

# MOVING WEST VIRGINIA FORWARD

2nd annual West Virginia Legislators' Forum  
on Education and the Economy

November 2, 2017 · Charleston Town Center Marriott



**CLAUDE  
WORTHINGTON  
BENEDUM  
FOUNDATION**



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For further reading, see the WVPEC website at  
<http://wvpec.com/legislators-forum>.

# About the WVPEC

The WVPEC is a diverse collaborative of dynamic education leaders from throughout West Virginia committed to championing growth in public schools through outreach and innovation.

The West Virginia Public Education Collaborative (WVPEC) was founded by West Virginia University (WVU) President Gordon Gee and former Shepherd University President Suzanne Shipley in 2015. Membership is representative of all sectors involved in public education, and the group is currently pursuing actionable applied research and educational partnerships to shape policy and drive educational innovation on a state and national level. The collaborative is headquartered in West Virginia University's Office of the Provost to ensure a neutral viewpoint and cross-disciplinary collaboration, and to facilitate flexibility.

To date, the WVPEC has sponsored two initiatives, the Legislators' Forum and Academic Spotlight, which have initiated a dialogue interweaving numerous views on education in our state while bringing together many different groups, including teachers, lawmakers, and the general public. Support for both of these initiatives was provided by the Claude Worthington Benedum Foundation and WVU.

## Our Purpose

The West Virginia Public Education Collaborative, founded in 2015, is committed to championing public schools from early childhood to secondary levels through outreach and innovation. Our members hope to identify the most pressing current educational needs and work with key stakeholders to remove those barriers in order to positively impact both the educational system and the economy of our state.

Dear Legislators,

Welcome to the second annual *West Virginia Legislators' Forum on Education and the Economy!*

Over the past few months, we have come a long way in identifying new opportunities to diversify and strengthen West Virginia to help boost economic growth and jobs. But this is just the beginning. Indeed, you are on the front lines of our efforts to move West Virginia forward, so it is critical to join together across party lines to address the most pressing issues facing public education and our economy today. This is an important opportunity for collaborative engagement between you, our state leaders, and experts in public education and workforce development as we begin charting a roadmap to helping our students and the next generations of leaders succeed, while diversifying our economy and workforce.

Using *West Virginia Forward* as a lens, policy experts, corporate leaders and educational practitioners will discuss the state's economic opportunities and challenges and the need to nurture the talent pipeline through the diversification of workforce development.

Our agenda is simple: To continue an open and honest dialogue about how to support and strengthen public education in order to help boost economic growth and jobs across West Virginia. Our sessions are designed to share insights on the anticipated changes to education, both nationally and in our state, as well as in the workplace over the next few years and beyond. Insights from state and national innovators, current school leaders, and educators will drive this discussion. We look forward to hearing the perspectives of national and state education and business leaders as they apply to West Virginia.

The Legislators' Forum agenda incorporates interactivity between legislators and speakers. We are eager to hear on-the-ground perspectives from our state board and a local superintendent and his educators. Our intent is that legislators will feel comfortable to discuss, ask questions and give input around topics that are crucial to their critical role of law-making.

On behalf of the West Virginia Public Education Collaborative, we thank our sponsors -- West Virginia University, the Claude Worthington Benedum Foundation and numerous business and community groups -- who have been great partners as we look ahead to charter new paths for a vibrant, dynamic and successful future West Virginia.

Thank you for your participation and your continued engagement as we strive to move West Virginia Forward!

Best regards,

Donna Hoylman Peduto  
Executive Director  
West Virginia Public Education Collaborative



## The West Virginia Legislators' Forum on Education & the Economy

November 1<sup>st</sup> and 2<sup>nd</sup>, 2017

Charleston Town Center Marriott - Charleston, West Virginia

### WEDNESDAY, NOVEMBER 1, 2017

6:00 pm – 7:00 pm

Registration & Reception

*Upper Gauley Room*

7:00 pm – 9:00 pm

*Moving West Virginia Forward:  
Charting a Course for the Future*

*Hawk's Nest*

Introduction and Welcome:

- *Joyce McConnell*, Provost, West Virginia University

Keynote:

- *Dr. Gordon Gee*, President, West Virginia University
- *Dr. John Maher*, Vice President for Research, Marshall University
- *Woody Thrasher*, Secretary of Commerce, West Virginia

Moderator

- *Rochelle Goodwin*, Senior Associate Vice President, West Virginia University

Dr. Gee, Dr. Maher & Secretary Thrasher will discuss the impetus for the West Virginia Forward initiative & its potential to diversify West Virginia's economy & workforce.

### THURSDAY, NOVEMBER 2, 2017

7:30 am – 8:15 am

Breakfast

8:15 am -8:30 am

Welcome

*Salon D*

- *Donna Hoylman Peduto*, Executive Director, WVPEC

8:30 am – 9:45 am

*Moving West Virginia Forward:  
Addressing Challenges & Opportunities in the Workforce*

*Salon D*

- *Matt Harbaugh*, Associate VP for Transformation, West Virginia University
- *The Honorable Bill Peduto*, Mayor of Pittsburgh

Matt Harbaugh will provide an overview of challenges/opportunities articulated in the McKinsey findings, specifically focusing on human capital & what skills, values & experiences our state needs—and our public education system can help students develop. Bill Peduto will discuss similar challenges faced & solutions reached in Pittsburgh as they relate to West Virginia.

9:45 am – 10:00 am	Break	
10:00 am – 11:00 am	<i>Moving West Virginia Forward: Building Tomorrow's Workforce</i>	<i>Salon D</i>
<p>Panelists:</p> <ul style="list-style-type: none"> <li>• <i>Lee Farabaugh</i>, COO, Core10</li> <li>• <i>Arria Hines</i>, President, Allegheny Science &amp; Technology Corporation</li> <li>• <i>Lauren Sisneros</i>, Policy Analyst, Education Commission of the States</li> </ul> <p>Moderator:</p> <ul style="list-style-type: none"> <li>• <i>Dr. Johnny Moore</i>, President, Pierpont Community &amp; Technical College</li> </ul> <p>Panelists will share specific examples of methods being utilized to respond to changing workforce demands, training employees for the jobs of tomorrow, &amp; connecting students to employers early. Conversation will unpack key terminology to shed light on new practices such as <i>new collar jobs</i>, <i>hereshoring</i>, and <i>fintech</i>.</p>		
11:15 am – 12:15 pm	<i>Moving West Virginia Forward: Preparing Students for a New Tomorrow</i>	<i>Salon D</i>
<p>Panelists:</p> <ul style="list-style-type: none"> <li>• <i>Susan Patrick</i>, President, iNACOL</li> <li>• <i>Anne Sekula</i>, Director, Remake Learning</li> <li>• <i>Rebecca Wolfe</i>, Associate Vice President, Jobs for the Future</li> </ul> <p>Moderator:</p> <ul style="list-style-type: none"> <li>• <i>Dr. Jim Denova</i>, Vice President, Claude Worthington Benedum Foundation</li> </ul> <p>This session will focus on innovative instructional practices in P-12 public education. Special emphasis will be placed on student engagement, creativity in learning, educational technologies, &amp; how schools need to change in order to prepare students for the evolving demands of the 21st century workplace.</p>		

## Greetings &amp; Insights

- *Tom Campbell*, President, West Virginia State Board of Education

## Lunch Keynote:

- *Dr. Ron Duerring*, Superintendent, Kanawha County Schools

## Resource Experts:

- *Fred Albert*, Math teacher at DuPont Middle School & 2016 Kanawha County Teacher of the Year
- *Susie Garrison*, English teacher at Capital High School & 2017 Kanawha County Teacher of the Year
- *Kelly Haynes*, Principal, Lakewood Elementary School, & President, Elementary Principals' Association
- *Jason Henley*, Elementary teacher at Andrews Heights Elementary
- *Christina Holston*, Medical Assisting instructor at Ben Franklin Career Center & HOSA National Board member
- *Ron Reedy*, Principal, Sissonville High School, & President, Secondary Principals' Association

Following greetings and insights, Kanawha County Superintendent Ron Duerring will share some extraordinary ways that Kanawha County has solved their most challenging problems. Legislators will then have the opportunity to engage directly with Kanawha County educators in small groups & focus on how policy translates into practice in the classroom. Educators will share the current challenges & successes affecting their classrooms and schools.

1:45 pm – 2:45 pm	<i>Moving West Virginia Forward: Assessing Health Impacts on Public Education</i>	<i>Salon D</i>
<p>Panelists:</p> <ul style="list-style-type: none"> <li>• <i>Janet Allio</i>, School Nurse/Coordinator of Health Services, Mary C. Snow Westside Elementary</li> <li>• <i>John Kennedy</i>, School-Based Health Coordinator, West Virginia Primary Care Association, Inc.</li> <li>• <i>Christina Mullins</i>, Director, West Virginia Office of Maternal, Child, &amp; Family Health</li> </ul> <p>Moderator:</p> <ul style="list-style-type: none"> <li>• <i>Robert Mahaffey</i>, Executive Director, Rural School and Community Trust</li> </ul> <p>Public school educators, counselors &amp; administrators face challenges that start outside the classroom &amp; impact students, families, communities, &amp; our state. This panel will discuss some of those challenges in the area of public health, focusing on how mental health concerns can affect our students' success at all levels of P-12 — &amp; how we can address those concerns.</p>		
2:45 pm – 3:00 pm	Break	
3:00 pm – 4:15 pm	<i>Moving West Virginia Forward: Taking a Moment to Reflect</i>	<i>Salon D</i>
<p>Conversations will be facilitated among small groups of legislators about various takeaways and big ideas were discussed in our Legislators' Forum sessions.</p>		
4:15 pm – 4:30 pm	Closing Remarks	<i>Salon D</i>
<ul style="list-style-type: none"> <li>• <i>Gayle Manchin</i>, Secretary for Education and the Arts</li> </ul>		



# MOVING WEST VIRGINIA FORWARD>>>

**A Briefing Prepared for  
The West Virginia Legislators' Forum**

*On Education & The Economy* | November 1-2, 2017



In recent years, West Virginia has suffered an economic decline due to a convergence of factors, including the financial crisis, loss of manufacturing jobs, and more recently the downturn of the coal industry. Although the US economy has recovered and grown over the past few years, West Virginia has struggled to match those trends, as its economy remained stagnant until 2016, and only recently started to grow again.

In response, leaders from West Virginia University (WVU), the State of West Virginia, and Marshall University came together to identify solutions that can revive the fortunes of the State. In addition to ongoing efforts from local and regional actors across the State to support economic recovery and growth, several key players agreed to embark on *West Virginia Forward* to define a path for economic development across the State.<sup>1</sup>

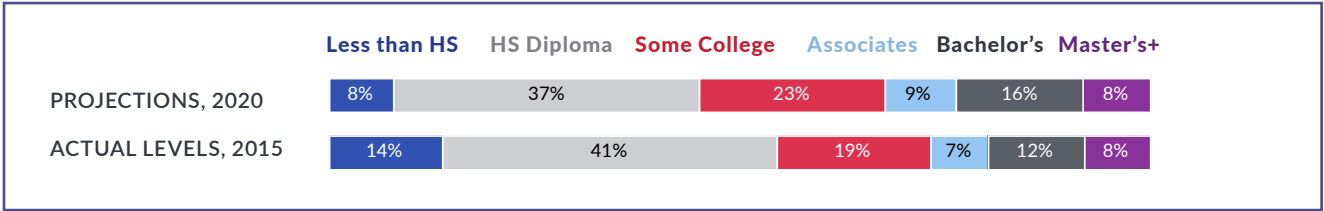
This year’s Forum zooms in on the strategies and innovations necessary to move West Virginia Forward in regard to the state’s workforce. West Virginia’s education systems—from early childhood through K-12 and into workforce training or postsecondary education—are essential to creating a skilled workforce that will meet the needs of the changing state economy.

This briefing provides a snapshot of key data across the pipeline as the state begins to move forward on a new path towards prosperity.

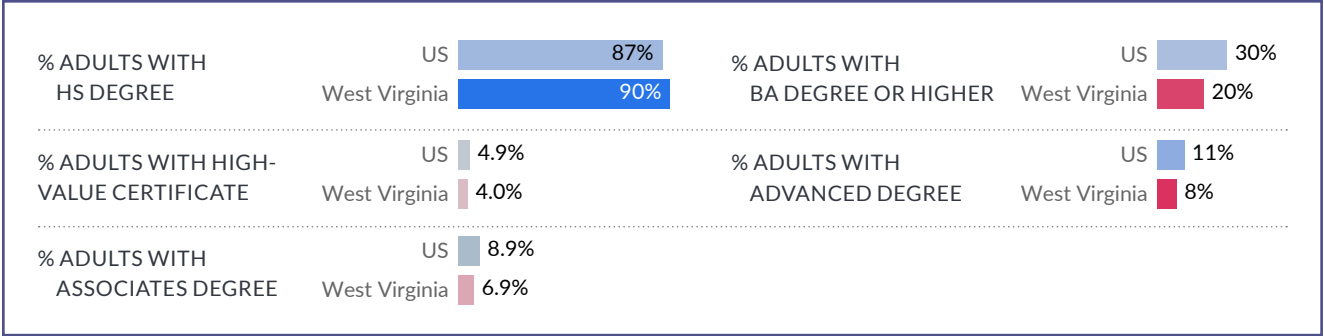
## Addressing the Changing Landscape of Work Educational Attainment & Workforce Demands

In West Virginia, and across the nation, workforce demands are changing. While blue-collar jobs are decreasing, these losses are offset by growth in “skilled-services” jobs, many of which do not require a bachelor’s degree.<sup>10</sup> This is good news, but there is also a catch: more of these jobs require some training beyond high school. The Center on Education and Workforce at Georgetown University created a report that looks forward to the year 2020 and predicts the state of the American economy.<sup>11</sup> The center’s projections provide information regarding the education requirements needed to gain employment in 2020.

### Projected Levels of Education Needed in West Virginia | 2020<sup>12</sup>



### Educational Attainment Estimates | 2011–2015<sup>12</sup>



## STATE OVERVIEW | FAST FACTS

**273,100**  
K12 public school students<sup>2</sup>

**↓1.6%**  
expected enrollment change by 2025<sup>2</sup>

**745**  
public schools<sup>3</sup>

**57**  
public school districts<sup>3</sup>

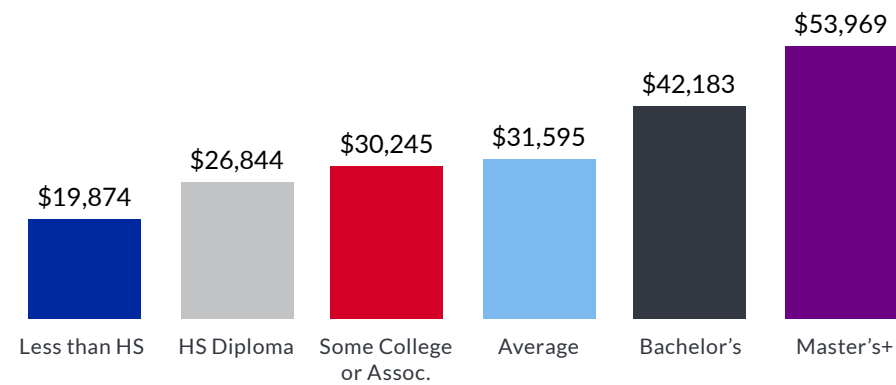
**90,782**  
Public postsecondary students<sup>4</sup>

**23%**  
are enrolled in 2-year colleges<sup>4</sup>

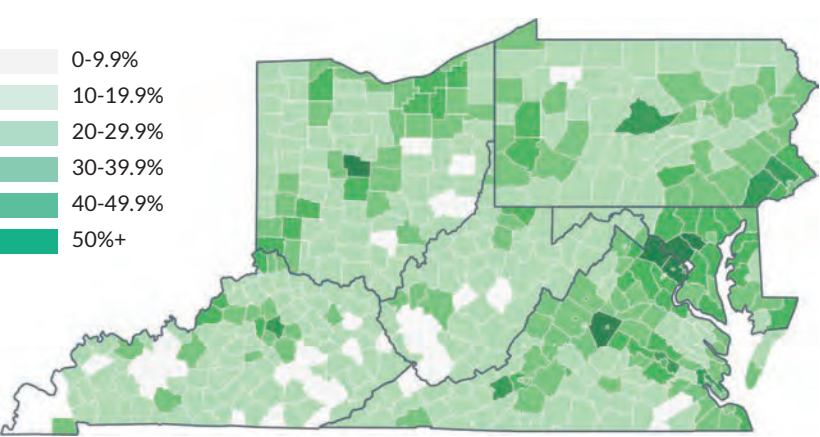
VALUE	CATEGORY	STATE RANKING
\$11,359 <sup>5</sup>	Per Pupil Expenditures	23
14:1 <sup>6</sup>	Student-Teacher Ratio	17
33%* <sup>7</sup>	NAEP 4th Grade Math	43
30%* <sup>7</sup>	NAEP 4th Grade Reading	42
21%* <sup>7</sup>	NAEP 8th Grade Math	47
27%* <sup>7</sup>	NAEP 8th Grade Reading	45
86.5% <sup>8</sup>	Public HS Grad Rate	18
11.8% <sup>9</sup>	4-year College Grad Rate	48
45.6% <sup>9</sup>	6-year College Grad Rate	45

\*Represents the percent of students that scored at or above proficient.

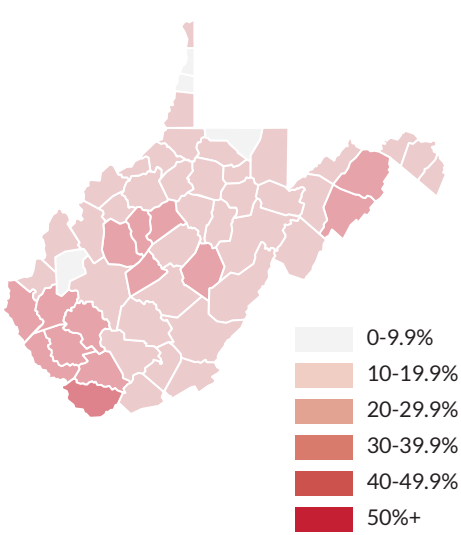
### West Virginia Median Earnings by Educational Attainment | 2014<sup>12</sup>



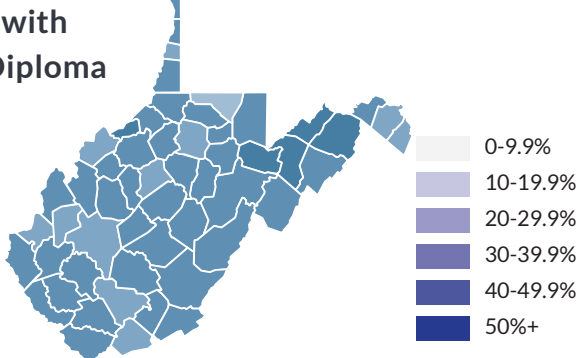
Percent of Adults with BA or Higher | 2011-2015<sup>13</sup>



Percent of Adults with HS Diploma as Highest Degree | 2011-2015<sup>13</sup>



Percent of Adults with Less Than an HS Diploma | 2011-2015<sup>13</sup>



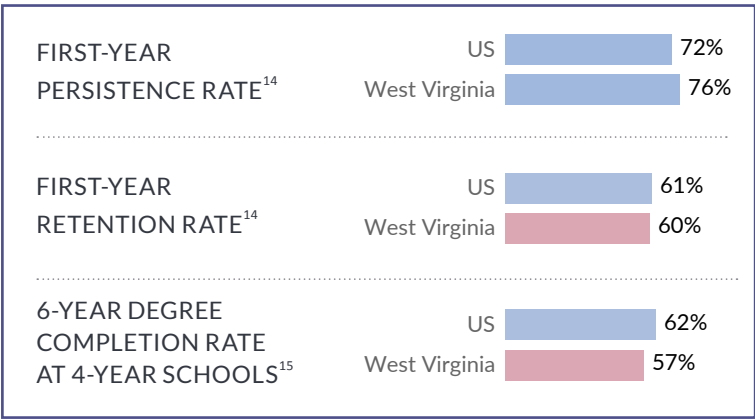
Building Tomorrow’s Workforce  
| Persistence & Completion in Postsecondary Education

The importance of a workforce with training beyond high school has been covered at length. More students are attending college than ever before, but degree completion still lags for many of our students.

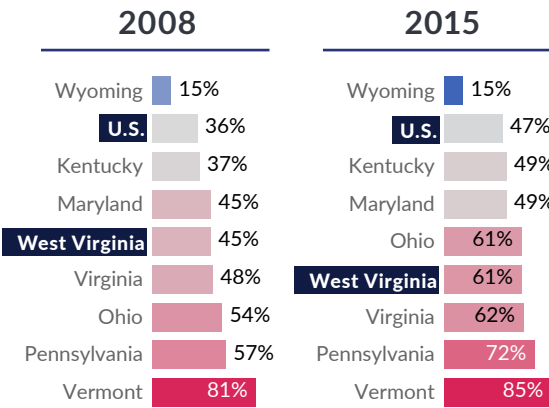
COLOR LEGEND



College Persistence and Retention<sup>14, 15</sup>



Percent of Public Costs University Students Pay | 2008 & 2015<sup>16</sup>



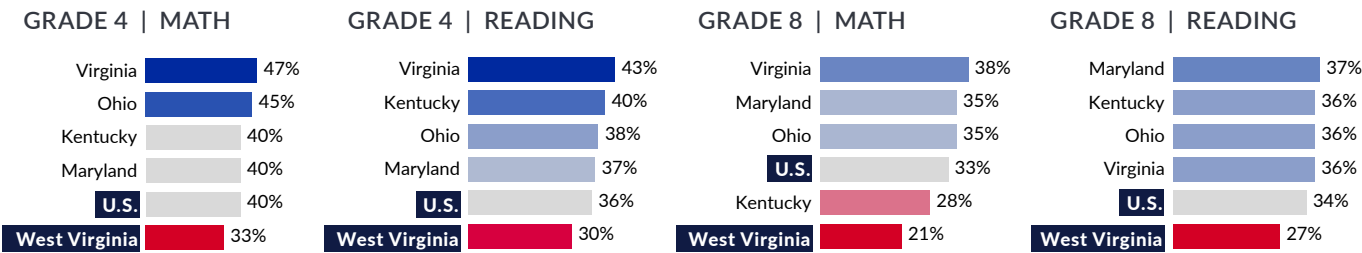
Preparing Students for a New Tomorrow  
| College & Career Readiness in PK-12

Creating a workforce with the skills and dispositions needed to move *West Virginia Forward* starts early. In order to help students find success, our preK-12 system must ensure that they are graduating from high school with the skills and knowledge they need for postsecondary training and careers. The fourth-grade students who took the National Assessment of Educational Progress and West Virginia Summative Assessment in 2015 are expected to graduate in 2023. Are they on track for success?

Elementary and Middle School Achievement  
West Virginia State Assessment Proficiency Rates<sup>17</sup>

	2015		2016		2017	
	MATH	READING	MATH	READING	MATH	READING
GRADE 3	44%	46%	49%	48%	48%	45%
GRADE 4	36%	45%	40%	48%	43%	47%
GRADE 5	30%	51%	33%	51%	34%	49%
GRADE 6	26%	43%	29%	46%	32%	45%
GRADE 7	26%	45%	30%	48%	31%	48%
GRADE 8	25%	44%	27%	47%	29%	45%

National NAEP Proficiency Rates, Selected States | 2015<sup>18</sup>



Act Performance by Subgroup & Subject | 2016<sup>19</sup>  
% Students Meeting College Readiness Benchmarks

	ALL FOUR SUBJECTS	ENGLISH	MATH	READING	SCIENCE
West Virginia Black	6%	40%	12%	23%	12%
Hispanic	17%	61%	29%	38%	26%
All	20%	67%	32%	46%	33%
White	21%	69%	33%	47%	34%
Asian	49%	76%	72%	63%	58%
US Black	6%	33%	13%	19%	11%
Hispanic	14%	46%	27%	30%	21%
All	26%	61%	41%	44%	36%
White	34%	73%	50%	55%	46%
Asian	46%	75%	70%	59%	56%

# *Moving West Virginia Forward:* **Charting a Course for the Future**

Dr. Gee, Dr. Maher, & Secretary Thrasher will discuss the impetus for the West Virginia Forward initiative & its potential to diversify West Virginia's economy & workforce.

*6:00 pm – 8:00 pm, Hawk's Nest*

## **Rochelle Goodwin, Moderator**



Rochelle Goodwin serves as the Senior Associate Vice President for Academic & Public Strategy at West Virginia University. Rochelle has had a 20-year career in public service, law, & policy. After practicing law & directing the state's pro bono legal program, she spent nearly a decade leading the offices, policy work, economic development efforts & constituent services for Senator Jay Rockefeller, during which she managed policy, communications, & service, & convened statewide conversations with key stakeholders on priority issues. In her current role, she furthers efforts aligning policy, service & education & works to support WVU's land grant mission through partnerships with academic & public leaders, community redevelopment, & economic development.

## **Dr. E. Gordon Gee**



Currently serving for a second time as president of West Virginia University, Dr. E. Gordon Gee has been a higher education leader for more than three decades. In 2009 Time magazine named him one of the top-10 university presidents in the United States. Gee has also served as president of The Ohio State University, Vanderbilt University, Brown University, & the University of Colorado. Gee graduated from the University of Utah with an honors degree in history & earned his J.D. & Ed.D. degrees from Columbia University. He has written widely on law & education, & is the co-author of 11 books. His service on education-governance organizations & commissions is also extensive.

## **Dr. John Maher**



John is the Vice-President for Research at Marshall University & the Executive Director of the Marshall University Research Corporation. He oversees the operations which provide research & grant development, grant administration, research integrity oversight, compliance services & intellectual property management to Marshall University. Previously, he served as the Executive Director of the Chemical Alliance Zone, a regional economic development coalition, & worked for 21 years in research & development at Union Carbide Corporation. John received his A.B. at Cornell University & his Ph.D. in Organic/Organometallic Chemistry from Harvard University.

## **Sec. H. Wood Thrasher**



H. Wood “Woody” Thrasher was appointed the West Virginia Secretary of Commerce in December 2016 by Governor Jim Justice. In this role, he oversees eight agencies including the Development Office, the Divisions of Forestry, Labor, & Natural Resources, the Office of Miners’ Health, Safety & Training, WorkForce West Virginia, the West Virginia Tourism Office, & the West Virginia Geological & Economic Survey. Thrasher’s main goal is creating more jobs in West Virginia by growing existing businesses & attracting new businesses to the state. Thrasher is the previous president & chief executive officer of The Thrasher Group, Inc., a leading Mid-Atlantic engineering & architectural firm, headquartered in Bridgeport, West Virginia.



# *Moving West Virginia Forward:* **Addressing Challenges & Opportunities in the Workforce**

Matt Harbaugh will provide an overview of challenges/opportunities articulated in the McKinsey findings, specifically focusing on human capital & what skills, values & experiences our state needs — & our public education system can help students develop. Bill Peduto will discuss similar challenges faced & solutions reached in Pittsburgh as they relate to West Virginia.

*8:30 am – 9:45 am, Salon D*

## **Matt Harbaugh**



Since joining West Virginia University in August 2013, Matt Harbaugh has worked to transform the University's culture & capabilities to foster innovation, build stronger corporate partnerships, & increase the University's economic impact within the State & region. At WVU, Matt also serves as the Executive Director of the WVU Innovation Corporation, an independent non-profit applied research corporation that partners with government & industry to develop, test & commercialize new technologies. Matt is currently working to launch Mountain State Capital, a \$25 Million venture capital fund focused on the greater Appalachian region, & serves on the boards of the West Virginia Jobs Investment Trust & TechConnect West Virginia. Matt received his undergraduate degree from Duke University, & earned his J.D. & MBA degrees from the George Washington University.

## **Mayor Bill Peduto**



William Peduto was elected to the office of Mayor of the City of Pittsburgh on November 5, 2013, & took office as Pittsburgh's 60th Mayor in January 2014. Previously, he worked for 19 years on Pittsburgh City Council. As a Councilman, Peduto wrote the most comprehensive package of government reform legislation in Pittsburgh's history. He strengthened the Ethics Code, created the city's first Campaign Finance Limits, established Lobbyist Disclosure & Lobbyist Registration & ended No-Bid Contracts. As Mayor, Peduto continues to champion the protection & enhancement of Pittsburgh's new reputation - maintaining fiscal responsibility, establishing community based development plans, embracing innovative solutions & becoming a leader in green initiatives.

# *Moving West Virginia Forward:* **Building Tomorrow's Workforce**

Panelists will share specific examples of methods being utilized to respond to changing workforce demands, training employees for the jobs of tomorrow, & connecting students to employers early. Conversation will unpack key terminology to shed light on new practices such as new collar jobs, hereshoring, & fintech.

*10:00 am – 11:00 am, Salon D*

## **Dr. Johnny Moore, Moderator**



Dr. Johnny M. Moore currently serves as the third President of Pierpont Community & Technical College in Fairmont, West Virginia. Prior to his appointment at Pierpont, he served as the Executive Vice President at Tyler Junior College (Texas), Vice President of Student Affairs at Indian River State College (Florida) & the CEO & President at Philander Smith College in Little Rock, Arkansas. Dr. Moore received his Ph.D. in Mathematics from the Florida Institute of Technology. As president of Pierpont Community & Technical College, Dr. Moore is laser focused on the institution's mission to provide opportunities for learning, training, & further education that enrich the lives of individuals & promote the economic growth of the college's 13 county service region & state.



## Lee Farabaugh



Lee Farabaugh is a senior technology design, operations & innovation expert with over a decade of experience in financial technology (fintech) & health care IT. In 2016, she co-founded Core10, an innovative software development company with locations in Huntington, W.Va., & Nashville, Tenn., pioneering the Hereshore movement. As Core10's COO, she is dedicated to building tomorrow's financial infrastructure while restoring local communities in the United States. Prior to Core10, Lee founded the Nashville health care software development firm PointClear Solutions, where she served as chief experience officer, chief innovation officer & executive vice president of professional services. She holds a Masters in Human-Computer Interaction from Georgia Tech.

## Arria Hines



As an entrepreneur, successful businesswoman, advisor, & mentor, Arria Hines is a recognized leader in West Virginia & in all the places where Allegheny Science & Technology operates. Born & raised in Weston, WV, Arria began her entrepreneurial journey over 30 years ago in the basement of her home. In the years that followed, she navigated a success career as a program manager for companies such as SAIC, PRC & Ranger Golf Corporation. Finally, in 2009, she co-founded Allegheny Science & Technology (AST). Over the course of the next eight years, Arria turned AST into one of America's fast-growing privately held companies, employing over 200 people & more than two dozen contracts across multiple federal agencies.

## Lauren Sisneros



Lauren Sisneros joined Education Commission of the States in August 2015 as a policy analyst in the Postsecondary & Workforce Development Institute. Prior, she worked for the Colorado Department of Higher Education's Colorado Challenge Program & was placed at Metropolitan State University of Denver. In this role, she supervised a staff of college counselors & provided wrap-around services to scholarship students. She also worked for the Colorado General Assembly as a policy analyst & at Adams State College as an academic counselor. She earned a bachelor's degree in Business Management from Colorado State University-Pueblo & completed a master's degree in Education & Human Resource Studies through Colorado State University.

# *Moving West Virginia Forward:* **Preparing Students for a New Tomorrow**

This session will focus on innovative instructional practices in P-12 public education. Special emphasis will be placed on student engagement, creativity in learning, educational technologies, & how schools need to change in order to prepare students for the evolving demands of the 21st century workplace.

*11:15 am – 12:15 pm, Salon D*

## **Dr. Jim Denova, Moderator**



Jim Denova is Vice President of the Claude Worthington Benedum Foundation, & has primary responsibility for the Foundation's Education agenda in West Virginia & Southwestern Pennsylvania, & economic development projects in Southwestern Pennsylvania. He holds a Ph. D. from the University of Pittsburgh with a concentration in social research, & has over 40 years of experience in nonprofit administration & philanthropy. Jim has served on several nonprofit boards, & he lectures at the University of Pittsburgh's Graduate School of Public & International Affairs. Publications include working papers & journal articles on education, workforce development, & nonprofit management. Jim has received awards from the Children's Defense Fund, Marshall University, Philanthropy West Virginia, & the National Association of Educational Service Agencies.

## Susan Patrick



Susan Patrick is the President & CEO of iNACOL, & co-founder of CompetencyWorks, providing policy advocacy, publishing research, developing quality standards, & driving the transformation to personalized, competency-based education forward. She is the former Director of the Office of Educational Technology at the U.S. Department of Education. She served as legislative liaison for Governor Hull from Arizona. She also served as legislative staff on Capitol Hill. Patrick holds a master's degree from the University of Southern California & a bachelor's degree from Colorado College. She is a Pahara-Aspen Fellow & was awarded an Eisenhower Fellowship in 2016.

## Anne Sekula



Anne Sekula is the director of the Remake Learning Council & founder of Sekula Consulting, a firm focused on the nonprofit & philanthropic sector & specializing in issues research & project management. She served as Vice President of Programs at The Erie Community Foundation, overseeing grants & special initiatives in the areas of education, workforce development, & healthcare, and was also a Manager at the former consulting firm of Dewey & Kaye, where she specialized in issues research, organizational assessment, program evaluation, strategic restructuring, & planning projects in the areas of education, technology, youth development, workforce development, & community development. Sekula completed her Master's degree at Harvard University's Graduate School of Education with a focus on risk & prevention within the Human Development & Psychology Department.

## Dr. Rebecca Wolfe



Rebecca E. Wolfe, Associate Vice President, oversees Students at the Center, a Jobs for the Future initiative. Students at the Center is a leading national voice in the effort to support practitioners & policymakers with the research, tools, & inspiration they need to set ambitious goals for student readiness outcomes & catalyze & support sustained efforts toward transformative teaching & learning. Together with our partners we aim to ensure all students can acquire skills, knowledge, & dispositions needed for success in college, the workforce, & civic life. Dr. Wolfe has authored or co-authored numerous publications on student-centered learning. Dr. Wolfe holds a B.A. in sociology with a focus in urban education from Harvard University, & a Ph.D. in education policy & administration from Stanford University.

## *Moving West Virginia Forward:* **Perspectives from our Schools**

Following greetings & insights, Kanawha County Superintendent Ron Duerring will share some extraordinary ways that Kanawha County has solved their most challenging problems.

Legislators will then have the opportunity to engage directly with Kanawha County educators in small groups & focus on how policy translates into practice in the classroom. Educators will share the current challenges & successes affecting their classrooms & schools.

*12:15 pm – 1:45 pm, Salon D*

## **Dr. Ron Duerring**



Ron Duerring became Superintendent of Kanawha County Schools on Sept. 21, 1998. He came to Kanawha County Schools in 1975 as a teacher at Spring Hill Elementary & has since served as a consultant, principal, & assistant superintendent. When Dr. Duerring served as Principal at Grandview Elementary, Grandview was selected by the WV State Department of Education as a Blue Ribbon School. While serving as principal, he was selected by the Kanawha County PTA Council as Principal of the Year in 1996 & Superintendent of the Year in 2000 by the West Virginia Music Educator Association. He recently was awarded membership into the International Who's Who of Professionals.



## Fred Albert



Frederick Albert is a Kanawha County educator with 28 years of experience. He currently teaches sixth grade math at DuPont Middle School. Albert has served as president of American Federation of Teachers-Kanawha since 2004, & as treasurer of American Federation of Teachers-West Virginia. In 2016, Albert was named Teacher of the Year for Kanawha County Schools & was a finalist for West Virginia Teacher of the Year in 2016-2017. He served on the West Virginia Commission for Professional Teaching Standards & has been nationally trained as a facilitator for the AFT Professional Development Program, Thinking Mathematics. Albert received his Bachelor of Science Degree in Education from West Virginia State University, & has done graduate work at Marshall University & West Virginia University.

## Susie Garrison



Susie Garrison has been an educator in Kanawha County for 17 years, working with students from preschool through graduate level. She currently is the Curriculum Leader for the English department at Capital High School, as well as the head girls' soccer coach & assistant girls' basketball coach. She was recently selected as the Kanawha County Teacher of the Year by both the county & the Kanawha County Secondary Principals' Association. Her passion for empowering youth to question, learn, & grow drives her to constantly seek new opportunities to serve them, well beyond the boundaries of the classroom, field, & court.

## Kelly Haynes



Kelly Haynes began her career teaching at Hayes Junior High School in Kanawha County. She continued as a fifth grade teacher at Midway Elementary, a 3/4 split teacher at Mary Ingles, a 2nd grade teacher at Sissonville Elementary, & ended her teaching career at Hayes Middle School teaching reading. While at Hayes, she completed her Master's degree in Educational Leadership & then began her career as a Middle School Assistant Principal at Horace Mann Middle. She was fortunate to move in to a principal's role at Watts Elementary, then on to her current position as principal at Lakewood Elementary. Haynes also serves as the president of the Kanawha County Elementary Principal's Association.

## Jason Henley

Bio/picture not provided.

## Christina Holston



Christina Holston is the Certified Medical Assisting Instructor at Ben Franklin Career Center in Dunbar, West Virginia. She serves as Executive Director of West Virginia HOSA. She was elected WV HOSA Secondary Advisor of the year for 2017 & was a speaker at the 2017 Southern Regional Educational Conference in Nashville, Tennessee. Before becoming a Career Tech Educator, Holston was the Patient Care Coordinator for Dr. Bernard J. Luby for seven years. She completed the Medical Assisting program at Ben Franklin Career Center & is certified as a medical assistant & electronic health records specialist. Holston is currently attending WVU Tech to obtain her bachelor's degree & then will pursue a master's degree in leadership.

## Ron Reedy



Ron Reedy is a native West Virginian who graduated from West Virginia University with both bachelor's & master's degrees, holds a certification in school administration from Salem International University, & has completed the conservatory program in filmmaking from the American Film Institute. He served in the United States Air Force as a fighter pilot before starting a Hollywood career in Film & Television Writing & Directing, then returned to West Virginia in 2000 & began teaching theatre at Riverside High School. He is a distinguished scholar from the West Virginia Principal's Leadership Academy, the 2012 West Virginia Assistant Principal of the Year & the 2016 West Virginia Principal of the Year. He currently serves as Principal at Sissonville High School.

# *Moving West Virginia Forward:* **Assessing Health Impacts on Public Education**

Public school educators, counselors & administrators face challenges that start outside the classroom & impact students, families, communities, & our state. This panel will discuss some of those challenges in the area of public health, focusing on how mental health concerns can affect our students' success at all levels of P-12—& how we can address those concerns.

*11:15 am – 12:15 pm, Salon D*

## **Robert Mahaffey, Moderator**



Since 2014, Robert Mahaffey has been Executive Director for the Rural School & Community Trust, the premier national advocacy organization dedicated to helping rural schools & communities grow better together. He had served since 2008 as Director of Communications. Previously, Mahaffey was Vice President, Communications, New American Schools, & the Publisher & Communications Director, National Association of Secondary School Principals. In 2011, he was elected President, Organizations Concerned about Rural Education (OCRE), a national coalition of education, agriculture, community development, technology & utility organizations serving all rural children & communities. As a West Virginia resident, he is a certified substitute teacher & serves on the West Virginia Public Education Collaborative. Rob earned a BS degree in Political Science & English, Brigham Young University & MS degree in Management, University of Maryland.



## Janet Allio



Janet Allio, RN has been a school nurse with Kanawha County Schools for 22 years. She is currently the nurse & coordinator of health services for Mary C Snow West Side Elementary in Charleston, West Virginia. Ms. Allio was West Virginia's School Nurse of the Year in 2014 & a winner of the HighMark Excellence in School Nursing Award in 2015. She worked with the Charleston Police Department to create the first Handle With Care Program at Mary C. Snow West Side Elementary & is now on the Handle With Care Board, expanding the program throughout the state & nation. Allio is an appointed member of the Children's Health Insurance Program (CHIP) Board & works with other community resources on a regular basis.

## John Kennedy



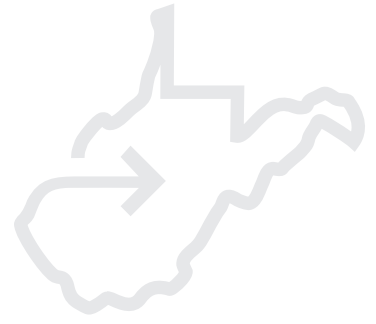
Kennedy's role as West Virginia Primary Care Association School-Based Health Coordinator is to provide training & technical support to school-based health centers in WV while increasing the awareness of the health centers. Prior to this position, Kennedy was the Community School Coordinator for RESA 1 & worked closely with the WV Department of Education to promote Community Schools. He has spent 24 years in private & public sectors delivering mental health treatment to school age students & their families. He has worked extensively, coordinating community & school partnerships by promoting health, safety, well-being & academic success of students in public schools.

## Christina Mullins

Christina Mullins is the Title V Director for West Virginia. She is also the Director of the Office of Maternal, Child & Family Health at the West Virginia Department of Health & Human Resources. In this role, she is responsible for the management & oversight of 26 programs & projects that help to improve the health & well-being of West Virginia's women, children & families. In her nearly 20-year tenure with the Bureau for Public Health, she has worked to establish West Virginia's youth anti-tobacco campaign, facilitated the achievement of all data benchmarks for the Breast & Cervical Cancer Screening Program & worked with a multitude of partners to launch a surveillance system for neonatal abstinence syndrome. Christina was born in Lincoln County, West Virginia & graduated from Marshall University with a Master's Degree in Clinical Psychology.



# WEST VIRGINIA FORWARD



## WHAT IS WEST VIRGINIA FORWARD?

West Virginia Forward is a collaboration among West Virginia University, the West Virginia Department of Commerce and Marshall University to identify short-term, larger-scale projects that will boost West Virginia's economic development efforts. The collaboration was supported by analysis from McKinsey & Company, which was focused on how West Virginia's assets may be aligned with trending business sectors to provide potential avenues for job growth and economic stability.

## WHY IS WEST VIRGINIA FORWARD IMPORTANT?

The state is in a transition economy. Our communities are struggling while jobs have disappeared. Our talent has been forced to leave the state they love to pursue opportunity. We need to embrace all the opportunities West Virginia has to offer and believe that we can create a new path forward. It is not about rising from the bottom of a poll or stat. It's about moving West Virginia Forward.

## WHY WAS MCKINSEY & COMPANY CHOSEN TO DO THE ANALYSIS?

McKinsey & Company is a global management consulting firm that serves leading businesses, governments, non-governmental organizations, and not-for-profits. We worked with McKinsey due to their expertise and success in providing the critical information organizations need to create change.

## WHO ARE THE OTHER PARTNERS INVOLVED IN THIS PROJECT?

For the past several months, there have been working groups with staff from West Virginia University, the Department of Commerce, Marshall University and McKinsey. In addition, we have met with lawmakers, economic development experts, community leaders, educators, business owners, the Chamber of Commerce, the National Guard, Vision Shared, Imagine, the Business Roundtable, Tech Connect, Discover the Real West Virginia Foundation and others to begin the process of soliciting feedback from stakeholders across the State.

## WHAT AREAS OF GROWTH ARE BEING CONSIDERED?

While all possibilities are being considered, a few key opportunities include workforce, business climate, entrepreneurship and infrastructure. In the past, the State and other organizations have addressed specific

areas of concern. However, this collaborative partnership aims to look at West Virginia's assets from a global perspective and pair them with economic trends we can leverage for future growth.

## HOW WILL THIS BE DIFFERENT THAN OTHER REPORTS THE STATE HAS DONE?

The report will be specific for West Virginia and our current economic landscape, and it will address implementation. It will be aspirational but realistic, and there are no other reports like it in the region. The state has phenomenal assets, such as energy, healthcare and its people. But we need to take stock of our economic assets, understand what business sectors are most likely to grow in the coming years and then determine if we have the right attributes to attract them here.

## WHAT ARE THE NEXT STEPS?

Next steps include asking each partner to undertake projects to implement these recommendations. West Virginia University, the Commerce Department and Marshall University are entering into a Memorandum of Understanding that formalizes the partnership through commitments from each, outlining specific actions and dedicating resources. The partners have been in preliminary discussions and implementation meetings will start in September. Then work will begin to address the recommendations in cooperation with subject matter experts around the state and region. The completed report will be done around mid-September. We will share information when the final report is available.

## HOW MUCH IS THIS COSTING TAXPAYERS?

Nothing. The research and report was paid through the support of private donors and foundations.

## HOW CAN I GET INVOLVED?

It is vital that every West Virginian get involved. And there are many opportunities at the community, state and regional levels. If you would like to volunteer or have an idea, you can email [vvforward@mail.wvu.edu](mailto:vvforward@mail.wvu.edu). And stay current with projects and progress at [vvforward.wvu.edu](http://vvforward.wvu.edu).



# Inflection Point: Supply, Demand and the Future of Work in the Pittsburgh Region

A forward look at the coming transformation of work across the Pittsburgh region and its implications for employers, educators and workforce talent

## EXECUTIVE SUMMARY

### THE PITTSBURGH REGION IS APPROACHING AN INFLECTION POINT.

Competition for jobs and talent in the global economy is putting greater pressure on communities. Increasingly, the success of regional economies is **defined by their people and the quality and alignment** of their workforce. The Pittsburgh region has made internationally recognized gains over the past 30 years, but it must transform itself once again to meet this competitive challenge. Decisions made, or left unmade, by community and business leaders over **the next three to five years will lead in one of two** directions: slow change or inaction that will erode competitiveness, or focused attention, investment and leadership that will cement Pittsburgh's role **as an innovation hub that attracts top talent and serves as an axis for ideas and solutions with global resonance.**

The nation as a whole is challenged by the unprecedented numbers of Baby Boomer retirements; Pittsburgh's challenge is that its demographics put it first in line, and it lacks a deep pipeline of younger talent. Over the next ten years, 1.2 million workers will need to be hired or upskilled here, while more than a quarter of a million enter retirement.<sup>1</sup> In the Pittsburgh region 22% of workers are over age 55, compared to 19% nationally,<sup>2</sup> with no comparably sized group of younger workers behind them. This is particularly pronounced in the 'Gen X' category of people in their 40s, which has led to a

hollowing out of middle management that would presumably be ready to step into top management.

This demographic issue poses a substantial risk to Pittsburgh's workforce ecosystem and economy, but it is compounded by the reality that the region has not been able to attract enough people to replace those leaving, and has a death rate that exceeds the birth rate.

Exacerbating this dynamic is the fact that occupational skill demands in the workforce are changing rapidly and are dramatically different from those of the past. This has important implications at both ends of the pipeline: there is a need to develop new strategies to manage knowledge transfer and retain skilled workers, and concomitantly, a need to ensure those new to employment are adequately prepared.

The Pittsburgh region reflects a disparity of economic opportunity. There is a concentration of high-wage, high-skill occupations with relatively low unemployment such as Information Technology (IT) and Engineering. However, there are also 32,000 long-term unemployed residents, most commonly in occupations such as Production or Administrative Support with slower than average growth prospects. While the region must continue to expand innovation and growth of high-skill roles, it needs to redouble its efforts to address the skill and workforce needs of residents who are not currently on pathways to high-wage jobs.

Education and training providers at every level must be able to adjust, and workers will need to be able to rapidly adapt to the changing realities of workforce demand. Employers must work to establish and clearly communicate new expectations and roles. Too often, however, an information gap about emerging high-demand jobs and skills exists between employers and training providers. Without an in-depth understanding and consistent monitoring of the changing nature of the labor market, private and public sector stakeholders will be at a disadvantage when attempting to formulate the right plan to position the Pittsburgh region's labor shed for sustainable long-term employment and successful employment outcomes.

In response to these changing conditions, the Allegheny Conference on Community Development commissioned Burning Glass Technologies and the Council for Adult and Experiential Learning (CAEL) to conduct a labor market supply and demand analysis to examine the issues and opportunities facing the region.<sup>3</sup> This report offers a comprehensive analysis of the job market demand over the next decade, 2015-2025. It also serves as a call to action to the region's employers and educators, whose collective

community leadership will be required to ensure that the region has a workforce trained for the jobs and skills of the future.

## QUESTIONS ADDRESSED IN THE REPORT

This study utilizes a range of data sources and analytic approaches including: traditional economic data for long-term trend analysis, job postings analysis to measure the skills and credentials in demand, and in- depth focus groups to provide robust contextualization to the quantitative indicators. This report focuses on occupations, or the jobs that people are doing, rather than industry sectors, meaning the employers. The following questions are addressed:

### **What are the jobs and skills in demand in the Pittsburgh region now and over the next decade?**

- What occupations will be in demand across the economy and what are the associated skill sets?
- What occupations will grow fastest and need additional supply?
- Where are employers' skill needs changing and how will training programs need to adjust?
- What are the areas where Pittsburgh's talent base has unique capabilities worthy of promotion?

### **What are the strengths and risks in the Pittsburgh region's future talent pipeline?**

- Where are employers able to attract the talent they need and where are they struggling?
- Where are there robust pipelines that offer opportunity to attract new employers to the Pittsburgh region?
- Where are the risks in the pipeline due to insufficient supply, misaligned programs, or high outward migration?

### **What can the community of employers and training providers do to capitalize on positive findings and address the challenges identified in this report?**

## UNIQUE ASSETS WHICH THE PITTSBURGH REGION CAN LEVERAGE

**Diverse industry mix:** The diversity of Pittsburgh's industrial sectors and its incumbent workforce represent a unique blend of strengths. A base of IT, engineering and healthcare talent and related university research allows Pittsburgh to serve as an

innovation hub driving the future of science and technology. The historically strong production and construction labor force that most recently allowed the region to capitalize on shale gas production similarly provides a talent base that allows for the absorption of future fluctuations in energy and manufacturing workforce needs.

**World-class higher education institutions:** The 61 local universities, community colleges, and training providers comprise a strong base of talent development, and cutting-edge research institutions provide the ability to both recruit talent and lead on innovative changes in the coming decade. This base also represents an unparalleled economic opportunity to reshape Pittsburgh's economy.

The talent associated with the universities serves as an important source of economic development and a major attraction for IT, Engineering and other advanced technology firms.

**Engaged CEO network:** The Allegheny Conference on Community Development represents a strong network of engaged CEOs who are personally invested in the community and are seeking to actively address the training and workforce challenges of the coming decade.

**Culture of Collaboration:** There is strong momentum for action on both the workforce supply and demand sides due to a longstanding culture of public-private partnership in the region. The various stakeholders have worked together for generations to overcome challenges and capture opportunities for the region. They are well-prepared to do so again.

## CROSS-CUTTING TRENDS IN THE MARKET

Four themes emerged consistently throughout the analysis of dozens of data sources and over 25 hours of focus groups and interviews with 130 CEOs and HR Directors from 85 companies in the region, across all sectors, as well as K-12 and post-secondary education

leaders. These four themes influence every occupational group and industry sector and are examined in more granular detail later in this report. The four key themes are:

**Aligning supply and demand:** Changing skill sets across virtually all occupations means that a much tighter education and industry connection must be created to align supply and demand. In addition to new focus on the K-12 and post-secondary pipeline, continual training and upskilling of people already in the workforce will be required.

Technological innovations are changing daily routines for workers in almost every occupation, and will continue to do so. A culture of continuous learning must become the norm, and employers and the workforce system must develop effective and ubiquitous tools to support upskilling.

**A changing 21st century workforce:** Technology is also increasing demand for some roles, while rendering others obsolete. Companies across many sectors now identify themselves as technology companies. Ensuring a future workforce with digital fluency must begin with the K-12 system. Further, many industries are being rapidly reshaped by technology and forces in the marketplace resulting in new business models; incumbent workers must adapt to these changes and those seeking opportunity must understand how to become adequately skilled for emerging roles.



# Assessing Health Impacts on Public Education

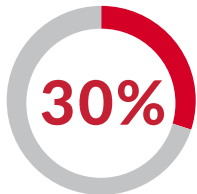
## Challenges in the Mountain State

There is no shortage of research on the connections between health and education. The relationship is reciprocal: poor health in children often begets poor student achievement, and poor educational outcomes often lead to poorer health outcomes in adulthood.<sup>20</sup>

It is difficult to imagine a way for states to fully close the academic achievement gap without also addressing the health disparities that affect many of our most poorly-served students. And brain research demonstrates that what happens in the earliest days and years of a child’s life sets her life trajectory for learning and health. State leaders must consider the connections between health policy and education policy, particularly in areas such as early childhood, in order to address the disparities that have long plagued both systems.

### Current Status of Infant and Toddler Well-Being <sup>21</sup>

INDICATOR	WEST VIRGINIA	NATION
Unintended Pregnancy (% of all pregnancies)	52%	45%
Prenatal Care Before 3rd Trimester (% of live births)	92%	87%
Teen Mothers (% of live births)	4%	7%
Home Health Visit (% of children ages 0-3)	14%	14%
Well-Baby Check (% of babies)	92%	91%
Developmental Screening (% of children ages 10 months to 5 years)	38%	31%



Children in Poverty,  
Age 0–5 (2015)



Children Living in Households  
that were Food Insecure  
(2014)

In 2015, West Virginia had the highest rate of death due to drug overdose:

**41.5 for every 100,000<sup>22</sup>**  
A **16.9% increase** from the previous year

Approximately 80% of children removed from homes are due to substance abuse<sup>23</sup>

**In 2006**  
**970** children removed because of substance abuse

**In 2016**  
**2,171** children removed because of substance abuse

## Endnotes

<sup>1</sup>West Virginia Forward (2017). Available at: <https://wvforward.wvu.edu/>

<sup>2</sup> [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_203.20.asp](https://nces.ed.gov/programs/digest/d15/tables/dt15_203.20.asp)

<sup>3</sup> [https://nces.ed.gov/pubs2016/2016076/tables/table\\_02.asp#r2](https://nces.ed.gov/pubs2016/2016076/tables/table_02.asp#r2)

<sup>4</sup> [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_304.60.asp](https://nces.ed.gov/programs/digest/d15/tables/dt15_304.60.asp)

<sup>5</sup> <https://www.census.gov/content/dam/Census/library/publications/2017/econ/g15-aspef.pdf>

<sup>6</sup> [https://nces.ed.gov/programs/digest/d16/tables/dt16\\_208.40.asp](https://nces.ed.gov/programs/digest/d16/tables/dt16_208.40.asp)

<sup>7</sup> <http://nces.ed.gov/nationsreportcard/districts/>

<sup>8</sup> [https://nces.ed.gov/programs/digest/d16/tables/dt16\\_219.46.asp](https://nces.ed.gov/programs/digest/d16/tables/dt16_219.46.asp)

<sup>9</sup> [http://collegecompletion.chronicle.com/state/#state=hi&sector=public\\_four](http://collegecompletion.chronicle.com/state/#state=hi&sector=public_four)

<sup>10</sup> Georgetown University Center on Education and the Workforce (2017). Good Jobs that Pay without a BA. Available at: <https://goodjobsdata.org/>

<sup>11</sup> Georgetown University Center on Education and the Workforce (2013). Recovery: Job Growth and education Requirements through 2020. Available at: <https://cew.georgetown.edu/cew-reports/recovery-job-growth-and-education-requirements-through-2020/>

<sup>12</sup> <https://cew.georgetown.edu/cew-reports/recovery-job-growth-and-education-requirements-through-2020/>

<sup>13</sup> <https://www.census.gov/topics/education/educational-attainment.html>

<sup>14</sup> <https://nscresearchcenter.org/snapshotreport28-first-year-persistence-and-retention/>

<sup>15</sup> <https://nscresearchcenter.org/signaturereport12/>

<sup>16</sup> Percent of Public University Cost Students Pay, 2008 & 2015. Available at: <http://www.sheeo.org/projects/shef-fy15>  
[http://www.sheeo.org/sites/default/files/State\\_by\\_State\\_Change\\_Charts\\_FY15.xlsx](http://www.sheeo.org/sites/default/files/State_by_State_Change_Charts_FY15.xlsx)

<sup>17</sup> <http://www.ncpublicschools.org/accountability/reporting/>

<sup>18</sup> <http://nces.ed.gov/nationsreportcard/districts/>

<sup>19</sup> [http://www.act.org/content/dam/act/unsecured/documents/cccr2017/ACT\\_2017-Average\\_Scores\\_by\\_State.pdf](http://www.act.org/content/dam/act/unsecured/documents/cccr2017/ACT_2017-Average_Scores_by_State.pdf)

<sup>20</sup> Egerter, S. et al. (2011). Education & Health. Robert Wood Johnson Foundation.

Basch, C. (2010). Healthier Students are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap. Campaign for Educational Equity, Teachers College Columbia University.

<sup>21</sup> <https://www.america'shealthrankings.org/learn/reports/2016-health-of-women-and-children-report>

<sup>22</sup> <https://www.cdc.gov/drugoverdose/data/statedeaths.html>

<sup>23</sup> [http://www.register-herald.com/news/dhhr-secretary-says-w-va-experiencing-child-welfare-crisis/article\\_51ac3c78-875f-11e7-b9ec-db8aad810237.html](http://www.register-herald.com/news/dhhr-secretary-says-w-va-experiencing-child-welfare-crisis/article_51ac3c78-875f-11e7-b9ec-db8aad810237.html)



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# PATHWAYS TO PROSPERITY

## A Struggling Education and Workforce System

The United States faces systemic challenges that lead to uncertain futures for too many young people. Youth who lack the skills and credentials necessary for meaningful careers with family-supporting wages encounter one dead end after another. Meanwhile, employers are struggling to hire enough skilled workers to meet current and projected demands. We must respond to these challenges and foster communities that create economic opportunity and mobility for all.



## Why Pathways to Prosperity?

Pathways to Prosperity, an initiative of Jobs for the Future (JFF) and the Harvard Graduate School of Education (HGSE), is reimagining how we prepare all young people for college and career success. Our evidence-based framework launched a national pathways movement that continues to grow.

We build the capacity of cross-sector stakeholders, including policymakers and state and regional leaders in secondary and postsecondary education, industry, and economic and workforce development, to create high-quality college and career pathways. These pathways ensure all young people attain postsecondary credentials with value in the labor market and launch rewarding careers.

Pathways to Prosperity builds on JFF's deep expertise in developing innovative solutions and public policies that boost college and career readiness and success and build a more highly skilled, competitive workforce. With 35 years of experience, JFF is a recognized national leader in bridging education and work to increase economic mobility and strengthen our economy.



## Pathways to Prosperity Core Strategies



**Secondary and Postsecondary Alignment and Integration:** College and career pathways span high school and college, intentionally aligning and integrating rigorous academic, career-focused curricula and work-based learning with local labor market demands. Dual enrollment policies enable high school students to earn college credit in non-remedial English and math and technical courses in a program of study that they can continue to pursue at the postsecondary level.



**Career Information and Advising:** Starting in middle school, students learn about postsecondary and career options through real-world, developmentally appropriate activities.



**Education-Industry Partnerships:** Business and industry leaders collaborate with educators to design curricula and offer a continuum of work-based learning opportunities such as job shadows and internships that expose students to the world of work.



**Intermediary Development and Capacity Building:** Local or regional organizations provide staffing, infrastructure, and capacity to support pathways work.



**Effective Leadership and Enabling Policies:** States enact legislation and policies that advance college and career pathways, provide sustainable funding to districts and community colleges, and offer financial incentives to support work-based learning opportunities.

## How We Can Help

With our national expertise in effective and innovative college and career pathways, Pathways to Prosperity can help you with the systems change management required to transform outcomes for students, employers, and economies. We provide strategic guidance and technical assistance to diverse organizations and agencies such as state agencies, school districts, community colleges, employer associations, philanthropy, business and industry, and intermediary nonprofits.

Our team would be happy to explore how we might support your systems-level work—from development and design, to implementation and improvement, to expansion and scaling. We customize our professional services to meet our partners' priorities and needs. Examples of our services include:

- > Partnership development and capacity building
- > Strategic guidance on the development of labor market-aligned secondary-postsecondary programs of study
- > Work-based learning design and implementation
- > Identification of policies and structures to advance pathways systems

For more information, visit [www.PtoPNetwork.org](http://www.PtoPNetwork.org) or contact [PtoPNetwork@jff.org](mailto:PtoPNetwork@jff.org).

# STUDENTS AT THE CENTER INITIATIVE OVERVIEW

ENGAGING ALL STUDENTS FOR COLLEGE, CAREER, AND CIVIC SUCCESS



**Students at the Center**, a Jobs for the Future initiative, is a leading national voice for the knowledge, skills, and dispositions all youth need to succeed in college, career, and civic readiness. Our work synthesizes—and adapts for practice—current research on key components of student-centered approaches to learning that lead to deeper learning outcomes. Our goal is to strengthen the ability of practitioners and policymakers to engage each student—and especially low-income and marginalized youth—in acquiring the skills, knowledge, and expertise they need to succeed in today's and tomorrow's economy and be lifelong learners.

Edited volumes of two of the major Students at the Center research papers series, *Anytime, Anywhere: Student-Centered Learning for Schools and Teachers* (2013) and *Rethinking Readiness: Deeper Learning for College, Work, and Life* (2017), are available from Harvard Education Press. Additional papers, a wealth of teaching tools, materials, newsletters, blogs, and other resources are freely available at [www.studentsatthecenterhub.org](http://www.studentsatthecenterhub.org)

## RATIONALE & BACKGROUND

In an increasingly interconnected and fast-changing world, our educational system must provide all young people with the sorts of high-level learning opportunities that used to be reserved for a privileged few.

That premise has fueled more than three decades of efforts to improve the performance of our nation's schools. However, for all of the ways in which reformers have shaken up the world of K-12 education in recent years, the heart of the enterprise—teaching and learning—has changed very little in most schools and for most children. And as a result, the leading approaches to educational reform have largely failed to boost educational achievement across the U.S., or to close the resource gaps that divide our communities.

Students at the Center provides educators with tools, information, and support that can help them not just to set ambitious goals for student learning but, even more important, to make real improvements to teaching practices and the school and district policies that affect them, so that all students—with a special focus on underserved youth—have concrete opportunities to acquire the skills, knowledge, and dispositions needed for success in college, in the workforce, and in civic life.

Jobs for the Future launched Students at the Center by commissioning teams of distinguished scholars to synthesize existing research on student motivation and engagement, cognitive development, school improvement, and efforts to take effective teaching practices to scale.

Students at the Center has since commissioned its second set of white papers, analyzing research and describing policy strategies that promise to support deeper learning in the nation's schools.

And in fall 2016, Students at the Center announced the Student-Centered Learning Research Collaborative. The Collaborative will catalyze researchers, practitioners, and policymakers to develop and share evidence on student-centered learning which will impact meaningful change at scale.

JFF widely disseminates the work of the Students at the Center initiative by way of conferences, social and mainstream media, publications, professional development, and outreach to educational associations. Along with our school, policy, and industry partners, JFF also develops online tools, policy briefs, professional development, and other resources to help implement student-centered approaches. Over the next three years, Students at the Center will increasingly use its framework, resources, and expertise to directly support states, districts, and community colleges implementing student-centered approaches that increase deeper learning outcomes for low-income and marginalized populations.

## THE STUDENTS AT THE CENTER FRAMEWORK

The Students at the Center framework defines a core set of researched-backed principles that are known to drive powerful teaching and learning, and are designed to ensure that all students develop the sorts of high-level knowledge, skills, and dispositions they need to succeed in college, careers, and civic life.

These four key principles of student-centered learning—drawn from the mind/brain sciences, learning theory, and research on youth development—are overlapping and complementary.

In combination, and when guided by a coherent and rigorous set of educational goals, they provide a strong foundation for the pursuit of deeper learning:

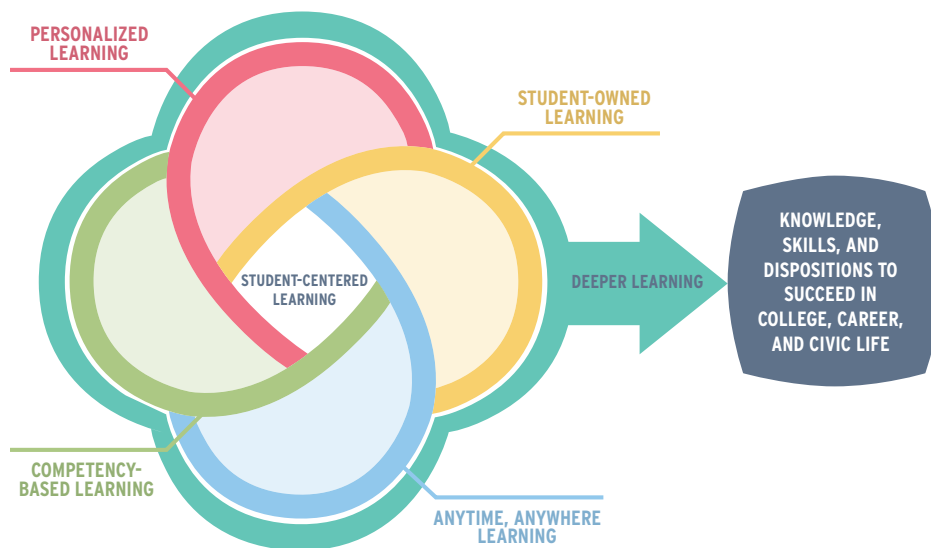
- 1. Learning Is Personalized:** Together educators, parents, and students customize learning experiences—what, how, when, and where they learn and the supports they need to learn—to students' individual developmental needs, skills, and interests. Although where, how, and when they learn might vary according to their needs, students also develop deep connections to each other, their teachers and other adults, and their community. Many applications of personalized learning emphasize the role of student agency in personalizing learning (see principle #4) and the use of technology to enable the level of differentiation at scale.
- 2. Learning Is Competency-Based:** Students move ahead based not on their age or the number of hours they log in the classroom but, primarily, based on their ability to demonstrate that they have reached key milestones along the path to mastery of core competencies and bodies of knowledge. Further, each student must be provided with the scaffolding and differentiated support needed to keep progressing at a pace appropriate to reaching college, career, and civic outcomes, even when unequal resources are required to achieve a more equitable result.
- 3. Learning Takes Place Anytime, Anywhere:** Time is fully utilized to optimize and extend student learning and to allow for educators to engage in reflection and planning. Students

have equitable opportunities to learn outside of the typical school day and year in a variety of settings, take advantage of the variety of digital technologies that can enhance learning, and can receive credit for this learning based on their demonstration of skills and knowledge.

- 4. Students Have Agency and Ownership Over Their Learning:** Students have frequent opportunities to direct, reflect, and improve on their own learning progression toward college and career readiness standards. Students are supported to take increasing responsibility for their own learning using strategies such as self-regulation, collaboration, self-assessment, help-seeking, self-advocacy, and creativity. Students have regular opportunities to determine topics of inquiry, to express perspectives, to guide how to best support and celebrate each other's progress, to provide input into how their work is assessed, and to experience and design cultural responsiveness in both content and the learning environment.

Deeper learning indicates two major types of outcomes as essential to college and career readiness for all:

- > The mastery of core academic content, including foundational domain knowledge, concepts, and modes of inquiry in the humanities, mathematics, sciences, and arts that form the building blocks for further study and skill specialization.
- > The academic ability and predilection to continue to learn and to apply and transfer knowledge effectively through higher-order skills, such as critical thinking, problem solving, communication, collaboration, and self-directed learning.



For more information, please contact Rebecca E. Wolfe, Associate Vice President, Jobs for the Future, [rwolfe@jff.org](mailto:rwolfe@jff.org), 617.728.4446.

**Jobs for the Future** is a national nonprofit that builds educational and economic opportunity for underserved populations in the United States. JFF develops innovative career and educational programs and public policies that increase college readiness and career success, and build a more highly skilled, competitive workforce. With over 30 years of experience, JFF is the national leader in bridging education and work to increase economic mobility and strengthen our economy.

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# Ready for the Robots? Let's Prepare Every Student for the Future of Work

By Contributing Blogger on May 10, 2017 1:00 PM

*This post is by Rebecca E. Wolfe, an Associate Vice President at Jobs for the Future and a co-editor of Rethinking Readiness: Deeper Learning for College, Work, and Life, published in April by Harvard Education Press.*

Could you be replaced by a robot? If not today, will automation claim your job--or your children's jobs--within several decades? As anxieties escalate about the "Future of Work," few things are certain but this: No one can predict exactly what the jobs of the future will be.



But what about the *skills* of the future? Which abilities are most vital for young people to be able to navigate an ever-changing economy? Turns out that's something more and more people agree on, and it's not memorizing facts and reproducing content knowledge. Rather, as Andreas Schleicher, who oversees the international PISA tests that compare student performance around the world, puts it: "extrapolating from what we know and applying

that knowledge to novel situations."

Exactly. This sentiment resonates profoundly with a growing number of American employers, educators, policymakers, and researchers. Everyone from [Jeb Bush](#) to [Nicholas Pinchuk](#) (and Randi Weingarten!), to [Linda Darling-Hammond](#) have been calling for education to focus much more on critical thinking, creative approaches to problem solving, effective communication, collaboration in diverse contexts, and directing one's own learning in order to truly prepare students to complete college and whatever careers await them.

This is the argument at the heart of a new book from Jobs for the Future (JFF), [\*Rethinking Readiness: Deeper Learning for College, Work, and Life\*](#). The collection of edited research papers, written by some of the nation's most well-respected education scholars, urges schools to replace the narrow learning goals of the past 15 years with renewed efforts to ensure that all students attain the full range of intellectual, personal, and social skills valued in today's economy--and the economies of the future--in this rapidly changing world.

The abilities employers say are most important--often called "employability skills"--mirror the deeper learning competencies explored in *Rethinking Readiness*. The ability to think critically and solve complex problems, work collaboratively, communicate effectively, learn how to learn, and develop a mindset for continuous learning and mastering content are the essence of deeper learning. When paired with rigorous content, these are the skills that can keep students agile in the uncertain future of work. Each chapter in *Rethinking Readiness* unpacks a different angle of with whom, how, and where these skills emerge.

## **How Can We Foster These Skills in All Students?**

The book's authors point us to significant research that supports the goal of teaching these skills to *all* students, including often-marginalized students



such as low-income students, students of color, English language learners, and students with learning disabilities. *Rethinking Readiness* focuses on how educators and policymakers can move forward to provide these educational experiences to vastly greater numbers of students through the lenses of curriculum, instruction, teacher evaluation, student assessment, and more.

For example, the book's authors point to effective strategies for students with disabilities who learn in mainstream classrooms and for English language learners--two populations who will make up a growing share of the workplaces of the future. In their chapter "Deeper Learning for Students with Disabilities," Sharon Vaughn of the University of Texas College of Education and her colleagues show that "among special education's recommended practices are several that would likely prove just as beneficial to the wider student population, such as modifications to pacing, direct and systematic instruction paired with explicit practice, strategies to support motivation and attention, and increased instructional time, among others."

And Patricia Gandara, a research professor and co-director of the Civil Rights Project at UCLA, in the chapter "Deeper Learning for English Language Learners," explains how English language learners, who are usually defined by the skills they lack, in fact have many assets that enhance their ability to attain deeper learning skills. She cites cultures that prize collaboration, multinational perspectives on history, culture, and politics, and valuable traits like resilience as just a few that will serve them well in future careers.

No surprise to regular readers of this blog, we learn that a traditional brick-and-mortar classroom is not the only, nor sometimes even the best place to teach skills for deeper learning. In her chapter, "The Power of Work-Based Learning," JFF senior advisor Nancy Hoffman argues that while deeper learning competencies may be essential to creating quality workers, quality work experiences are essential to developing deeper learning competencies and thus employability skills. Young people in these situations confront difficult, "real-world" problems and typically have a limited amount of time to

solve them. Setting goals, managing time, adapting to unexpected challenges, and reflecting on one's progress are all built in to high quality work-based learning.

There is no question automation and robots already are and will take on more work in the future. But it is also undeniable that the most capable people to thrive in new and changing environments will be those who are complex problem solvers, able collaborators, creative thinkers, and skilled communicators. The more that machines learn to perform new tasks accurately and efficiently--and can replace a greater variety of human workers--the more critical that we construct education systems that ensure all students can access the work settings, experiences, and competencies that will fuel future employment and fully develop what makes us, well, human.

*Illustration by A.J.B. Lane*

## **EXECUTIVE SUMMARY**

### **Ten Principles for a High-Quality System of Assessments**

#### **Provided by Jobs for the Future**

High-quality, comprehensive, and timely information about what students know and can do is critical to ensuring that schools and families can prepare *each and every* student for success in school, college, careers, and life. Multiple forms of assessments are a key source of this information for educators, students, parents, and the public. No single assessment or piece of student work can provide the robust information needed to inform teaching, learning, and supports, as well as public accountability and continuous improvement of education systems through families, policymakers and other stakeholders. A high-quality system of assessments can facilitate this by *providing aligned and coherent information from a variety of assessments about students' college and career readiness – maximizing efficiency while reducing duplication, in a timely and rich enough manner to inform instruction, student self-direction in learning, and accountability.*

A high quality system contains a comprehensive array of assessments – from formative to summative, and possibly interim assessments - grounded in a theory of action that focuses on advancing the full range of knowledge, skills, and behaviors needed for success in college and careers. These assessments are compared, analyzed, and refined to remove duplicative testing. A high quality system of assessments that includes extended-performance tasks in particular, can provide robust, comprehensive data throughout the year ranging from demonstrations of learning through classroom work and projects to more standardized demonstrations of college and career readiness (e.g. district and statewide assessments, standardized performance assessments, etc.). Through these types of high quality systems of assessment, students can develop a range of cognitive and co-cognitive skills as they work intensively on their tasks, revise their work to meet standards, and display their learning to parents, peers, teachers, and employers. Additionally teachers' development, use, and even scoring, of high quality assessments in a balanced system has been shown to improve instruction and student learning.

By providing a coherent spectrum of data, a balanced, high-quality system of assessments can help avoid an over-emphasis on a summative statewide assessment that is not designed to inform everyday classroom instruction or capture the full array of college and career ready knowledge, skills, and behaviors and conversely help avoid a reliance on a variety of local and classroom assessments that may be unaligned to each other and/or to college and career readiness, and may not provide clear, actionable, and disaggregated student results. A high-quality system of assessments is key to realizing the potential of assessments to inform improvements at all levels of our education system that result in each and every student working towards mastery of the full array of college and career ready knowledge, skills, and behaviors.

In order to support states and districts in accelerating their adoption and evolution of high-quality systems of assessments, the undersigned organizations and individuals have developed the following ten principles for advancing such systems. The principles draw collectively on expertise developed over decades of studying and designing assessments and assessment systems and efforts to advance the full array of college and career-ready knowledge, skills, and behaviors for all students. (See

resources in appendix.) They also build on existing principles for high-quality assessments and systems of assessments developed by our organizations over the past several years.

**High quality systems of assessments:**

1. Capture the array of knowledge, skills, and behaviors needed for college and career readiness (i.e. deeper learning).
2. Balance assessment of learning with assessment for and as learning through a comprehensive set of tasks and measures.
3. Advance equity and are inclusive of and accessible to all students.
4. Build educator and school capacity for designing and using assessments.
5. Align assessments to support learning and avoid duplication of testing.
6. Convey clear, coherent, and continuous data on student learning.
7. Include meaningful, ongoing input and collaboration from local communities and diverse stakeholders in the development and continuous improvement of the system.
8. Encourage cycles of review, calibration, and continuous improvement of assessments individually and as a collective system.
9. Employ high standards of coherence, quality, validity, reliability, and fairness.
10. Protect data privacy.

**CURRENT LIST OF ~15 SIGNATORIES include:**

Leading K-12 policy organizations, university-based experts in formative assessment, national organizations engaged with states writing and implementing ESSA plans, organizations that work at national, state, and local levels that focus on assessment for learning

[illegible]

**WV**  
**Primary Care Association**  
 Miles Ahead of the Curve...Minutes Away From Home

# WV Community Health Centers School-Based Health Services

*Affordable. Accessible. Accountable.*

## To the Student

- Provided care to 42,852 students in 2016
- Provide easier access to comprehensive health care
- Promote prevention and early intervention
- Decrease absenteeism, tardiness and early dismissals from school
- Increase likelihood of yearly medical and dental check ups
- Increase in utilization of primary care, behavioral health and dental services
- Promote wellness

## To the Family

- Reduction in parental time off from work to take a child to receive care
- Ensure all children receive medical attention, irrespective of a family's ability to pay
- Link families with applicable social programs, as needed

## To the Community

- Strengthen the connection between community and the school
- Enable students and families to be more informed health care consumers
- Research shows that schools with a SBHC display a significant decrease in absenteeism as well as fewer trips to the emergency room<sup>1</sup>
- 147 locations in 39 counties

<sup>1</sup>Journal of Adolescent Health, 2010



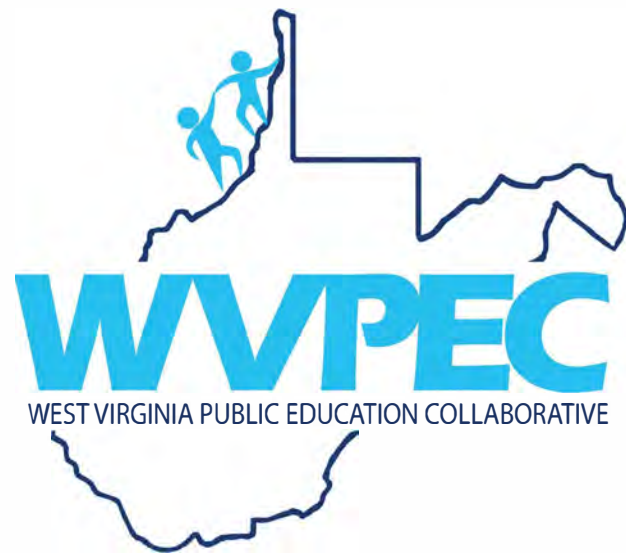
# WV Community Health Centers School-Based Health Services

*Quality Care. For Your Family. In Your Community.*

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## School-Based Health Services

- Well-Child Care
- Immunizations
- Sick Visits/Acute Care
- Behavioral Health Services
- Oral Health Services
- Case Management of Chronic Conditions
- Health Education and Preventive Care
- Referral to medical speciality services and follow-up
- Care Coordination between School-Based Health Center Staff and Primary Care Provider
- Consultation/Coordination with school staff, parent/guardian and teachers, as appropriate
- Triage for Medical Emergencies



# WEST VIRGINIA

LEGISLATORS' FORUM