



Manufacturing Skill Standards Council

Tools for Workforce Excellence

National Shipbuilding Research Program

Crosscut Initiatives Panel Meeting

May 10, 2006

Radisson Admiral Semmes Hotel

Tom Gannon, MSSC



Purpose of MSSC Standards

U.S. manufacturing needs an empowered, skilled, and motivated, manufacturing workforce to:

- Be Globally Competitive by...
 - Increasing productivity
 - Increasing innovation

- Adopt advancements in...
 - Technology
 - Equipment
 - Processes

- Find, motivate, and retain a workforce that...
 - Has the foundational skills needed to compete
 - Can keep pace with changes in technology, equipment, & processes



The MSSC Stakeholders

- **Strong coalition** of over 300 leading national and regional organizations representing 14 manufacturing industry sub-sectors.
- **Mission:** To develop a standards-based assessment and certification system for U.S. manufacturing production and production support workers – entry-level to first-line supervisors where none currently exists.
- **Accomplishments:** Skill standards for six concentration areas developed and released in 2001.
 - Developed and launched an Assessment for production and production support workers in November 2005.
 - In the process of certifying 45 Assessment Centers nationally.
 - Assisting in the development and promotion of MSSC-related curriculum and training resources.



Principles for the MSSC Standards

- Standards should be forward looking and promote the use of best practices to ensure skills for high-wage jobs
- Standards should be used to enhance and broaden skills, identify training needs and remedy skill gaps
- Standards should be flexible to change and updated regularly and should be relevant to the workplace



Industry Sectors Covered

- Food and Beverage
- Textiles and Leather
- Furniture
- Wood and Paper
- Printing
- Petroleum and Coal Products
- Chemicals
- Transportation Equipment
- Plastics and Rubber Products
- Primary and Fabricated Metals
- Nonmetallic Minerals
- Computers and Electronic Products
- Machinery
- Electrical Equipment and Appliances



MSSC Certification System

- **Skill Standards:** Statements that describe manufacturing work and identify required skills
- **Assessment:** Multiple tests that assess individuals skill against the standards and identify development needs
- **Certification:** National credentials recognized by manufacturing employers for hiring and promotion



Value to Stakeholders

- **Employers** – confidently attract, recruit, hire, train and promote employees
- **Individuals** – identify skill gaps, find effective training, & demonstrate proficiency
- **Educators** – align learning objectives, curriculum/materials, and track outcomes
- **Unions** – provide training opportunities and portable, recognized credentials for members
- **WIBs** – form a systems framework for workforce development based on results



MSSC Standards Structure

About the Work

- Critical Work Functions
- Key Activities
- Performance Indicators

About the Worker

- Academic & Employability Knowledge and Skills
- Occupational/Technical Knowledge and Skills



Foundational skills for all sectors and occupations

- specifically addressing foundational (core)...
 - Academic
 - Workplace (“Employability”)
 - Basic technical competencies

...all in a manufacturing context



Academic Competencies

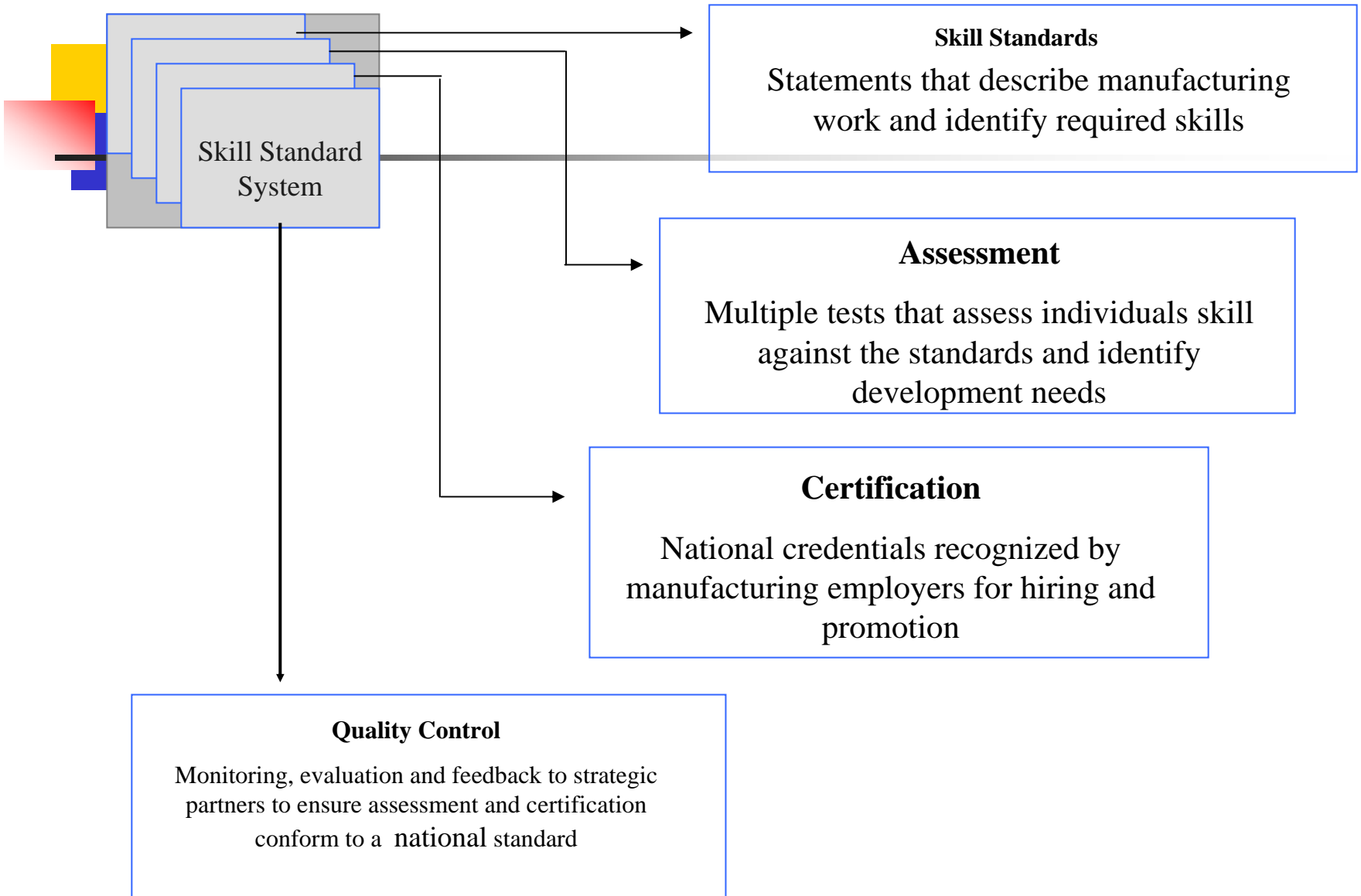
- Math
- Science
- Reading
- Writing
- Listening
- Information/Computer Technologies
- Gathering & Analyzing Information



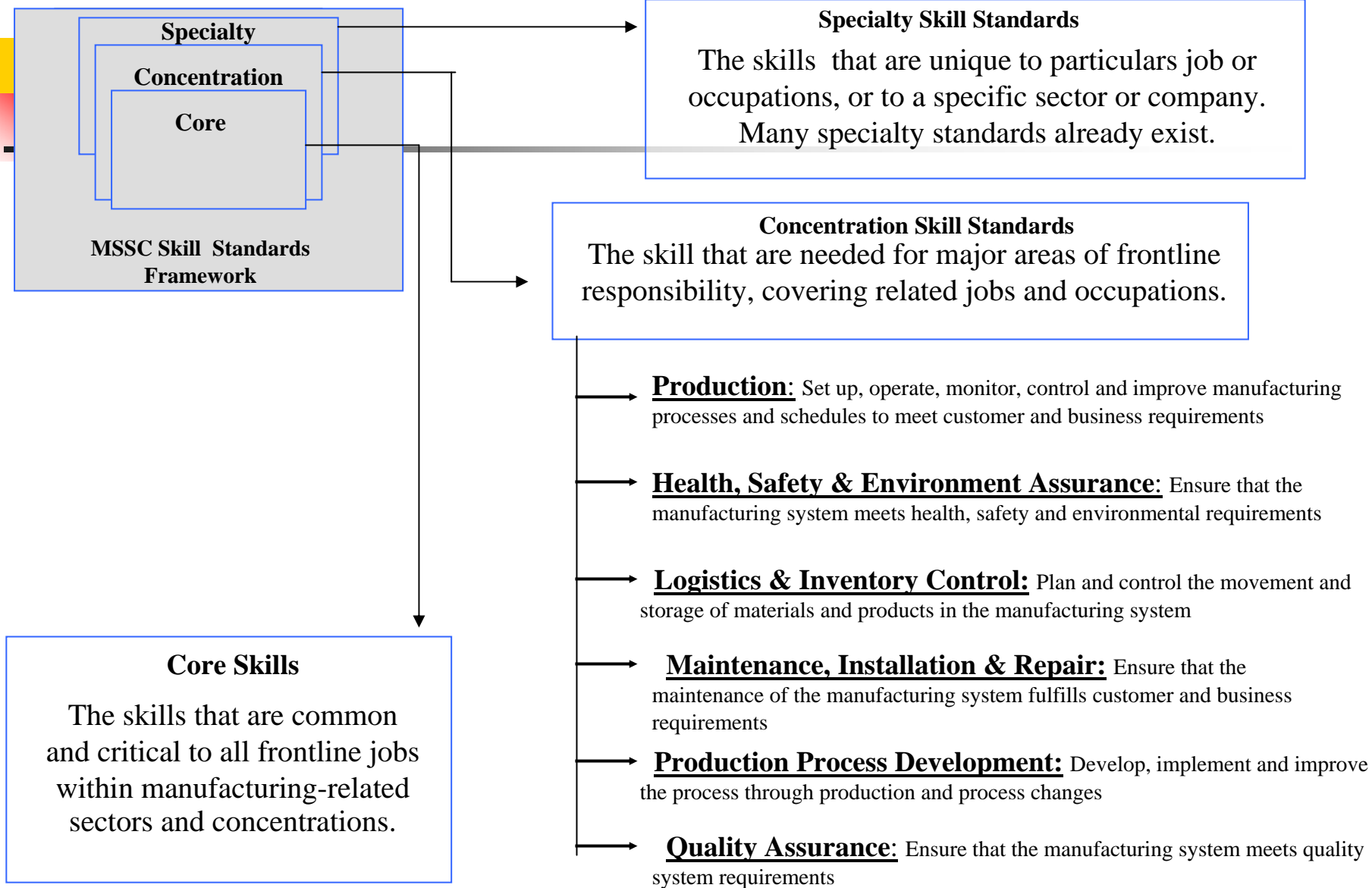
MSSC Workplace Competencies

- Problem Solving
- Decision Making
- Planning & Organization
- Social Skills
- Adaptability
- Teamwork
- Leadership
- Consensus Building
- Career and self-development

MSSC Skill Standards System



MSSC Skill Standard Framework





Principles for MSSC assessments

- Assessments should recognize and validate skills gained through a variety of experiences and not just through formal training.
- Assessments and certifications should accurately reflect the skill requirements for the job.
- Skill assessments and certifications should be used to augment, not replace existing apprenticeship and specialty skills programs.
- Test results are confidential unless released by the individual.



MSSC Production Technician

- Assessment is computer-based via internet
- Multiple choice and simulation components for each module, (90 minutes/module) - all questions linked to the Performance Indicators of the skill standards
- Consists of 4 test modules: Manufacturing Process and Production; Quality Practices and Continuous Improvement; Safety; and Maintenance Awareness



MSSC Production Technician

Manufacturing Processes and Production Content:

- Produce product to meet customer needs
- Coordinate work team to produce product
- Communicate material specifications and delivery schedules
- Communicate production requirements and production specifications



MSSC Production Technician

Safety Content:

- Maintain a safe and productive work area
- Ensure safe use of equipment in the workplace
- Communicate safety training and job specific needs



MSSC Production Technician

Quality Practices & Continuous Improvement Content:

- Maintain quality and implement continuous improvement processes
- Correct the product and process to meet quality standards
- Communicate quality requirements, issues and training



MSSC Production Technician

Maintenance Awareness Content:

- Maintain equipment, tools and workstations



Using the MSSC Assessments

- **Students:** Demonstrate “work readiness” to employers by documenting the skills needed for the job
- **Incumbent workers:** Document existing knowledge and skills, identify gaps for improvement, plot career paths
- **Dislocated workers:** Develop a skills portfolio of knowledge and skills learned on previous job
- **Employers:** Identify skill gaps – provide more focused training; streamline hiring process
- **Unions:** Joint training programs – to benchmark curriculum, provide additional credentials



Opportunities for stakeholders:

- Modular design = flexible implementation
- Benchmark existing training curriculum
- Offer additional credentials for existing training programs (e.g. health & safety)
- For use in apprenticeship or pre-apprenticeship programs
- Integrate assessments into company-based improvement initiatives (e.g. quality, safety, production process improvements, etc.)
Certification for dislocated workers



Fee Structure

- Test Site accreditation fee \$1,000 (3 years)
- Applicant Registration fee (1-time \$50)
- Test fees (\$45 per module)
- Fee sharing:
 - \$22.50 NOCTI
 - \$11.25 Test Site
 - \$11.25 MSSC



Desirable Test Sites

- Community colleges, advanced technology centers, other appropriate educational institutions
- Joint Labor/Management Training programs, company test sites
- Area one-stop career centers or programs with relationships to the WIA system
- Company education and training centers



Becoming a Test Site

- Be able to offer a proctored environment
- Able to conform to software and hardware requirements
- Attend 2 hour proctor training scheduled periodically by NOCTI
- Visit msscusa.org/becomeasite.html to begin approval process



Challenges:

- Issues:
 - Low pass rates during pilot testing
 - Computer delivery
 - Framework – multiple choice & simulation
 - Terminology
 - Relatively unknown in the market place

- Needs:
 - Crosswalk for fit into existing standards
 - Outreach to training program staff for review
 - Implementation advice and strategies
 - Curriculum and courses
 - Test preparation for workers



The MSSC System

- **Industry-led Standards**
- **Nationally “Portable” Certification:**
 - “Recognition Award” for Each Module
 - “MSSC Production Technician Certification” for all 4 modules
- **Assessment in Four Modules:**
 - Manufacturing Processes & Production
 - Quality & Continuous Improvement
 - Safety
 - Maintenance Awareness



MSSC System Elements

- **MSSC-certified Assessment Centers**
 - Currently 44 Centers in 13 states
- McGraw-Hill Textbook: *High-Performance Manufacturing*
- Manufacturing Applications Workbook
- Instructor Resource CD including instructional plans and test generator
- Indiana LIFT Skill-MAP Survey and On-line training curriculum

- **Curriculum**
 - Fast-track 15-20 hours for Each Module (April 2006)
 - Academic 160-170 hours (June 2006)
 - Teacher Development Curriculum 40 hours (planned)



The MSSC system continues to build

- **MSSC System Launch Event:**
 - Grand Rapids Michigan, November 2005

- **MSSC Pilots and/or Feasibility Studies Already Funded:**
 - California
 - Wisconsin
 - Indiana
 - Minnesota
 - Michigan
 - Delaware

- **MSSC Pilots Under Active Discussion:**
 - Texas
 - Pennsylvania
 - Ohio
 - Florida
 - New York
 - Illinois



MSSC Information

For more information, visit:

www.msscusa.org

Or contact

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