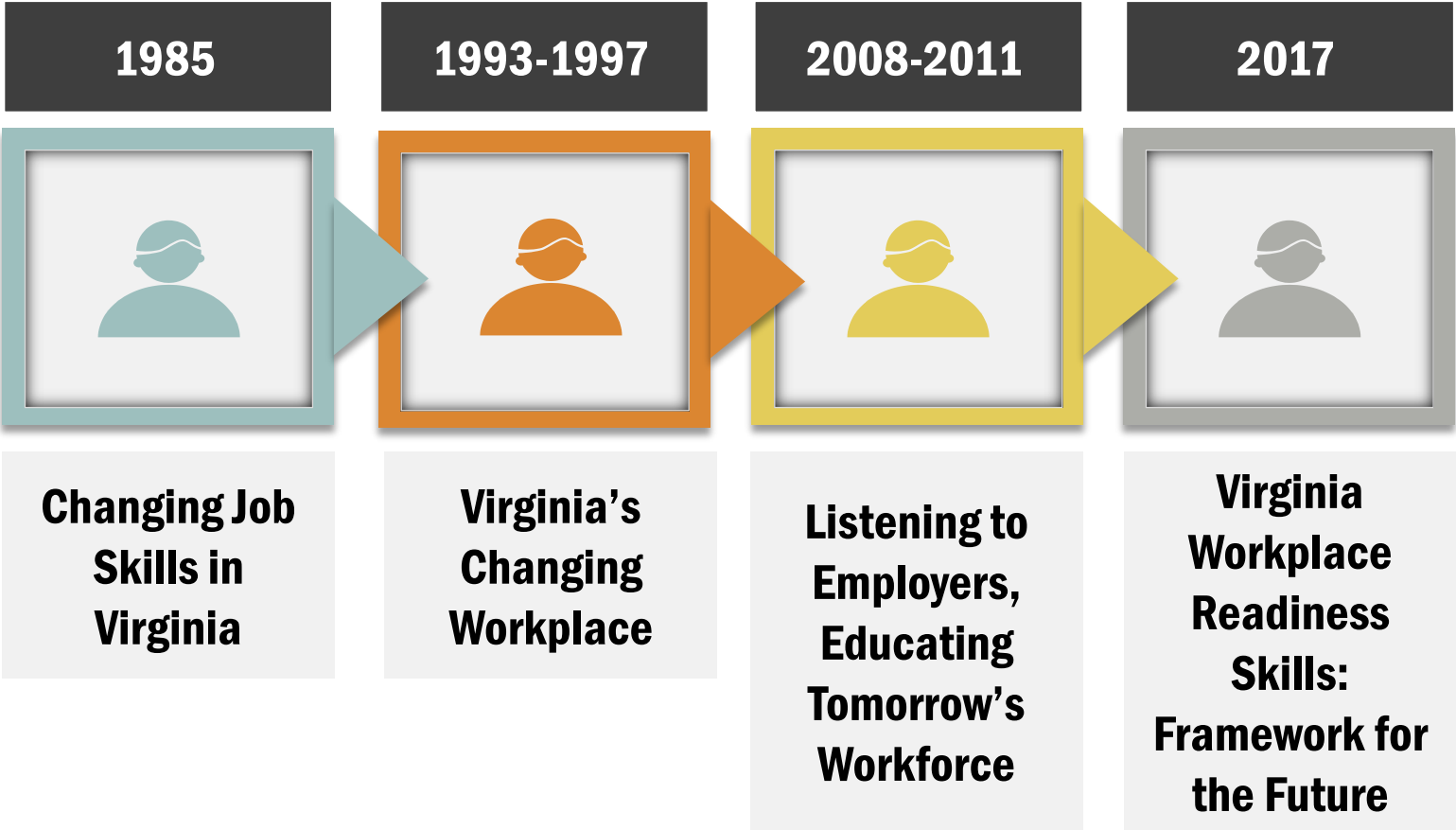# Workplace Readiness Skills Research in Virginia

BUILDING A SKILL FRAMEWORK OVER TIME

Presented at the CTECS Workplace Readiness Skills Summit
Sacramento, CA
February 20, 2019

Kathryn Piper Crespin
Demographics Research Group
Weldon Cooper Center for Public Service
University of Virginia

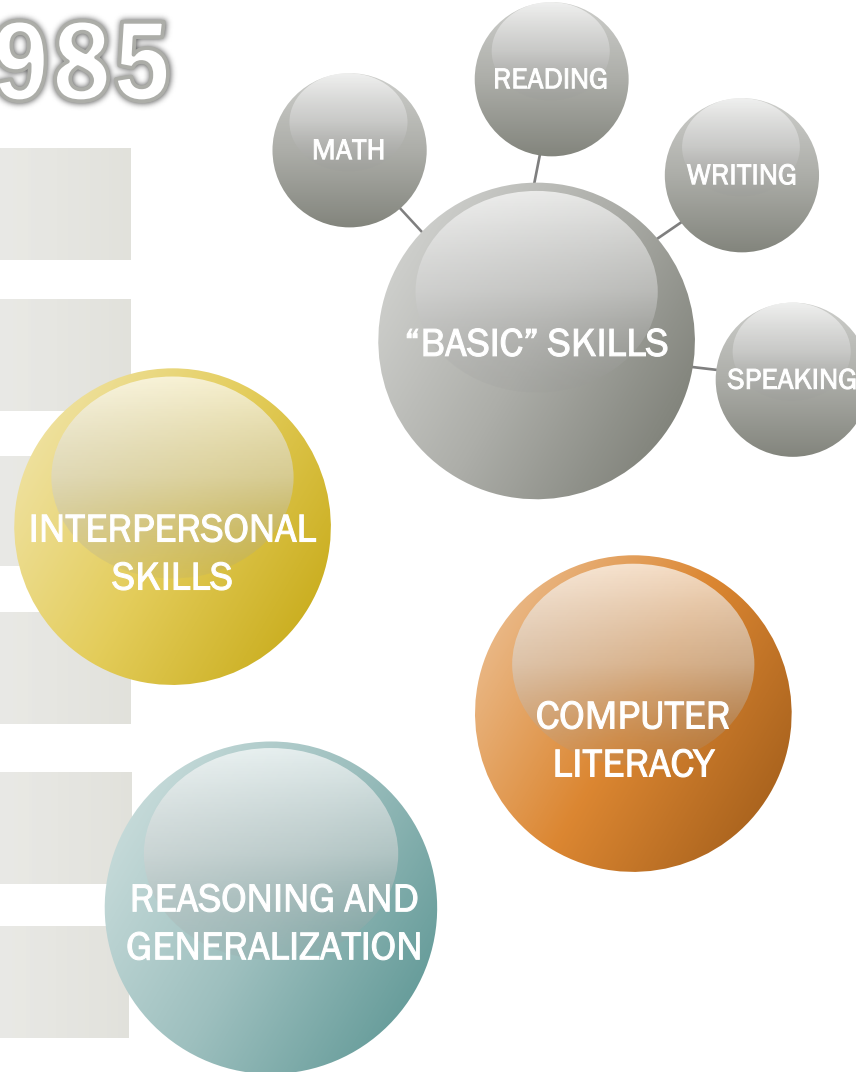# Timeline of Virginia's Workplace Readiness Skills Research

1985	1993-1997	2008-2011	2017
Changing Job Skills in Virginia	Virginia's Changing Workplace	Listening to Employers, Educating Tomorrow's Workforce	Virginia Workplace Readiness Skills: Framework for the Future

Changing Job Skills in Virginia
Employer Interviews
1985

1. THE SPREAD OF TECHNOLOGY
2. COMPUTERIZATION
3. SPECIALIZATION
4. WORKING IN TEAMS
5. CUSTOMER-CLIENT ORIENTATION
6. THE PACE OF CHANGE

MATH

READING

WRITING

SPEAKING

"BASIC" SKILLS

INTERPERSONAL SKILLS

COMPUTER LITERACY

REASONING AND GENERALIZATION

Virginia's Changing Workplace
Employer Interviews
1993-1997

1 EMPLOYEE WORK ETHIC

2 THE COMPUTERIZED WORKPLACE

3 WORKER EMPOWERMENT

4 RISING EDUCATIONAL EXPECTATIONS, PROFESSIONALIZATION, AND CREDENTIALISM

5 CUSTOMER SERVICE

6 THE FLEXIBLE WORKPLACE

7 CONSTANT CHANGE / LIFELONG LEARNING

Virginia's Original 13 Workplace Readiness Skills

1) Reading
2) Math
3) Writing
4) Speaking & Listening
5) Computer Literacy
6) Reasoning, Problem-Solving, and Decision-Making
7) Understanding of the "Big Picture"
8) Strong Work Ethic
9) Positive Attitude
10) Independence & Initiative
11) Self-Presentation
12) Satisfactory Attendance
13) Teamwork

Listening to Employers, Educating Tomorrow's Workforce
Development of Virginia's Current List of 21 Workforce Readiness Skills

2008-2009

Comprehensive review of existing skill frameworks and related research

Drafting of new list of 21 Workplace Readiness Skills for Virginia

Online survey of over 300 Virginia employers and workforce professionals

Listening to Employers, Educating Tomorrow's Workforce
Virginia's Current List of 21 Workforce Readiness Skills

2010

Listening to Employers, Educating Tomorrow's Workforce
Curriculum Development and Implementation

2010

Virginia's 21 new Workplace Readiness Skills were incorporated into all CTE courses in 2010.

Listening to Employers, Educating Tomorrow's Workforce
Workplace Readiness Skills for the Commonwealth Examination

2011-2017

This stand-alone Workplace Readiness Skills certification and credential was implemented in 2011.

EXAM FEATURES

- Online
- One hour, timed
- 100 questions
- Multiple choice
- Four possible answers
- 9th-grade reading level
- Double randomized
- Instant results
- Pass score: 75%
- Digital badge
- Accommodations available
- Easy to administer
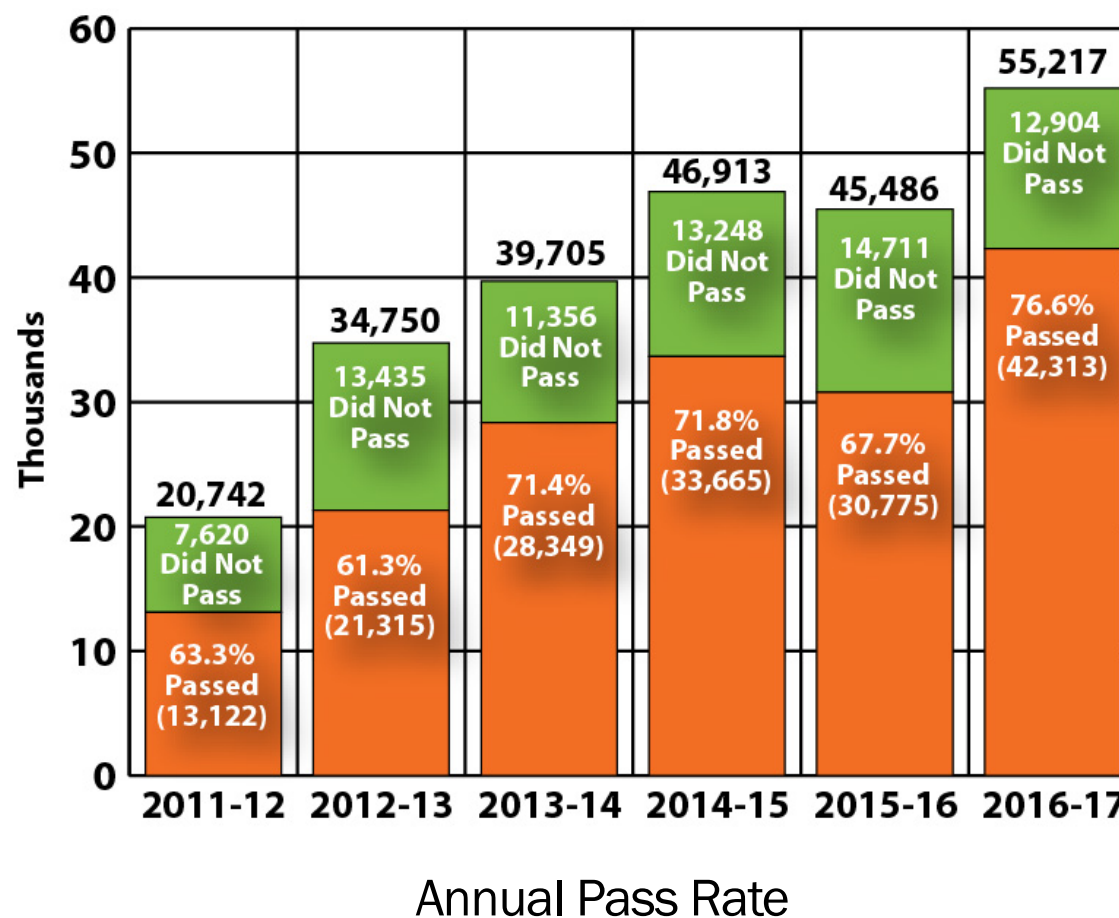
Virginia Workplace Readiness Skills: Framework for the Future
Research Process

2017
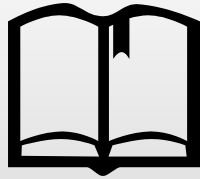
Comprehensive review of more than 70 reports, publications, and websites
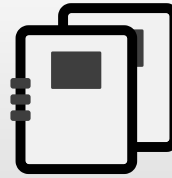
Cataloguing, indexing, and comparison of over 25 skill frameworks

Online survey of nearly 400 Virginia employers and workforce professionals

Virginia Workplace Readiness Skills: Framework for the Future
Research and Literature Review – Workplace Trends

1 INFORMATION REVOLUTION

2 AUTOMATION

3 GLOBALIZATION

4 RAPID AND CONTINUOUS INNOVATION

5 ORGANIZATIONAL RESTRUCTURING

6 TIME- AND POWER-SHIFTING
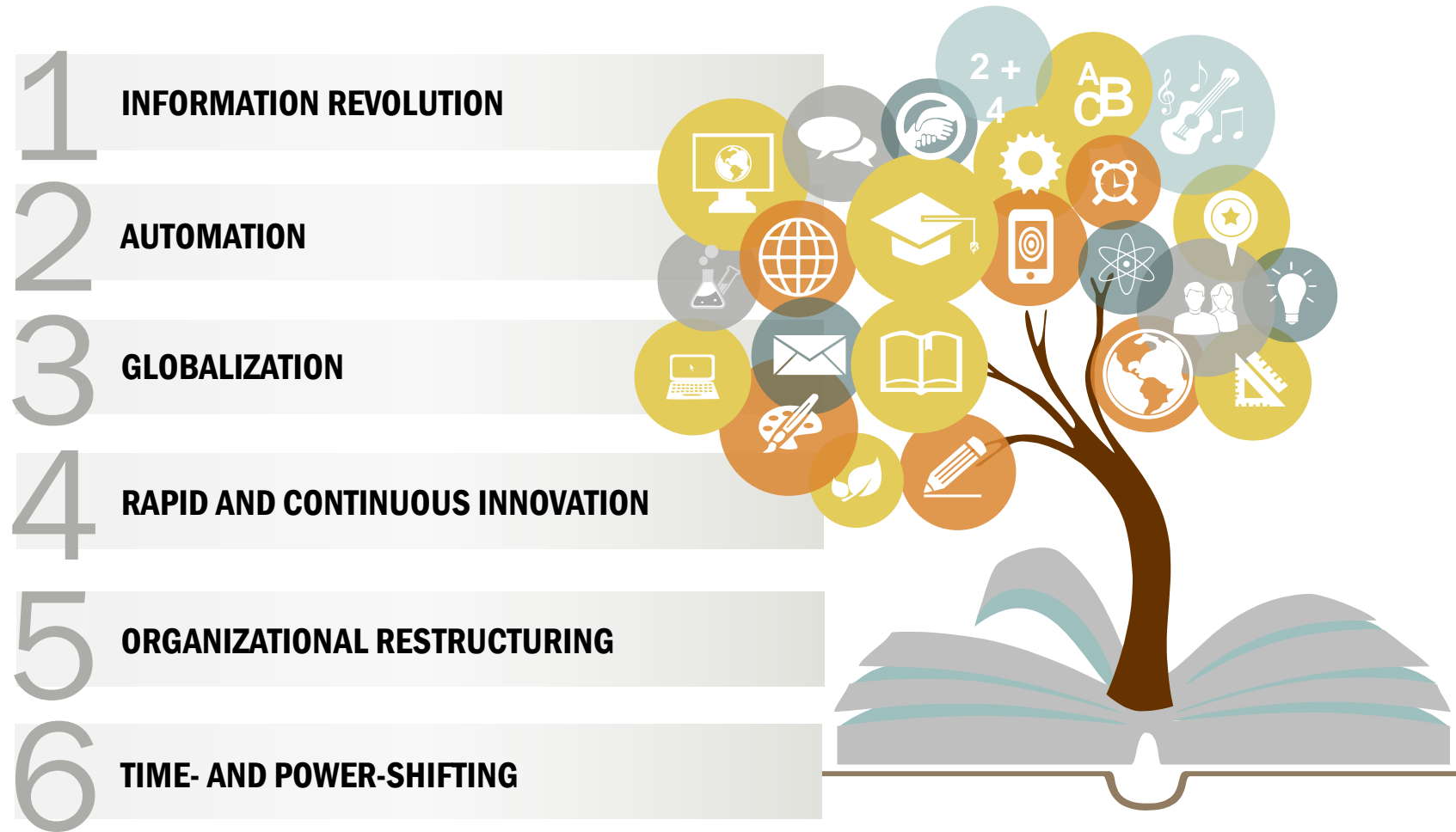
Virginia Workplace Readiness Skills: Framework for the Future
Skill Framework Comparison

SURVEY FEATURES

- Web-based using Qualtrics
- 6 questions
- 10 minutes or less to complete
- Both closed- and open-ended questions
- 2,396 Virginia employers and workforce professionals were invited to take the survey via email
- Survey administered June 19-August 9, 2017
- 395 completed surveys

Virginia Workplace Readiness Skills: Framework for the Future
Survey Development—Changes to Skills for Survey

1
- Added two new skills to list to test using survey—*Information Literacy* and *Initiative & Self-Direction*

2
- Removed the word "initiative" from the current skill definition of *Creativity and Resourcefulness*
- Renamed/Redefined that skill *Creativity and Innovation*

3
- Changed the skill title of *Diversity Awareness* to *Respect for Diversity*
- Revised the skill definition to better reflect the essence of that skill

4
- Altered wording in the *Positive Work Ethic* skill definition to reflect a greater variety of workplace arrangements by changing the phrase "comes to work on time" to "adheres to an agreed-upon work schedule"

Virginia Workplace Readiness Skills: Framework for the Future
Survey Development—Survey Questions

CTE CAREER CLUSTER	Which CTE career cluster best describes your company or organization? (required)
CURRENT SKILL IMPORTANCE	How important is each workplace readiness skill for entry-level workers in your organization? (required)
MOST LACKING SKILLS	What workplace readiness skills are today's entry-level employees lacking the most? (list up to five)
FUTURE SKILL IMPORTANCE	In about five years from now, how important will each workplace readiness skill be for entry-level workers?
MISSING SKILLS	What workplace readiness skills, if any, do you believe are missing from the current framework and should be added?
OPEN COMMENT	What additional comments or thoughts do you have about workplace readiness skills?

Virginia Workplace Readiness Skills: Framework for the Future
Contact List Development

NONPROBABILITY SAMPLING METHODS

PURPOSIVE SAMPLING

- Individual survey links
- Respondents known
- Could not be forwarded
- One-time use
- 338/395 completed surveys

SNOWBALL SAMPLING

- Anonymous survey links
- Respondents unknown
- Could be forwarded
- One-time use
- 57/395 completed surveys

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Respondents by CTE Career Cluster

Career Cluster	Percentage
Agriculture, Food, and Natural Resources	7.1%
Architecture and Construction	4.6%
Arts, A/V Technology, and Communications	2.5%
Business Management and Administration	1.5%
Education and Training	14.2%
Finance	3.8%
Government and Public Administration	20.0%
Health Science	6.3%
Hospitality and Tourism	1.0%
Human Services	7.6%
Information Technology	2.5%
Law, Public Safety, Corrections, and Security	4.6%
Manufacturing	6.6%
Marketing	1.0%
Science, Technology, Engineering, and Mathematics	4.1%
Transportation, Distribution, and Logistics	2.5%
Other	10.1%

(n=395)

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Current Skill Importance

How important is each workplace readiness skill for entry-level workers in your organization? (n=395)						
Skill	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not Applicable
Conflict Resolution	0.3%	5%	14%	43%	38%	1%
Creativity and Innovation	0.0%	5%	25%	41%	28%	0.3%
Critical Thinking and Problem Solving	0.3%	1%	7%	34%	57%	0.0%
Customer Service	1%	2%	7%	24%	65%	2%
Health and Safety	1%	4%	18%	31%	44%	3%
Information Literacy	1%	3%	12%	39%	46%	1%
Information Technology	1%	4%	15%	41%	39%	0.0%
Initiative and Self-Direction	0.0%	2%	10%	39%	49%	0.0%
Integrity	0.0%	1%	3%	19%	77%	0.0%
Internet Use and Security	2%	4%	15%	32%	46%	1%
Job Acquisition and Advancement	4%	11%	34%	32%	15%	3%
Job-Specific Technologies	0.0%	5%	18%	43%	34%	1%
Lifelong Learning	1%	3%	16%	39%	41%	0.0%
Mathematics	2%	13%	33%	33%	18%	1%
Organizations, Systems, and Climates	0.3%	5%	22%	43%	30%	1%
Positive Work Ethic	0.0%	0.3%	3%	23%	74%	0.0%
Reading and Writing	0.0%	2%	9%	33%	56%	0.0%
Respect for Diversity	1%	2%	11%	27%	58%	1%
Self-Representation	0.3%	3%	14%	37%	46%	0.0%
Speaking and Listening	0.0%	1%	3%	26%	70%	0.0%
Teamwork	0.0%	1%	6%	30%	64%	0.3%
Telecommunications	2%	7%	23%	41%	26%	1%
Time, Task, and Resource Management	0.0%	2%	9%	38%	51%	0.3%

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Current Skill Importance

Extremely important

- Critical Thinking and Problem Solving
- Customer Service
- Health and Safety
- Information Literacy
- Initiative and Self-Direction
- Integrity
- Internet Use and Security
- Lifelong Learning
- Positive Work Ethic
- Reading and Writing
- Respect for Diversity
- Self-Representation
- Speaking and Listening
- Teamwork
- Time, Task, and Resource Management

Very important

- Conflict Resolution
- Creativity and Innovation
- Information Technology
- Job-Specific Technologies
- Organizations, Systems, and Climates
- Telecommunications

Moderately important

- Job Acquisition and Advancement
- Mathematics

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Current Skill Importance

Workplace Readiness Skills in Order of Current Importance	
Skill	**Metric**
Integrity	4.73
Positive Work Ethic	4.71
Speaking and Listening	4.66
Teamwork	4.57
Customer Service	4.53
Critical Thinking and Problem Solving	4.48
Reading and Writing	4.44
Respect for Diversity	4.40
Time, Task, and Resource Management	4.39
Initiative and Self-Direction	4.36
Information Literacy	4.27
Self-Representation	4.26
Internet Use and Security	4.18
Health and Safety	4.16
Lifelong Learning	4.16
Conflict Resolution	4.13
Information Technology	4.12
Job-Specific Technologies	4.07
Organizations, Systems, and Climates	3.97
Creativity and Innovation	3.93
Telecommunications	3.84
Mathematics	3.53
Job Acquisition and Advancement	3.45

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Future Skill Importance

Skill	Less important	About the same importance	More important	Not sure	TOTAL (n)
In about five years from now, how important will each workplace readiness skill be for entry-level workers in your organization?					
Conflict Resolution	1%	51%	47%	1%	370
Creativity and Innovation	1%	37%	60%	1%	369
Critical Thinking and Problem Solving	1%	29%	70%	1%	369
Customer Service	1%	44%	54%	1%	369
Health and Safety	3%	65%	31%	2%	370
Information Literacy	1%	35%	63%	1%	365
Information Technology	2%	28%	70%	1%	369
Initiative and Self-Direction	1%	34%	64%	1%	368
Integrity	1%	52%	47%	1%	369
Internet Use and Security	2%	36%	60%	1%	368
Job Acquisition and Advancement	4%	68%	23%	4%	368
Job-Specific Technologies	2%	42%	55%	1%	369
Lifelong Learning	1%	41%	58%	1%	370
Mathematics	5%	65%	29%	2%	370
Organizations, Systems, and Climates	2%	50%	46%	2%	368
Positive Work Ethic	1%	48%	51%	1%	368
Reading and Writing	2%	52%	46%	0.3%	369
Respect for Diversity	1%	38%	60%	1%	367
Self-Representation	8%	64%	27%	1%	370
Speaking and Listening	0.3%	46%	54%	1%	369
Teamwork	1%	41%	58%	1%	369
Telecommunications	2%	44%	52%	1%	368
Time, Task, and Resource Management	1%	42%	56%	1%	370

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Future Skill Importance

More important in the future

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Customer Service
- Information Literacy
- Information Technology
- Initiative and Self-Direction
- Internet Use and Security
- Job-Specific Technologies
- Lifelong Learning
- Positive Work Ethic
- Respect for Diversity
- Speaking and Listening
- Teamwork
- Telecommunications
- Time, Task, and Resource Management

About the same importance in the future

- Conflict Resolution
- Health and Safety
- Integrity
- Job Acquisition and Advancement
- Mathematics
- Organizations, Systems, and Climates
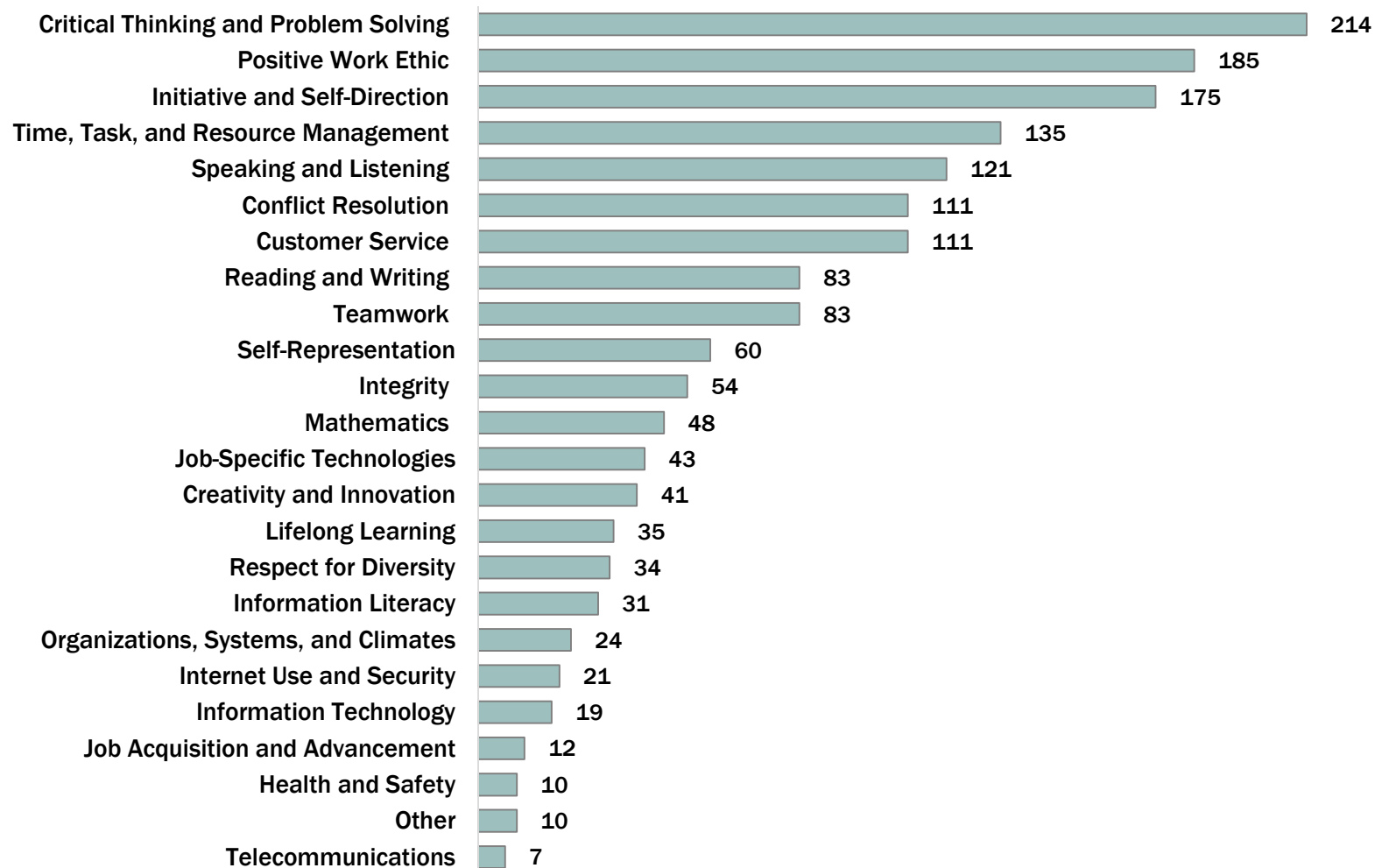- Reading and Writing
- Self-Representation

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Future Skill Importance

Workplace Readiness Skills in Order of Future Importance	
Skill	**Metric**
Critical Thinking and Problem Solving	**2.70**
Information Technology	**2.69**
Initiative and Self-Direction	**2.63**
Information Literacy	**2.63**
Creativity and Innovation	**2.60**
Respect for Diversity	**2.59**
Internet Use and Security	**2.59**
Teamwork	**2.58**
Lifelong Learning	**2.57**
Time, Task, and Resource Management	**2.55**
Job-Specific Technologies	**2.54**
Speaking and Listening	**2.54**
Customer Service	**2.53**
Positive Work Ethic	**2.51**
Telecommunications	**2.50**
Conflict Resolution	**2.46**
Integrity	**2.46**
Organizations, Systems, and Climates	**2.46**
Reading and Writing	**2.44**
Health and Safety	**2.29**
Mathematics	**2.24**
Job Acquisition and Advancement	**2.20**
Self-Representation	**2.19**

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Skills Most Lacking

Skill	Value
Critical Thinking and Problem Solving	214
Positive Work Ethic	185
Initiative and Self-Direction	175
Time, Task, and Resource Management	135
Speaking and Listening	121
Conflict Resolution	111
Customer Service	111
Reading and Writing	83
Teamwork	83
Self-Representation	60
Integrity	54
Mathematics	48
Job-Specific Technologies	43
Creativity and Innovation	41
Lifelong Learning	35
Respect for Diversity	34
Information Literacy	31
Organizations, Systems, and Climates	24
Internet Use and Security	21
Information Technology	19
Job Acquisition and Advancement	12
Health and Safety	10
Other	10
Telecommunications	7

Virginia Workplace Readiness Skills: Framework for the Future
Survey Results—Missing Skills

- Initiative and Self-Direction
- Communication Skills (in general)
- Work Ethic
- Cross-Cultural Competence / Global Outlook
- Teamwork
- Interpersonal / Social Skills (in general)
- Writing
- Accountability
- Attendance / Punctuality
- Realistic Expectations about Nature of Work
- Related Work Experience
- Problem Solving

- Reading
- Professionalism
- Drug-Free
- Time Management
- Accepts Constructive Criticism Well
- Critical Thinking
- Big Picture Thinking
- Ethics
- Job-Specific Skills
- Responsibility
- Respect
- Speaking

Virginia Workplace Readiness Skills: Framework for the Future
Youth Labor Force Participation

**Percent in Labor Force by Age Group, Virginia, 2001-2016**
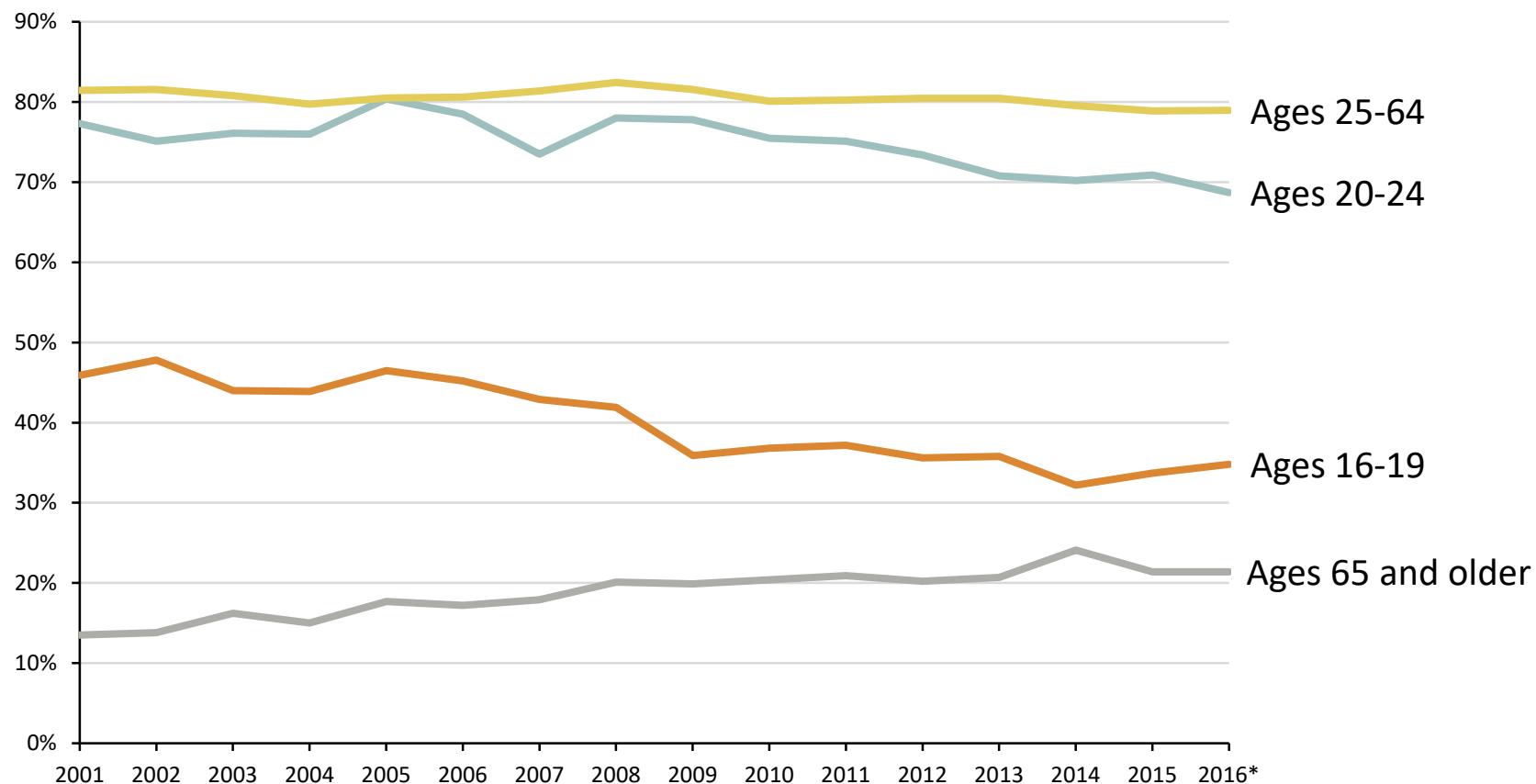
Ages 25-64

Ages 20-24

Ages 16-19

Ages 65 and older

Data source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, https://www.bls.gov/lau/ex14tables.htm (*2016 data are preliminary)

Virginia Workplace Readiness Skills: Framework for the Future
Youth Labor Force Participation

Percent Change in Labor Force Participation by Age Group, Virginia, 2001-2016
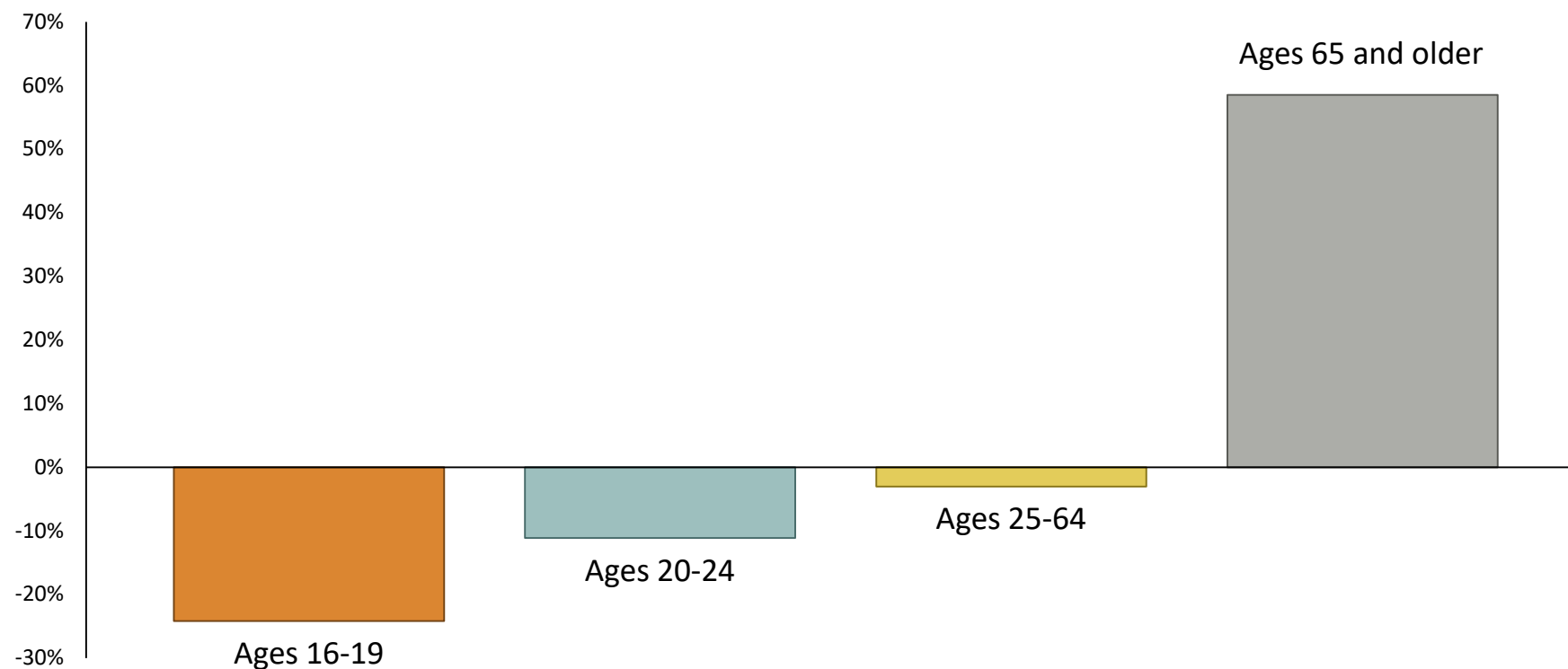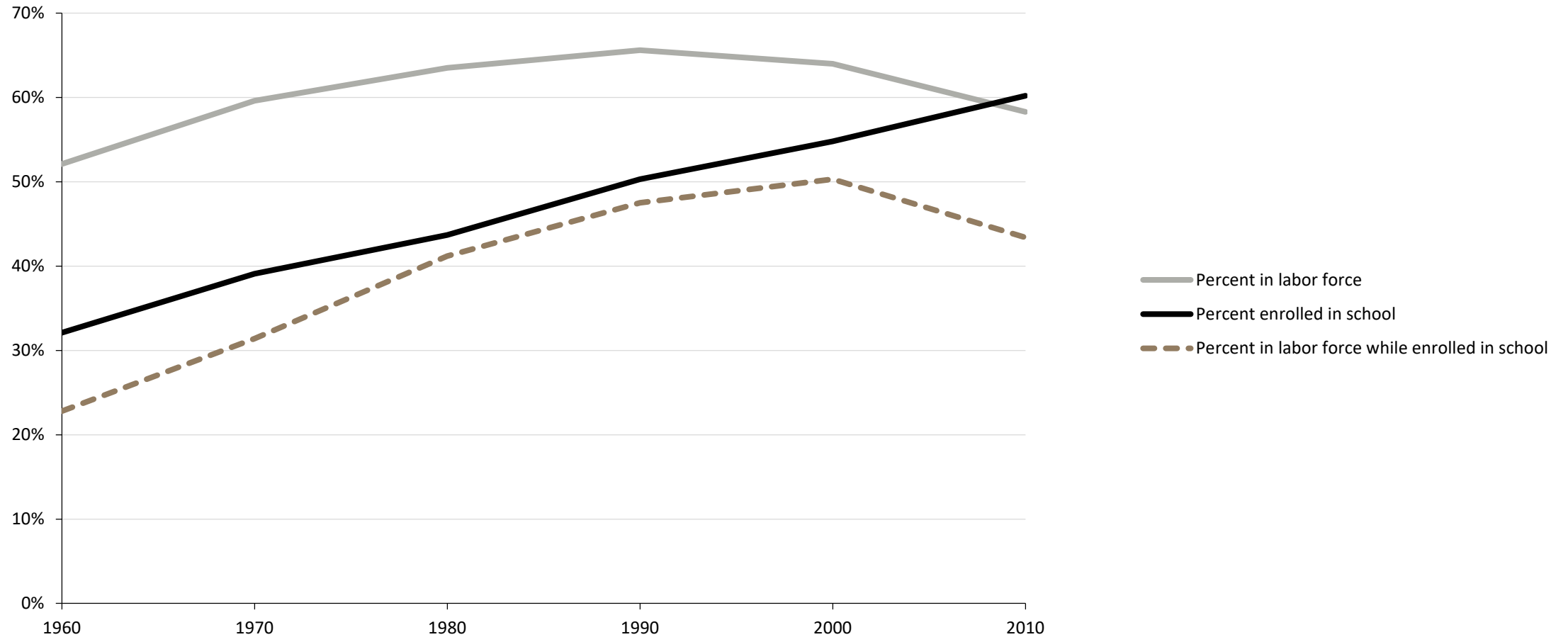
Data source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, https://www.bls.gov/lau/ex14tables.htm (*2016 data are preliminary)

Virginia Workplace Readiness Skills: Framework for the Future
Youth Labor Force Participation and School Enrollment

Labor Force Participation and School Enrollment of Virginia Youth, Ages 16-24, 1960-2010

Legend:
- Percent in labor force
- Percent enrolled in school
- Percent in labor force while enrolled in school

Decreasing youth labor force participation coupled with increasing school enrollment means that _school-based_ workplace readiness skills preparation—such as Virginia's Workplace Readiness Skills program—will become an even more vital resource for CTE students in the future.

THANK YOU!

To view the full 2017 Workplace Readiness Skills report, follow this link:

http://www.doe.virginia.gov/instruction/career_technical/workplace_readiness/wrs-research-report.pdf

For more information, please contact:

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