The Case for Academies in Michigan

Michigan Career Education Conference

February 2, 2010

The Dynamics of Change

- WHY ….. Do we need to change schools?
- WHAT ….. Needs to be done?
- HOW ….. Do we do it?

Too many schools jump immediately to “What” and “How” without spending enough time building the case for “Why” !!

Why size DOES matter!

- If you're one in a million in China . .
- . . There's 1,300 people just like you!
- . . In India, there's 1,100 just like you!
- China's top 25% of the population . .
- . . Is greater than the total population of North America!
- Translation: They have more HONORS kids than we have kids!

Total frequency (number of individual responses) totaled 20,833 with Tier 1 and Tier 2 skills representing 70% of all skills ranked. Table 4 displays rankings for Tiers 1-3 with the number of respondents selecting a given skill in the columns to the right of the skill type. These rankings were made across all job types for a global assessment of key skills related to future job growth.

TABLE 4: Rank Order of Skills Spanning All Sectors

TIER 1	
Reading Comprehension	474
Critical Thinking	461
Active Learning	453
Problem Sensitivity	451
Active Listening	444
English Language	440
Attention to Detail	432
Dependability	432
Oral Expression	421
Mathematics	406
Deductive Reasoning	404
Oral Comprehension	403
Integrity	397
Cooperation	393
Written Comprehension	377
Inductive Reasoning	375
Analytical Thinking	370
Speech Clarity	353
Complex Problem Solving	338
Persistence	338
Adaptability/Flexibility	329
Initiative	322
Intercultural Awareness	316
Intercultural Sensitivity	313
Information Ordering	308
Near Vision	298
Intercultural Competence	296
Independence	293
Computers and Electronics	281
Intercultural Intelligence	262
Judgment and Decision Making	260
Engineering and Technology	252
Troubleshooting	243

TIER 2	
Self Control	224
Time Management	216
Achievement/Effort	212
Design	206
Stress Tolerance	206
Speech Recognition	205
Customer and Personal Service	194
Development environment software	189
Speaking	172
Coordination	164
Desktop computers	164
Administration and Management	161
Leadership	155
Database mgmt system software	152

TIER 3	
Word processing software	127
Spreadsheet software	126
Production and Processing	122
Web platform development software	122
Object/component oriented database	118
Learning Strategies	116
Written Expression	116
Technology Design	115
Notebook computers	110
Economics and Accounting	108
Innovation	108
Writing	103
Mechanical	101
Operations Analysis	99
Programming	89
Instructing	84
Clerical	83
Negotiation	83
Systems Analysis	82
Computer servers	81
Data base user interface	80
Program testing software	80
Analytical or scientific software	78
Systems evaluation	78
Computer aided design	76
Telecommunications	76
Monitoring	75
Science	74
Education and Training	71
Mathematical Reasoning	71
Personal computers	71
Enterprise resource planning	70
Equipment Selection	70
Personnel and Human Resources	68
Quality Control Analysis	68
Service Orientation	68
Personal digital assistant	67

KEY SURVEY RESULTS

Data analysis revealed three relatively distinct conceptual clusters of skill sets spanning all sectors. These skill clusters are further described below:

Survey Skill Clusters		
Analytical/Communication	▶	*Critical Thinking* *Complex Problem Solving* *Active Learning* *Written Expression* *English Language**
Intrapersonal	▶	*Cooperation* *Dependability* *Intercultural Sensitivity* *Intercultural Competence*
*Knowledge-Based***	▶	*Knowledge of Database Platforms* *Use of Desktop Computers* *Configuration Management Software* *Website Development*

* *Because of the high number of non-native English speakers largely working in the computer and engineering fields; proficiency in English emerged as part of this grouping.*

** *The knowledge-based skill set was comprised of skills that are job specific and tied to a specific job task. The example provided is for a technical occupation.*

In examining the top skills across all jobs, within job sectors, or by specific job, the skills most frequently cited as necessary were predominantly from the **Analytical/Communication** and **Intrapersonal** skill clusters. One interpretation is that the technical skills associated with a given job represent the minimum skill set to complete the tasks associated with the job, but that the **Analytical/Communication** and **Intrapersonal** skills are those skills that distinguish individuals that are highly successful within a particular job. Further, these latter skills are less transient in their relative importance. Most of the job specific skills become outdated relatively quickly especially in technical fields; however, the ability to work with others, to think critically, and to express ones' self effectively makes the employee more adaptable to ever changing task requirements and technology and more likely to be successful across industry changes.

The results of the Skills Needs Assessment Project are further validated by the findings of Southeast Michigan's 21st Century Workforce Regional Labor Market Trends & Forecast, issued January 2009. Each commonly studied occupation in the 21st Century Study with a projected growth rate of at least 12% and expectations of 500+ new jobs by 2014, surfaced within the Top 31 weighted jobs in the Oakland County Project; with 3 of the first 4 being the same in a slightly varied order.

NGA Honor States Program Objectives

- Decrease 9th grade retention
- Decrease overall dropout rates
- Increase high school graduation rates
- Increase student rigorous course selection
- Increase AP test-taking rates
- Increase preparedness for post-secondary
- Increase college-going rates
- Increase college graduation rates

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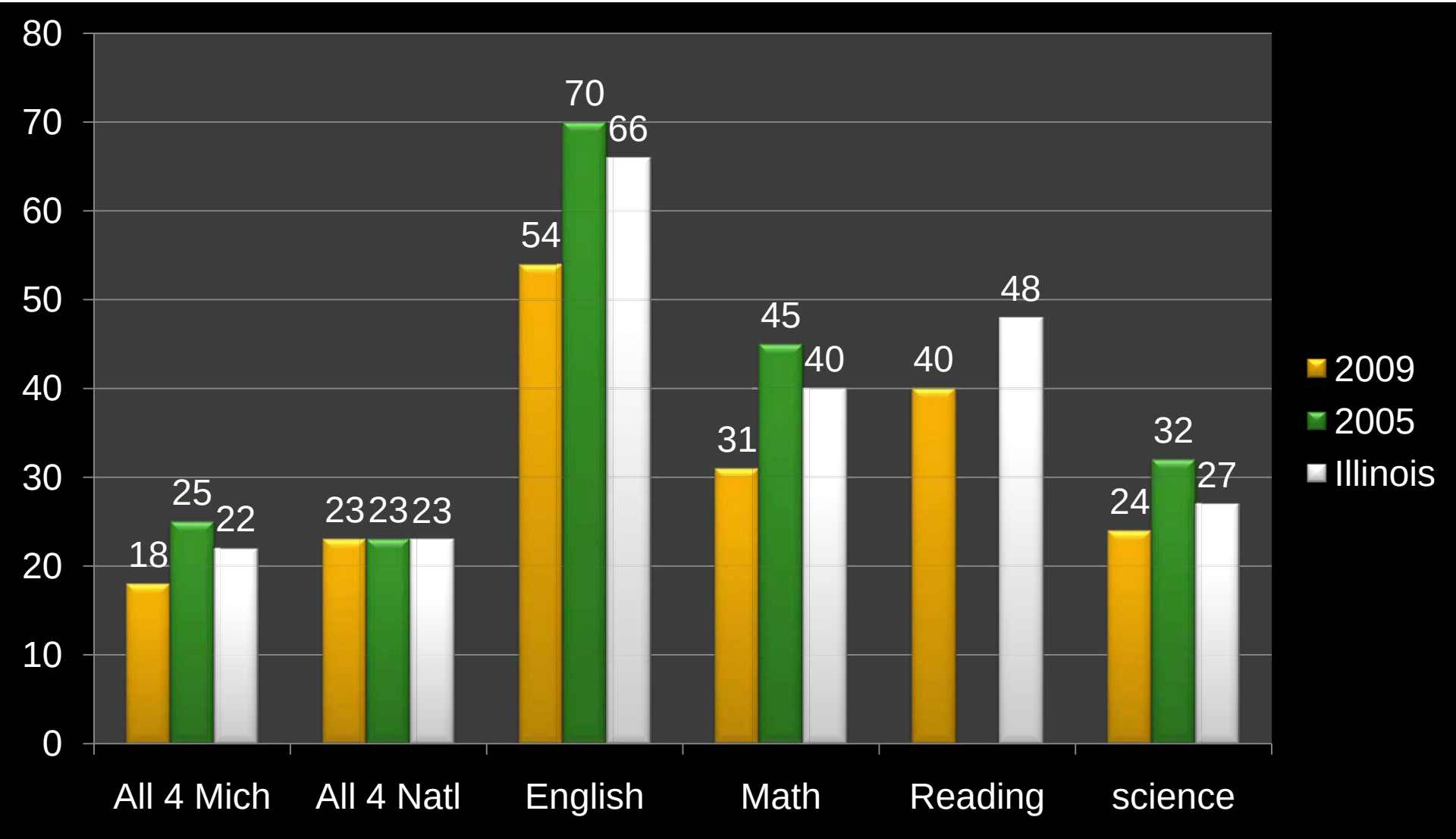
Michigan ACT-Tested Graduates Likely to be Ready for College-level Work (in percent)



Standards-Based School Reform . .

. . . Ignores the fact that many students are simply not engaged sufficiently by academic study. If allowed to remain unmotivated and disengaged, these students risk failing in high school or dropping out, thus short-circuiting their chances for future success.

Mary Visher

Phi Delta Kappan

Survival Skills for the 21st Century

- Critical Thinking and Problem Solving
- Collaboration across Networks/Leading by Influence
- Adaptability and Agility
- Initiative and Entrepreneurship
- Effective Oral and Written Communication
- Accessing and Analyzing Information
- Curiosity and Imagination

Tony Wagner

"Global Achievement Gap"

Survival Skills for the 21st Century

- "They are not just the skills one needs for work, they are also the skills all of us need to be engaged and effective citizens in a 21st century democracy and lifelong learners"

- "A serious side effect of a curriculum based mainly on memorization is student boredom. And boredom - not lack of skills – is the number one cause of high school dropouts"

- "We need to expect all teachers to teach all students how to think and communicate effectively, and they need to assess these skills and benchmark expectations to what the world will require of our high school graduates . . . every day, in every class and at all grade levels".

Tony Wagner

Harvard Graduate School of Education

Student Dis-Engagement

- The Journal of School Health documents that 40% – 60% of all students are chronically disengaged from schools.

- The 2005 National Academy of Science report found that many high schools fail to provide a healthy social environment or one conducive to learning, and that studies should be more relevant to student's lives to motivate them to learn.

“High school is like a pumpkin…

it just rots away after Halloween!”

-- Maine high school student

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"This is the first time in the history of the human race that a generation of kids has overtaken their parents in the use of new technology"

Peter Eio, LEGO Systems

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Interactive Learning Shifts

- Linear -- Hypermedia
- Instruction – Construction/Discovery
- Teacher-centered – Learner-centered
- Simply absorbing – Navigating/how to learn
- School – Lifelong learning
- One-size-fits-all – Customized learning
- Learning as Torture – Learning as Fun

Dan Tapscott
"Growing Up Digital"

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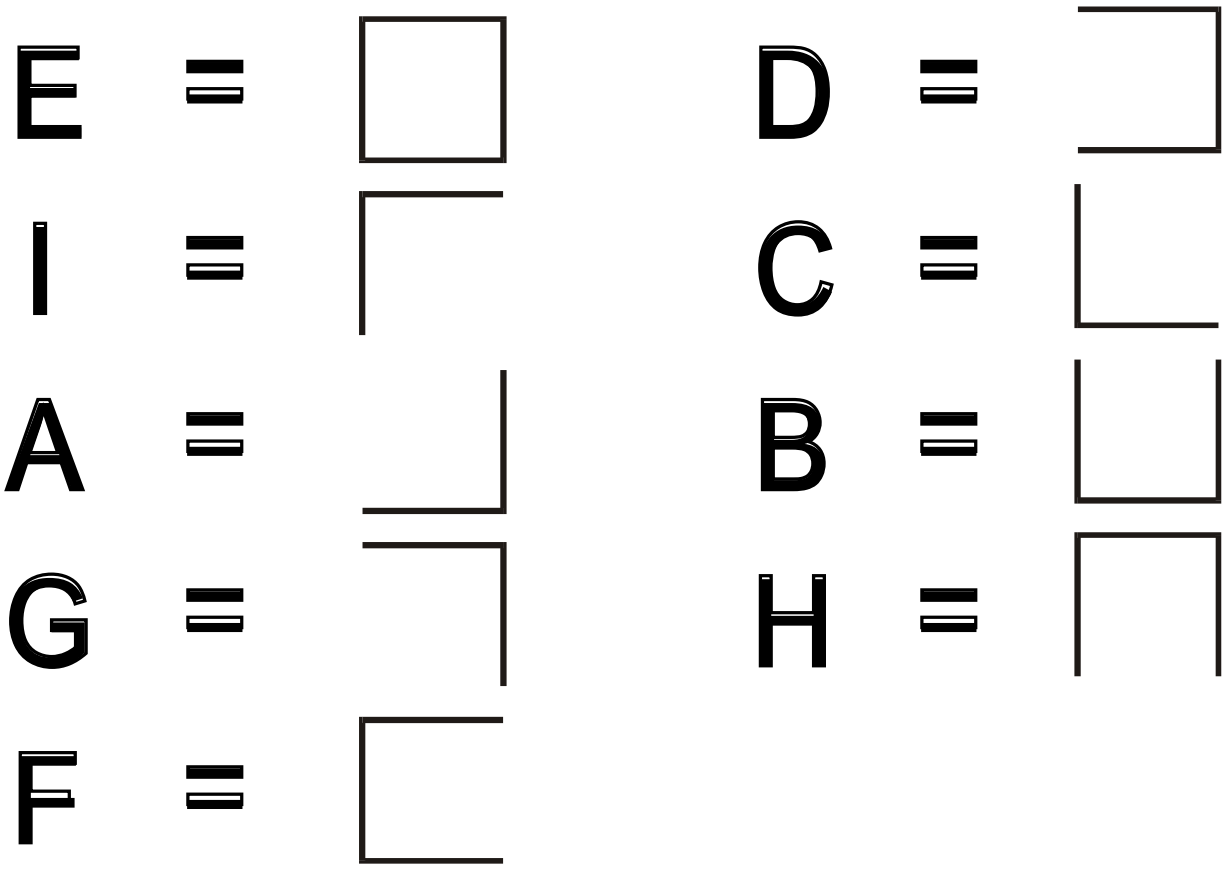
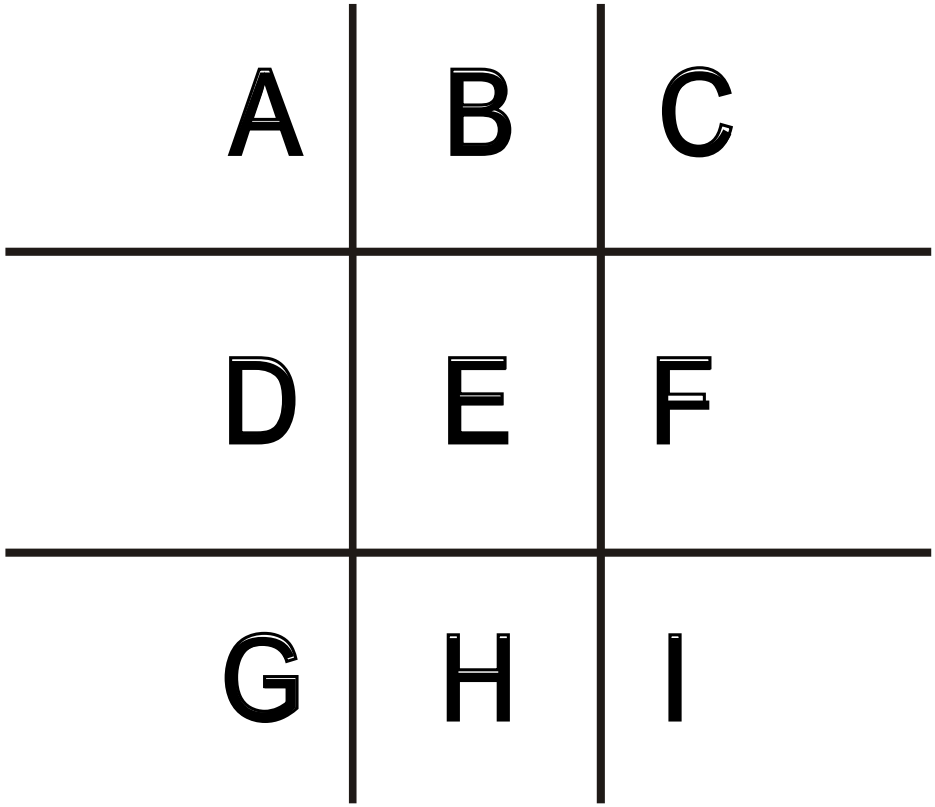
Independent of Context



In Context



The Paomnehil Pweor of the Human Mind

Aoccdrnig to rscheearch at Cmabridge Uinervtisy, It doesn't mttaer in what order the ltteers in a word are, the only iprmoetnt thing is that the frist and lsat ltteer be at the rghit pclae. The rset can be a ttaol mses and you can slitl raed it wouthit a porbelm. This is bcuseae the human mind deos not raed ervey lteter by istlef, but the word as a wlohe.

Engaging students

- "Research has shown that when students are given the
- latitude to pursue topics that interest them by doing what
- real scientists, special-interest groups, or business people
- do to solve problems, they go far beyond the minimum
- effort … They also retain what they have learned, are able
- to apply their learning to real-world problems, are absent
- less often and have fewer discipline problems. In short,
- students get excited about learning."

- Educational Leadership/September 2002

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Student Engagement – Motivating Students to Learn

- "Students are most likely to be engaged in learning when they are active and given some choice and control over the learning process-and when the curriculum is individualized, authentic, and related to student's interest…

- Research shows that engaged students experience greater satisfaction with school experiences, which may in turn lead to greater school completion and student attendance rates, as well as lower incidences of acting-out behaviors.