes where and how people work. This new economy also requires more demanding skills from its workers: higher standards for dealing with abstraction, system thinking, experimental inquiry and collaboration (Reich, 1991). Wirth (1993) argues that education is at a pivotal juncture as to whether it can contribute to the renewal of the American society. One effort, the School-To-Work Opportunities Act (1994), attempts to bring education and business together to broaden opportunities for all students by providing experiences that link their education to work.

STW language emphasizes all students. According to Halperin (1994):

The idea of helping youth move from school to the workplace is not new; what is new is the conceptualization of school to work as a cornerstone of schooling. Currently, school to work is envisioned as "a systematic, comprehensive, community-wide effort to help all young people (1) prepared for high-skill and high-wage careers, (2) receive top quality academic instruction, and (3) gain the foundation skills to pursue post-secondary education and lifelong learning." (p. 4)

As this conference attests, STW is being implemented in many exciting variations from revitalized vocational, technical programs to career awareness/exploration curricula. In many schools, the efforts, however, are being targeted at students who do not plan to attend college. Specifically, STW has been captured by weak voc ed and job training programs; programs which should have died long ago. Granted these students face dismal employment prospects without STW programs; but so do students going to college. The assumption that simply going to college will lead to a promising, high paying job is poorly founded.

College students leave college poorly prepared to transition into the world of work. This presentation will share information that identifies the areas college students are deficient and proposes some readily identifiable options to assist in a seamless STW transition.

ENROLLMENT FACTS:

1. Approximately 60% of high school graduates attend college immediately after high school graduation.
2. Only 25% of those who attend actually earn a degree.
3. It takes men nearly six years to complete a four year degree; women nearly five years.
4. Nearly 60% of college students have a learning style incompatible with the faculty.
5. Tuition has increased 244% at public 4-year institutions since 1980; 277% at private institutions.
6. Loan indebtedness is at an all-time high; law school graduates have one of the highest levels of loan default.

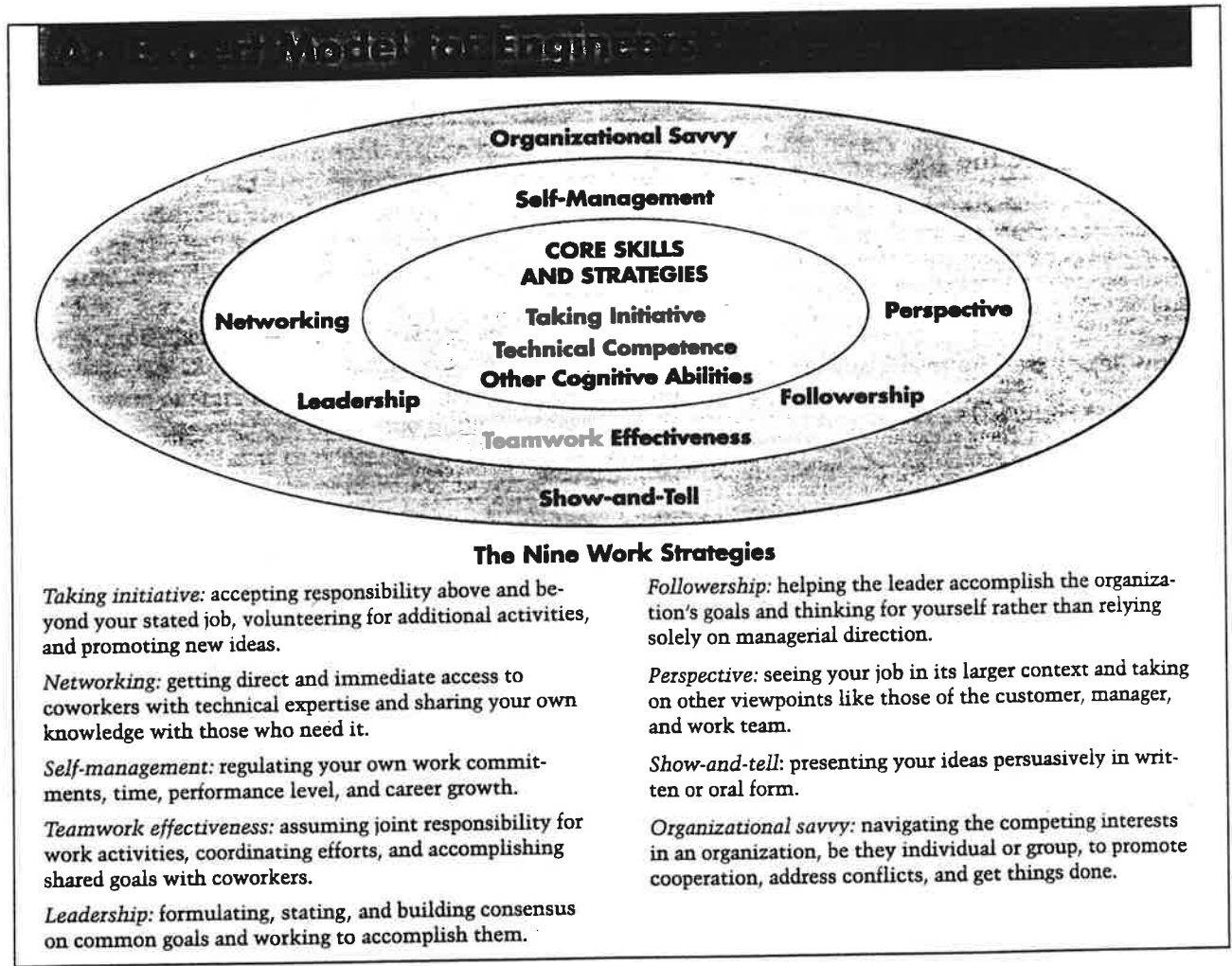
LABOR MARKET TRENDS:

1. Length of time to find a job has increased to nine months after graduation.
2. Approximately 35% to 40% of the jobs college graduates hold after graduation do not require a college degree.
3. Starting salaries, measured in constant terms, have fallen steadily since 1979, except for a brief period in the mid-1980's.
4. Tenure in first job is 14 months; 11 months if a new graduate changes company.
5. The five major reasons new college graduates pre-terminated from their first jobs:
 - a. Lack of initiative/motivation
 - b. Failure to be at work on time/attendance
 - c. Failure to follow instructions
 - d. Poor interpersonal skills
 - e. Lack of teamwork skills

Skills and Factor Clusters Contributing to Successful Work Performance: RAND Study

Skill/Factor	Corporate Respondents (mean)	Academic Respondents (mean)
General Cognitive Skills	4.7	4.8
Social Skills	4.7	4.7
Personal Traits	4.3	4.3
On-Job Training	4.1	4.2
Knowledge in Academic Major	3.9	4.1
Prior Work Experience	3.6	4.0
Firm's Recruiting Practices	3.7	3.6
Cross-Cultural Experience	3.2	3.8
Foreign Language Competency	3.0	3.9
Attributes of Educational Inst	3.2	3.7

Source: Bikson, T.K. and Law, S.A. *Global Preparedness and Human Resources: College and Corporate Perspectives*. Santa Monica: RAND. Institute on Education and Training, 1994, p.10.



AN EXPERT MODEL FOR ENGINEERS

Taking initiative: accepting responsibility above and beyond your stated job, volunteering for additional activities, and promoting new ideas.

Networking: getting direct and immediate access to co-workers with technical expertise and sharing your own knowledge with those who need it.

Self-management: regulating your own work commitments, time, performance level, and career growth.

Teamwork effectiveness: assuming joint responsibility for work activities, coordinating efforts, and accomplishing shared goals with co-workers.

Leadership: formulating, stating, and building consensus on common goals and working to accomplish them.

Followership: helping the leader accomplish the organization's goals and thinking for yourself rather than relying solely on managerial direction.

Perspective: seeing your job in its larger context and taking on other viewpoints like those of the customer, manager, and work team.

Show-and-tell: presenting your ideas persuasively in written or oral form.

Organizational savvy: navigating the competing interests in an organization, be they individual or group, to promote cooperation, address conflicts, and get things done.

PREPARING STUDENTS TO TRANSITION

1. Practice of One's Craft: Expect Practice
 - a. Mentors/shadowing
 - b. Internships/co-op
 - c. Student teaching at MSU
 - d. PhD

2. Learning Style-Inventory

Learning - Knowing Process

3. Portfolios

4. Behavioral Interviewing

5. Self-Management

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Level of Skills/Competencies Required for Entry-Level College Educated Positions and Level of Educational Preparedness (mean score)

Major Competency Areas	Technical		Non-Technical	
	Performance	Preparedness	Performance	Preparedness
Reading	4.13	3.26	3.70	3.29
Writing	3.50	2.88	3.43	3.04
Speaking/Listening	3.91	2.98	4.01	3.29
Mathematics	4.16	3.72	3.44	3.02
Thinking Skills	4.34	3.11	4.25	3.15
Organizational Skills	3.95	2.95	4.26	3.23
Information Systems	4.33	3.59	3.76	3.28
Job Skills	4.06	3.16	4.21	3.12
Personal Skills	3.99	3.16	4.08	3.16

TECHNICAL GRADUATES

Reading:	Differentiating fact from inference Summarizing main and subsidiary ideas Understanding technical and abstract material Locating specific facts and details
Writing:	Composing letters, reports, and memoranda
Speaking/ Listening:	Presenting oral information and directions Participating in discussions
Thinking Skills:	Problem solving Decision making Reasoning Creative and critical thinking
Organizational Skills:	Interpersonal skills Handling conflict and criticism Leadership skills Working as a member of a team
Job Skills:	Setting priorities Coping with deadlines
Personal Skills:	Workplace values and ethics Ability to negotiate the system Adaptability

NON-TECHNICAL GRADUATES

Speaking/
Listening: Observing verbal and non-verbal cues

Thinking
Skills: Problem solving
Decision making
Reasoning
Creative and critical thinking

Organizational
Skills: Handling conflict and criticism
Interpersonal skills
Working as a member of a team
Leadership skills

Job Skills: Goal setting
Setting priorities
Coping with deadlines

Personal Skills: Workplace values and ethics
Initiative
Adaptability
Personal work habits
Ability to negotiate the system
Self-esteem

AN EVALUATION OF WORKFORCE READINESS

In an effort to assess whether students at Michigan State University are developing the competencies that the new economy (employers) now expect, an evaluation of student readiness was undertaken using Wilson Learning's Success Skills 2000: Benchmarks for High Performance.

This instrument was selected for the following reasons:

1. Focused on non-content or academic competencies: applied problem solving, interpersonal communication, and accountability.
2. Offered contextual situations through video simulations rather than paper-pencil exercise.
3. Could be developed into an instructional module in various formats.

Success Skills 2000 is a criterion referenced, performance based instrument (Wilson Learning, 1990 and 1992). It is administered in a 75 minute session where student view four new college employees in workplace situations and are asked to make decisions at certain points. The scoring depends on the weighting of a number of cues contained in 33 scenarios. The instrument appears to have high face validity and reliability. The national norms have been established by a group of new employees nominated by benchmark companies based on their performance at work (top 10%). Thus, the expectations for performance are very high.

MAJOR SCALES AND SUBSCALES

1. Applied Problem Solving
 - a. Critical thinking
 - b. Problem solving
2. Interpersonal Effectiveness
 - a. Influencing others
 - b. Building rapport
 - c. Teamwork
3. Accountability
 - a. Initiative
 - b. Self-Management

Participants: Undergraduates from all four classes volunteered or their class participated in the assessment. Approximately 2027 undergraduates have finished all parts of this phase of the project. An additional 500 are being tested this semester. Participants are also required to complete an extensive survey that captures personality traits, learning styles, campus activities related to academic and non-academic pursuits, and selected measures of self-efficacy. A longitudinal dimension has been built into this project with selected students being re-assessed in 18 to 24 months. The results reported in this presentation represent the 2027 students. Results are limited to the assessment only and does not include information from the paper-pencil exercise.

This study will also gather benchmark data on students from other educational institutions. We are currently testing a group of junior and seniors in high school; students who have completed an associates degree at a community college; either (a) transferring to a four-year school or (b) entering the workforce; and students who are attending select liberal arts colleges.

Work Skills Readiness Assessment

Preliminary results: n=2000 National norm set at 50

	First Year		Sophomore		Junior		Senior	
	n	mean	n	mean	n	mean	n	mean
Total Score	323	24.30	230	25.30	673	28.72	779	30.92
App. Prob. Solv.		41.08		42.60		44.42		43.40
Interp. Comm		28.56		28.33		31.24		36.18
Accountability		28.17		29.47		31.54		33.45

Specific skill traits. Rated 5 = Highly effective in using this skill
 3 = Effective in using this skill room for improvement
 1 = Not effective, not using skill well

Skill	First Year mean	Sophomore mean	Junior mean	Senior mean
Applied Crit, Thg				
Gathering Info	3.07	3.04	3.28	3.22
Evaluating Info	2.45	2.65	2.42	2.47
Understanding Relationships	3.56	3.79	3.97	3.94
Problem Solving				
Choosing Strat	3.23	3.18	3.32	3.30
Considering Alternatives	2.36	2.21	2.36	2.29
Influencing Others				
Comm for Agree	3.84	3.77	3.97	4.05
Persuading	3.04	3.25	2.99	3.24
Justifying	3.61	3.83	3.71	3.69
Building Rapport				
Sensitive	3.20	3.33	3.57	3.70
Relate Postv. to Others	2.89	2.83	3.17	3.21
Teamwork				
Helping Others	2.49	2.68	2.74	2.85
Asking for Help	3.49	3.44	3.37	3.43
Contributing	2.75	2.66	2.80	2.96
Initiative				
Handle risk & Unfamiliar task	3.38	3.50	3.57	3.57
Work with no guidance	3.51	3.56	3.37	3.29
Voluntarily performing tasks	3.55	3.43	3.56	3.56
Self-Management				
Insure Quality	2.34	2.46	2.53	2.61
Adapt/Flex.	2.42	2.40	2.49	2.67
Mang Time	2.05	1.94	2.08	2.13

RESULTS

Scores on Workplace Readiness Assessment for Undergraduates (mean)

	All Participants	First Year	Sophomore	Junior	Senior
Total Score	25.89	24.30	25.30	28.72	30.92
Applied Problem Solving	43.24	41.08	42.60	44.42	43.30
Interpersonal Effectiveness	32.39	28.56	28.33	31.24	36.18
Accountability	31.50	28.17	29.47	31.54	33.54