Work-based Learning Models for Youth that Leverage Certifications and Apprenticeships

Andy Hepburn, GPS Education Partners
Neil Reddy, Manufacturing Skill Standards Council
Cindy Hill, ACT, Inc.
Presenters

Andy Hepburn  
Chief Innovation Officer  
GPS Education Partners  
ahepburn@gpsed.org

Neil Reddy  
Co-founder & CEO  
Manufacturing Skill Standards Council (MSSC)  
reddyn@msscusa.org

Cindy Hill, Ph.D.  
Industrial/Organizational Psychologist  
ACT  
Cindy.hill@act.org
MSSC Background

- 1998–2001 Federally mandated as the “Voluntary Partnership” for all of manufacturing to develop industry-led standards, assessments and certifications for front-line workers (entry-level through front-line supervisor) for all manufacturing sectors
- 2001 Federal Gov’t endorses the MSSC national “Gold” standards: involving over 700 companies, 4000 front-line workers, 300 experts, $9+ million public & private funds—foundation for CPT & CLT
- CPT: Applicable to all front-line production jobs (6 million)
- CLT: Applicable to all front-line material handling and distribution jobs (5.3 million)
- Applicable to a broad population of: students, incumbent workers, veterans, dislocated workers, unemployed, & returning citizens
MSSC Since 2001 - “Today

- Participating Federal Agencies: DOD, DOL, DOED, DOJ, DOC, & VA
- Only National Certification Body Accredited under ISO 71024 (Personnel Certification) and endorsed by NAM for both Mfg. & Logistics
- 1550+ MSSC Authorized Assessment Centers
- 50 States + D.C.
- 2600+ Authorized CPT and CLT Instructors
- Given 215,000+ assessments
- Issued over 155,000+ credentials
Business Round Table (BRT) Quality Assurance “Federally Funded” Industry Certifications

Define “industry”: Represents an entire industry, a large industry sector or major occupation

• Choose programs that are 3rd Party Accredited with audits consistent with ISO 17024 (Personnel Certification)

• Certifications that are based on industry-defined, nationally validated, competency-based standards developed in cooperation with a nationally-recognized trade association or other industry body,

• Use certifications that have applied legally defensible validation methods

• Focus on certifications that are recognized nationwide (national portability) supported by an infrastructure able to deliver related training and assessments nationwide

• Focus on education and training programs that include “earn and learn” experiences and include attainment of industry-recognized credentials

• Choose programs that use well-qualified, experienced instructors who are themselves certified,

• Focus on programs with assessments delivered under strong security safeguards.
MSSC Core Competencies:

- **Critical Work Functions of Production**
  - Safety
  - Quality Practices & Measurement
  - Manufacturing Processes & Production
  - Maintenance Awareness
  - Green Production

- **Certified Logistics Associate (Foundational)**
  - Global supply chain life cycle, basic terminology, safety, quality, equipment, behavior, teamwork, communication, computers

- **Certified Logistics Technician (Mid-technical)**
  - Receiving, storing, ordering, packaging, shipping, inventory control, transportation modes, dispatch, tracking, measurement, metric conversion
CPT + “Skill Boss”

- 4 CPT “Hands-on” Certificates
- Full CPT “Hands-on” Certification
- Covers 55 hands-on skills
- Integrates with CPT virtual e-learning
Successful Implementation

- Public Private Partnerships: Industry, Secondary, Post-Secondary, WIBs, Associations/Chambers, ED groups, city and state governments
- Imbed credentials into pre-apprenticeships and full apprenticeships
- Imbed credentialing programs in secondary and post-secondary: for-credit, dual-credit, non-credit, approved state lists
- State legislation to reward CTE credentials
- WIBs combine unemployment compensation with skills training
- Veterans programs
- Department of Corrections—CTE for incarcerated = tax payers not tax burdens (DOL Bonding Program)
- Charity Organizations: Good Will, United Way, Easter Seals, Salvation Army
MSSC CPT DOL Approved Apprenticeship Programs

Pre-Apprenticeship:

- Secondary & Opportunity Youth (WIOA funded)
- Imbed ACT NCRC “Silver Level”
- Related CPT Training: 80 hours junior year and 80 hours senior year
- On the Job Learning (OJL): 280 hours (8 weeks) in the summer of junior year and 280 hours (8 weeks) in the summer of senior year, for which the student will receive a stipend from the participating employer.
- A MSSC Certificate of Completion at the end of the pre-apprenticeship
MSSC CPT DOL Approved Apprenticeship Programs cont’d (WIOA funds)

**Industrial Manufacturing Technician (IMT): (3000 hrs.)**

First 260 hrs. “Related Instructional Component”:
- NCRC “Silver Level” math and English
- CPT Certification
- Communication & Teamwork

Full IMT Program:
- Customize for any mfg. sector
- Operate industrial production related equipment,
- Work with manufacturing related tools,
- Perform work processes related to a wide variety of manufacturing settings.
MSSC CPT Secondary Intern “Academies” Model

HS Students:

• NCRC Silver
• Earn the CPT Safety and Quality Certifications
• OJT: students perform 2 Summer Internships
• Employers build relationships with students
• Employers contribute $1000 to Academy
• Students earn $1800 per/internship

GPS EDUCATION PARTNERS Leading MSSC CPT Model—”Andy Hepburn”
Horizontal and Vertical Skills Credential Integration

- Occupational Credentials
- Industry-wide Credentials
- Foundational Credentials

Integration Across Sectors
Integration Within Sectors
What is Curriculum Profiling?

Curriculum Profile

- Identify Learning Objectives
- Identify Knowledge, Skills, and Abilities
- Identify WorkKeys skills and levels for entry and exit from the program
<table>
<thead>
<tr>
<th>Objective/ Skill</th>
<th>Applied Math</th>
<th>Graphic Literacy</th>
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</tr>
</thead>
<tbody>
<tr>
<td>OBJ 9</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>SKILL 3</td>
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<td>OBJ 10</td>
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<td>OBJ 11</td>
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<tr>
<td>SKILL 4</td>
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<tr>
<td><strong>SEGMENT 4 LEVERS AND MECHANICAL ADVANTAGE</strong></td>
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<tr>
<td>OBJ 12</td>
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<td>OBJ 15</td>
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<td>X</td>
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<td>SKILL 5</td>
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<tr>
<td>SKILL 6</td>
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**Unit 39: Mechanical Linkages**

**SEGMENT 1 FRICTION**

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MSSC: Curriculum Profile Results

• Applied Math for CPT Modules
  • Safety didn’t require any math
  • Manufacturing Process and Production required Level 4 for entry and students should be at Level 5 at completion

• Examples:
  • Determine the hours worked: \( T = (H_s \times D) \times (H_B \times D) \)
  • Calculate machine availability: \( MA = T_A - T_{SD} - T_{USD} \)
  • Estimate product cost: \( C_P = C_{mat} + C_L + C_O \)
  • Calculate productivity: \( P = \frac{N}{T} \)
  • Calculate mechanical advantage: \( MA = \frac{W = L}{F \times H} \)
### Skill Level Recommendations for Entry into the CPT Individual Certificate Modules

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<td>4</td>
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### Skill Level Recommendations for Exit from the CPT Individual Certificate Modules

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GPS Education Partners

Non-Profit 501(c)(3) dedicated to solving community challenges through Work-Based Learning solutions.

Join the conversation using #ACTWorkforce @ACT
Partnered with World-class Employers
Using Certifications to demonstrate Career Readiness

GPSEd Professional Development Program™

NCRC

MSSC

ACADEMIC

PROFESSIONALISM

TECHNICAL

Career Readiness

ACT WORKFORCE SUMMIT 2019

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Principles of High Quality Work-based Learning

Equitable  Accountable
Career-oriented  Portable
Adaptable
Defining Principles for High Quality Work-based Learning

Career-oriented

Learning is structured around knowledge, skills, and competencies that lead to careers with family-supporting wages.
HOBART SERVICE CAREER PATHWAY

Your road map to a rewarding career path that provides livable wages and opportunities for growth. Learn exactly which skills you need to enter or advance. You’ll also have access to the exact education, training, and credentials needed.

HIGH SCHOOL COURSEWORK

SKILLS I
Communication Skills
Electrical Circuits
Motors
Basic Robotics and Automation
Hand Tool Identification and Use
Computer Use for Office Applications
Blueprint/Schematic Reading

SKILLS II
Base:
Skills I
Plus:
Customer Service
Employability Skills
Shipping and Receiving
Mechanical Drive Inspection and Repair
Electrical Systems
Maintenance Practices
Electrical Schematics
Basic Electrical/Mechanical Troubleshooting

JOB OPPORTUNITIES
Apprentice Technician
(approx. $10–$15/hr)

SKILLS III
Base:
Skills I and II
Plus:
Advanced Electrical/Mechanical Troubleshooting
Professionalism

JOB OPPORTUNITIES
Service Technician Level 3–4
(approx. $26–$30/hr)

SKILLS IV
Base:
Skills I, II, and III
Plus:
Leadership
Sales
Business Management

JOB OPPORTUNITIES
Service Advisor
(approx. $32/hr)
Branch Manager
(approx. $36/hr)

ASSOCIATES: BUSINESS OR INDUSTRIAL MANAGEMENT

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Defining Principles for High Quality Work-based Learning

**Equitable**

Learning is accessible to every student, with targeted supports for those adversely impacted by long-standing inequities in our education system and labor market.

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Defining Principles for High Quality Work-based Learning

Portable

Learning leads to postsecondary credentials and transferable college credit that expand options for students.
Defining Principles for High Quality Work-based Learning

Adaptable

Learning is designed collaboratively to be recognized and valued across an industry or sector.
GPS Apprenticeship Growth Model

Growth based on student-driven performance.

Career Awareness

Work Readiness

Career Exploration

Employability Development

MSSC Safety Certification

MSSC Quality and Processes Certification

Career Experience

Professionalism Development

MSSC Maintenance Certification and ACT-National Career Readiness Certificate

Career Preparation

Leadership Development

MSSC CPT, Full-time Employment, and Post-secondary Education

Career Development

Apprentice In Training

Apprentice Level 1

Apprentice Level 2

Apprentice Level 3

Apprentice Level 4

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Defining Principles for High Quality Work-based Learning

**Accountable**

Student, employer and program outcomes are monitored using transparent metrics to support improvement.
GPSEd Student Success

94% Graduation Rate

94% Earned YA Certificate of Occupational Proficiency

82% MSSC Certified Production Technician Pass Rate

89% ACT National Career Readiness Certificate

84% Employment Rate

97% Employed and/or Attending Post-Secondary Education

83% Pursuing Technical Careers

*’16-’18 Graduate stats

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Thank You

Andy Hepburn:  GPSEd.org or
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Neil Reddy:  mssc.org or
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