

ATEA

American Technical Education Association

Journal

Outstanding Technical Students 2017



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Three Rivers Community College, Norwich CT

Region 2: Donnie Walton
Assistant Director, TCAT Newbern, Tennessee

Region 5: Dana Wolff
Southeast Technical Institute, Sioux Falls SD

Region 6: Marie Price
Director for Workforce Training and Community Education, North Idaho

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Shelly Fitterer, Dunwoody College of Technology—*Journal* layout

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The American Technical Education Association (ATEA) was founded in 1928 and incorporated as a non-profit professional education association in 1960. In 1973 the national headquarters was moved from Delmar, New York to Wahpeton, North Dakota. In 2012 ATEA relocated to the Dunwoody College of Technology, Minneapolis, MN. ATEA is the only autonomous and non-affiliated international association devoted solely to the purposes of postsecondary technical education. ATEA is the leading association for the postsecondary technical educator with emphasis on professional development. Educators and individuals from business and industry come together at conferences to discuss the latest trends and developments in technology. The organization is dedicated to excellence in the quality of postsecondary technical education with emphasis on practical teaching ideas and best practices.

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From the Executive Director and Managing Editor



The American Technical Education Association had a strong spring with 700 in attendance at the national conference in Nashville, Tennessee. It was focused on partnerships with the opening reception at the Nissan Training Center in Smyrna, Tennessee which was especially significant; because at the 2013 ATEA conference in Chattanooga, the TCAT, Nissan, and State of Tennessee partnership was introduced. In 2017 we saw the result, both the factory that assembles 645,000 cars a year and the training center for Nissan,

the TCAT's and the public. The 2017 panel on Tennessee Partnerships panel is in the Journal with how they are moving forward on medical devices in Memphis and LG appliances in Clarksville.

The Journal notes how the Tennessee Promise and Tennessee Reconnect are beginning to take effect. Sara Wilson, ATEA's outstanding technical student holds a bachelor of science degree in Chemistry and certificates from the Tennessee College of Applied Technology, Chattanooga, in industrial maintenance and industrial electricity, one of which she earned through Tennessee Reconnect, a program for adult residents to earn a 16 credit technical certification.

2017 is a landmark year for women in technology with Kim McPherson winning the Outstanding Technical Teacher award. Kim is a machine tool instructor at TCAT Dickson/Clarksville where LG is building a large plant. Nicole Zubke, Composite Engineering, Everett WA, received a Notable Performance in a Technical and Scientific Area award and Madeline Holly received Notable Performance in Nuclear Technology Engineering. Award. Madeline is at Three Rivers Community College, Norwich, Connecticut.

ATEA is piloting a new conference model. It is based on member interest of a specific industry, location or technical education experience. This fall Region 3 and Region 6 will hold a "members only" conference in Reno, Nevada, with Truckee Meadows Community College on November 9 and 10. TMCC has experienced a 6000 workforce increase due to Tesla's Gigafactory in Sparks, Nevada. The conference will focus on how TMCC responded and what are the changes in energy and construction in large scale solar powered factories/facilities. The Gigafactory is the largest solar powered factory in the world. Due to the Tesla and Panasonic tour capacity, the conference is limited to 60 participants. Should Region 3 and 6 members not fill them, they will be open to ATEA members on first come first served basis after September 1.

Dr. Ron McCage, retiring ATEA Board member received ATEA's highest award, the Jean Koch Award. The proclamation is in the Journal as is his latest article on technical education funding and support. It is reprinted with the permission of Techniques a publication of ACTE.

ATEA Board President Dr. Bryan Albrecht and new Board members are introduced in this edition. Thank you to Dr. Paul Young, President of ATEA 2015-2017 and to outgoing Board members for their service.

Sandra Gehlen Krebsbach
Executive Director

COVER PHOTO

ATEA Technical Students Awards: Madeline Holly, Notable Performance in a Technical and Scientific Area: Nuclear Technology Engineer, Three Rivers Community College, Norwich Connecticut; Sara Wilson, Outstanding Technical Student 2017 and Notable Performance in Industrial Maintenance, Chattanooga State College—Tennessee College of Applied Technology; Nicole Zubke, Notable Performance in Composite Design and Engineering, Everett Community College, Everett, Washington

atea president



Dr. Albrecht serves as President and Chief Executive for Gateway Technical College. Gateway is located in Southeast Wisconsin and provides academic and workforce

solutions for students and employers throughout the region. Under President Albrecht Gateway has established a national leadership position in the development of innovative learning strategies, model business and industry partnerships.

Bryan takes pride in giving back to his community serving on several local, state and national boards, including the American Technical Education Association, American Association of Community Colleges, National Manufacturing Institute Board, National Center for Occupational Research and Development, the Southeast Council of the Boys Scouts of America and the United Way of Racine County.

His experience has led him to testify before the U.S. Congress on workforce issues and as an invited speaker at the White House representing America's Community Colleges. Dr. Albrecht has been recognized as a Distinguished Educator by the International Technology & Engineering Association and he was the first person in his community to receive the Kenosha United Way Distinguished Leader Award.

Bryan holds Bachelors, Masters and Education Specialist degrees from the University of Wisconsin - Stout and a doctorate degree from the University of Minnesota.

ATEA 2018 National Conference

Dr. Albrecht is the Chair of the 2018 ATEA National Conference

March 21-23, 2018, hosted by Gateway Technical College, Kenosha WI.

Honorary Chair, Dr. Bob Meyer, Chancellor of the University of Wisconsin-Stout.

See page 25 for more information on the Conference.

Outgoing ATEA Board President Paul Young Ph.D.



ATEA thanks Dr. Paul Young for his leadership as President from 2015-2017, prior to that as Vice President from 2012-2017. He will serve as Past President 2017-2019 on the ATEA Executive Committee. During his tenure as president, Dr. Young had all ATEA Journals from 1970 forward digitized for historical records of ATEA, lead strategic planning, two strong national

conference, Alabama 2016 and Nashville, Tennessee in 2017 with 700 attending. Dr. Young is responsible for ATEA's return to the Northeast where it was formed in 1928. Dr. Jon Connolly, President of Sussex County Community College, Newton, New Jersey, joined the Board in 2016 and will host the fall 2017 Board of Trustee meeting.

Dr. Young's leadership combined the vision for the future of ATEA with respect and understanding of its past and its role in building the U S workforce in the Depression, War II and after and its role in sharing best practice and building professional relationships as well as identifying trends that effect technical education. Thank you Dr. Young for your service.

ATEA Fall Board Meeting



Hosted by: Dr. Jon Connolly, Sussex County Community College, Newton, New Jersey, Oct. 18 and 19.

Outgoing Board of Trustees



Ron McCage Ed.D.
Retired Executive Director of Career and Technical Education Consortium of the States
ATEA Board 2006-2017
Jean Koch Award for Outstanding Technical Education Achievement Recipient 2017



Keith McClanahan, Ed.D.
Provost and Executive VP for Learning, Ozarka College, Melrose AR
ATEA Board 2011-2017
Nominated John Deere for Silver Star Award 2015



Amy Erickson, Ph.D.
Dean of Science, Math, Agriculture and Culinary Arts
Sheridan College, NWWD
ATEA board 2011-2017
Award Committee Member 2012-2017



Mark Heinrich, Ph.D.
Former Chancellor of the Alabama Community College System
ATEA Board 2016-2017
Chair of the ATEA National Conference Orange Beach AL 2016



Mike Mires
Former Dean of Professional, Technical and Workforce Training Northern Idaho College
ATEA Board 2007-2017
Chair of Region 6 2012 Conference in Coeur de Alene ID
Chair of ATEA Awards Committee 2012-2016

Past President's Council

ATEA Board instituted a Past Presidents Council which will be part of the ATEA Executive Committee. Past Presidents who are active with ATEA are eligible. The Council is charged with overseeing succession and delivery on the mission. Appointed the Past Presidents Council are:



Rich Wagner, Ph.D.
President of Dunwoody College of Technology
ATEA President 2013-2015
ATEA Past President's Council 2017-2017



James King
Executive Vice Chancellor Tennessee Colleges, TBR
ATEA President 2008-2011
ATEA Past Presidents Council 2017-2019

Executive Board Appointments



1st Vice President ATEA Board of Trustees: Sue G. Smith
Vice President for Applied Technology and Science, Ivy Tech
Co-Chair of the ATEA National Conference 2015
Chair of Plenary Session on Technical Leadership National Conference 2016
Co-Chair for Region 3 on "Scaling the Workforce" Reno and Sparks NV 2017



2nd Vice President ATEA Board of Trustees: Mary Kay Bredeson
Co-Chair for Region 6 on "Scaling the Workforce" Reno and Sparks NV 2017

Reappointment to President of ATEA Regions



Dana Wolf
Instructor Financial Services
Southeast Tech, Sioux Falls SD
Region 5 President
ATEA President of Regions 2015, 2016, 2017
Appointment 2017-2017
Co-Chair Region 5 conference 2015—hosted by Southeast Tech

Board of Trustees New Appointments



AL BUNSHAFT

Al Bunshaft is the Senior Vice President of Global Affairs, North America, for Dassault Systemes Americas Corporation. From 2010 until 2013 Bunshaft was Managing Director of Dassault Systemes Americas. From 2013 to 2016 he was President and CEO of DS Government Solutions, the US subsidiary he led the creation of, focused on serving the United States Government. Prior to this he had a 25-year career at IBM holding various executive roles in R&D, strategic initiatives, and general management.

In his role as SVP of Global Affairs Mr. Bunshaft is responsible leading and marshaling the company's influence in the industrial, corporate, scientific, educational and cultural spheres.

A common thread in Mr. Bunshaft's career has been his expertise in visualization, computer graphics and engineering-related software tools. Since doing his post-graduate work at the National Science Foundation's Center for Interactive Computer Graphics he has led efforts to introduce new processes into far ranging industries.

Bunshaft is Dassault Systemes' leading voice in science, technology, engineering and mathematics (STEM) education and was named one of the 100 top CEO leaders in STEM. Bunshaft is the co-chair of the STEM Innovation Task Force and is a member of multiple university advisory boards and industry organizations. He regularly writes and speaks about STEM topics. He is a member of the Council on Competitiveness and was recently appointed to a National Academy of Engineering committee on the integration of STEM, humanities and arts. He also serves on the Massachusetts Governor's STEM Advisory Council. He is a board member of the Mass High Tech Council and a Board of Trustees member at the New York Hall of Science.

He received his Bachelor of Science in Computer Science and Mathematics from University at Albany, State University of New York and has a Master of Science in Computer Engineering from Rensselaer Polytechnic Institute, where he was a researcher at RPI's Center for Interactive Computer Graphics, a National Science Foundation university-industry research center.



MARK ENGLERT, PH.D.

Mark Englert has served the Northern Wyoming Community College District for the last 30 years. He first moved to Wyoming in 1980 when he became a teacher and coach in a small rural town, Midwest, Wyoming. He served the students there for five years before joining the ranks at Sheridan College. Mark's life ambition had always been to teach and coach and he found his niche teaching Health and Wellness and coaching the women's basketball team in Sheridan. After nine seasons Mark decided to pursue other interests in the world of community college education and expanded his horizons to include new administrative duties. He is devoted to the access mission of the community college and firmly believes every student deserves to succeed. During his tenure, he has become a strong advocate for career and technical education and the important influence such programs have

on students, the work force, and economic development. During the course of his career he has enjoyed opportunities to take on new responsibilities that have included being a Division Chair, Dean of Arts and Sciences, Acting Chief Academic Officer, Chief Student Affairs Officer, and since 2010, the Vice President/CEO of Gillette College. In each aspect of his career journey he has remained committed to student success



KEN POTTHOFF

I have worked in education for the past 20 years, which includes leadership in standards and assessment, curriculum development, project management, and the teaching of writing, literature, and film studies at the university level in the United States and in Shanghai, China. After serving as an instructional designer with the Career and Technical Education Consortium of States (CTECS) for 10 years, I became the Deputy Executive Director of CTECS in 2012. One key leadership skill I greatly value is building new partnerships that are mutually beneficial and that focus on program improvement in the ultimate interest of students and educators.

Since 1973, CTECS has had the pleasure of doing business with 45 states and other strategic partners. Our connections are expansive, ranging from large-scale postsecondary systems such as the Technical College System of Georgia (TCSG), to active new members, such as the State of California’s Division of CTE, to vibrant business associations like the Florida Automotive Dealer’s Association (FADA).

I whole-heartedly support the mission of ATEA and will do my best to enhance the mission of ATEA, ensuring that the “practical teaching ideas and best practices” of postsecondary education are upheld. ATEA’s goals and values are shared and reflected by CTECS, which include the promise to “advocate the value of technical education to society.”



ROGER TADAJEWSKI

I have dedicated my professional life to the advancement of education and workforce development in the transportation, aerospace and manufacturing industries. Currently, I hold the position of Executive Director of NC3-Coalition of Certification Centers which I founded to bridge the gap between divergent industries ranging from alternative energy to automotive technology. I am the business owner of The Business Education Partnerships Group. My board position will be mutually beneficial for ATEA and NC3 both campaigning for the value of technical education to society, strong partnerships with leadership from technical colleges from around the country.

Roger grew up in Northern Michigan, where he earned credentials in automotive technology and diesel engine service and later earned a business degree from Pepperdine University in California. He has worked in the oil drilling industry, RTW and Rockwell in materials research. In 1995 he created

American Youth Education Systems (AYES) until 2007 when he starting piloting NC3 and started it I 2009. It has 500 schools working on industry certifications, issuing 55,000 certifications in 2016.

Reappointed ATEA Board members



Paul Perkins
President Amatrol Inc.
2007-2017 reappointed for term 2017- 2020
Gold Sponsor of ATEA National Conferences 2013-2017



Mary Kaye Bredeson
Ex. Director COE for Aerospace and Adv. Manufacturing, Everett WA
2014-2017—appointed to 2017-2020
2nd Vice President of ATEA 2017-2019
Chair of Plenary Session on COE’s 2015 National Conference
Chair of Plenary Session on Workforce Development Mechatronics 2016 National Conference
Nominated Boeing Company for 2017 Presidents Award to an industry partner



Ron Langrell, Ph.D.
President Bates Technical College, Tacoma WA
2011-2017 reappointed for term 2017-2020
Hosted Region 6 “Key Leaders” meeting at ATEA Board meeting fall 2014

student

Outstanding Technical Student Award Winner 2017

This year was a banner year at ATEA for women students in technical education. The Outstanding Technical Student was Sara Wilson, Tennessee College of Applied Technology, Chattanooga. ATEA awarded two student Notable Performance Awards, one to Madelline Holly, Three Rivers Community College, Norwich Connecticut for Nuclear Engineering Technology and one to Nicole Zubke, Everett Community College, Everett, Washington for Composite Engineering.

The Outstanding Technical Student Sara Wilson, Industrial Maintenance and Mechatronics at Tennessee College of Applied Technology, Chattanooga.

- Holds a Chemistry BS degree
- Wanted a new start--technical training related to a job
- Industrial Electricity Program at Chattanooga TCAT
- Industrial Maintenance/ Mechatronics-electromagnetic systems through *Tennessee Reconnect
- Skills USA, speaks on her experience, 2016 Washington State Leadership Experience

*Tennessee Reconnect provides 16 free credits for



L-R Dr. Paul Young, President of ATEA and President of Northern Wyoming Community College; Sara Wilson, Outstanding Technical Student Award, Tennessee College of Applied Technology, Chattanooga State, Industrial Maintenance and Mechatronics; Chancellor Tydings; James King, Vice Chancellor of Tennessee Colleges of Applied Technology



L-R Dr. Paul Young, ATEA President; Sara Wilson, Outstanding Technical Student Award, Tennessee College of Applied Technology, Chattanooga State, Industrial Maintenance and Mechatronics

Update from Sara:

I'm working as an electrician at ATN Hoelzel. It's a company based in Germany that makes automation equipment for car manufacturers, like the glazing cells where the robots apply the adhesive to windshields (we have some videos on YouTube of our equipment in action). It's been rewarding to put my education to work, and I've learned a lot since I started in January. I love that I get to do both electrical and mechanical work. I also have the opportunity to travel to customer's locations.

When I decided back in 2015 to change careers, people thought I was out of my mind. Taking technical certificate programs has been one of the best decisions of my life. I work in the challenging and rewarding field of production automation. My day could be anything from building a safety fence to wiring a robot, and no two days are alike. The Tennessee Reconnect Grant was the catalyst to get me back to school, and I am so grateful for the opportunity it provided and the doors it has opened for me. I am excited about my new career trajectory, and I love the work I do.

Technical Students recognized for Notable Performance in a Technical and Scientific area.

Notable Performance in Nuclear Engineering Technology

Madeline Holly, Nuclear Engineering, Three Rivers Community College, Norwich Connecticut

Madeline came to Three Rivers with an Associate of Science in Engineering from Middlesex Community College in Middletown Connecticut. She chose to combine that with the AS in Nuclear Engineering Technology base in part upon a full scholarship from Dominion Power and first an internship then a contractor contract.

- Member of American Nuclear Society (ANS)
- American Society of Non-Destructive Testing (ASNT)
- Health Physics Society (HPS)
- Summer internship at Milestone Station Nuclear Complex– Instrumentation and Control Division
- Mentor for women to enter the program
- On time to graduation and employment

Nicole Zubke, Everett Community College, Everett, Washington

Nicole is completing two Associate in Technical Arts degrees in 2017, Advanced Manufacturing Technology in Technical Design and in Composites. She carried 20 to 25 credits of demanding course work, participate in student activities and work-study. “She is a natural motivator”, Tim Melcher, Associate Faculty, Advanced Composites Technologies.

Capstone project used plans from BYU, WSU, and Georgia Tech to develop manufacturing techniques including machining molds and various latches and devices, laying up complex aircraft laminate structures and utilizing state of the art tools and materials to send it to the “customer” where the parts are assembled to an aerospace design-build-fly challenge UAV.

This aircraft will be made to compete in the aerosPACE program, a design, build and fly program sponsored by Boeing to encourage student growth and development within the aerospace industry.

“Her participation and leadership skills have been a major under-pinning for the group’s success.” Tim Melcher



L-R Dr. Paul Young, ATEA President; Madeline Holly, award for Notable Performance in Nuclear Engineering Technology--Three Rivers Community College, Norwich CT

Notable Performance in Composite Engineering



L-R Dr. Paul Young, ATEA President; Nicole Zubke, Notable Performance in Composites and Technical Design, Everett College, Everett, WA

teacher

ATEA 2017 Outstanding Technical Teacher

Kim McPherson, Instructor, Machine Tool Technology,
Tennessee College of Applied Technology-Dickson

Classes, Mentor Tennessee Promise

- Graduate of Gasti Packaging Machine Apprenticeship Program in Germany
- Level One National Institute of Metalworking Skills (NIMS) certified instructor
- Skills USA Advisor
- Manufacturing Advisory Committee, TCAT Dickson and Clarksville
- Volunteers for Boy Scout of America, special industry classes and mentor Tennessee Promise

Kim grew up in Germany where she had the opportunity to join an apprenticeship program in machining at Gasti Packaging. They were recruiting young women to the program. She never regretted it and found it to be satisfying career and life. She met her husband when he was in the US Army stationed in Germany. They moved to Clarksville, Tennessee where he was discharged they have continued to live and raise their family. She worked in machining in industry but applied for an opening for machine tool instructor at TCAT-Dickson. She got the job. Kim is known for being especially effective with Veterans, understanding their challenges with adjustment.



L-R Dr. Paul Young, ATEA President; Kim McPherson, Tennessee College of Applied Technology, Clarksville; Dr. Arrita Summers, Director TCAT Clarksville; James King VC TBR for the TCATS



L-R Mary Kaye Bredeson, ATEA Board member and Ex. Director of the Center of Excellence in Aerospace and Advance Manufacturing, Everett; Nicole Zubky student finalist; Michael Patch, Outstanding Teacher finalist, Composites, Everett Community College; Mrs. Patching; Sarah Floyd, Everett Washington

ATEA 2017 Outstanding Technical Teacher Finalists

Michael Patch, Instructor, Advanced Manufacturing Composites, Everett Community College, Everett Washington

Michael is a member of Composite Washington, a consortium of instructors supported by the Center of Excellence in Aerospace and Advanced Manufacturing, to fill an urgent need for qualified composite material technicians in an ever-growing number of industries. Michael is a certified composite instructor and nationally recognized proctor; a certified Vacuum Infusion Process Composite Technician and nationally certified instructor; regular conference attendee and committee participant in composite recycling. Michael provided tours and presentations on composite manufacturing to visiting Kyushu Institute of Technology students, from Japan. The Nippon Business Institute and Japanese Cultural and Resource Center in Washington collaborated with the COE for Aerospace.

Michael is the lead faculty on the Everett Community College's Composite program for students working with groups of engineers from major universities to design and build an unmanned aerial vehicle.

- Graduated AS, AAS, BS in Aviation Science from Utah Valley University
- Commercial Pilot-Single and Multi-engine, Instrument Rated, Certified Flight Instructor-Multi-engine

Rick Lofy, Workforce and Business Solutions, Gateway Technical College, Kenosha WI

Rick leads a program with 95% success rate for completion of 16 credits with job placement in manufacturing, CNC Boot Camp at Gateway College. “They are not button pushers, they can interpret drawings, measure with quality instruments, and if they need to make offsets, have the math skills to perform the offsets on equipment.” Rick has a total of 30 years “aggressive/ progressive” manufacturing experience from washing parts, running manual machines, programming CNC machines, to Vice President for Manufacturing in an organization that received the Presidential E Award for exporting and Manufacturer of the Year in Wisconsin. He has 12 years as an instructor for Gateway Technical College.

- Developed programs for skill demonstration for employment
- Instrumental in forming “CNC” Bootcamp
- Set up “mock” interview process that is key to the participant employment success. 2013 Lead Quality Initiative to use Lean Six Sigma
- Trains in Six Sigma Green Belt and Black Belt
- Sargent in the Marine Corps
- Industrial Management, BS, Milwaukee School of Engineering



L-R Dr. Sandra Krebsbach, ATEA Executive Director; Dr Bryan Albrecht, President of Gateway Technical College; Rick Lofy, Gateway Technical College, Business and Workforce Solutions; Dr. Paul Young, President of ATEA and President of Northern Wyoming Community College

Nominations for 2018 ATEA National Awards

September 1 will be time for the ATEA Board of Trustees to invite nominations for the 2018 ATEA National Awards. The will be due Tuesday December 4, 2017. We encourage you to review the criteria posted on the ATEA website and nominate a worthy colleague, student, or program for an award. They will appreciate your recognition. The awards are outstanding technical student, outstanding technical faculty, outstanding program and the Silver Star of Excellence to a business exemplifying the standard for supporting technical education. It is jointly awarded with the National Technical Honor Society.

The awards will be presented at the 56th ATEA national conference on technical education, 2018 hosted by Gateway Technical College. It will be held at the Double Tree Hotel, Kenosha Wisconsin, 5 workshop sites in the area, industry tours and a keynote and reception at Snap-On Tools, March 21-23. There will be an Awards dinner on Wednesday March 21, 2018. National conference updates will be on ateaonline.org, ATEA's website.

Nomination forms and details will be emailed on September 1 and available on the ATEA Website.

outstanding program

Outstanding Program Award Winner 2017

Medical Assistant Program, Tennessee College of Applied Technology, Chattanooga

The Tennessee College of Applied Technology (Chattanooga) Medical Assistant Program was established in 1986 as a one year diploma program. Since 1998 it has been accredited by The Commission on Accreditation of Allied Health Education Programs (CAAHEP). Upon completion of the technical program, degree seeking students can attain their Associates of Applied Science (Health Sciences) degree in collaboration with the requirements set forth by both TCAT-Chattanooga and Chattanooga State Community College Allied Health Division.

The program prepares students to assume the role of health professionals in the field of medical assisting, as entry-level medical assistants utilizing a competency based education curriculum. The Ms. Rutledge and Ms. Draper stay in step with up to date medical technology trends. Upon graduation students carry these skills with them into the workplace and are readily prepared for their national certification through the American Association of Medical Assistants.



L-R: Dr. Paul Young, Cynthia Rutledge Associate Instructor and Nancy Draper Associate Instructor, Dr. James Barrott, Vice President Chattanooga Community College.

President's Award Winner 2017

Boeing Company

Dr. Paul Young awarded Boeing Company a special Presidents Award for their support of technical education across the nation and across sectors aerospace and automotive through training in mechatronics.



Accepting the Award for Boeing Company was Tia Rivera, Workforce Specialist, Boeing Seattle



L-R Mary Kaye Bredeson, Ex. Director, COE Aerospace and Advanced Manufacturing Everett WA. Fabian Zender, Innovation and Performance, Boeing, Arlington WA; Essentia Rivera, Workforce Specialist, Boeing Company, Everett WA, Melinda Ursino, Instructional Systems Designer, Boeing Company Everett WA; Dr. Paul Young, President ATEA Board of Trustees.

Silver Star of Excellence Award Winner 2017

Yamaha Marine Motors

ATEA and the National Technical Honor Society recognized Yamaha Marine Motor Division with the Silver Star of Excellence Award for 2017. Yamaha Marine Motors established a relationship with TCAT Chattanooga in 2012 have donated \$150,000 in equipment and training aids. Yamaha has made their dealerships available to both the marine and motorcycle programs for training and experience with materials and procedures that provides an advantage as a new employees. Yamaha Marine provides an apprenticeship program with intensive two week sessions on all aspects of entry level technician positions.

Yamaha Marine supports technical training through participation on the Advisory Committee of Parks Chastain training manager, Yamaha Marine University Yamaha Motors.

Mr. Chastain and others from Yamaha have supported TCAT Chattanooga's participation in Skills USA by setting up challenges that relate to real experiences.



Parks Chastain accepting the award.



L-R: James King, Vice Chancellor Tennessee Colleges of Applied Technology, Jimmy Jones, Master Instructor Marine Motors Program Chattanooga TCAT and 2013 Outstanding Technical Teacher Finalist, Ed Grunn, Instructor Marine Motors Program, Joe Maniscalco, division manager, Yamaha Marine ServiceEd Chasian, Yamaha Marine Motors Chattanooga, , Dr. James Barrott, Vice President Chattanooga Community College and Director TCAT Chattanooga.

jean koch

Jean Koch Outstanding Technical Education Achievement Award Winner 2017

Ron McCage

Dr. Ron McCage received the award for his outstanding life time achievement in technical education.

The Proclamation was ready by James King and the presentation made by ATEA Past Presidents, Dr. Rich Wagener, Dr. Paul Young, and James King. The proclamation reads:

WHEREAS, he meritoriously contributes to the improvement, promotion, development and progress of postsecondary technical education and the American Technical Education Association:

WHEREAS, he has contributed and achieved prominence in technical education at the local, state, regional and national levels: and

WHEREAS, he consistently spends significant time and energy in support of technical education; and

WHEREAS, he served for twenty-nine years as the Executive Director of the CTECS, Career and Technical Education Consortium of States, an organization that develops

national skills standards, assessment terms, and databases for occupational education and training; and as CTECS Board member for 3 years prior;

WHEREAS, he has served on the Board of the American Technical Education Association from 2003 to 2017, for a total of fourteen years and prior to that as an exhibitor and presenter at ATEA conferences beginning in 1985;

WHEREAS, Dr. Ronald McCage's professional demeanor, depth of knowledge and experience, and generous spirit contributes to the strength, credibility and effectiveness of all,

WHEREAS, the trustees of the American Technical Education Association wish to recognize the outstanding career and contributions of Dr. Ronald McCage and express its appreciation for his superb leadership; and

NOW, THERE FOR I, Paul Young, President, do hereby confer the Jean Koch Outstanding Technical Education Achievement Award on Dr. Ronald McCage on March 16, 2017

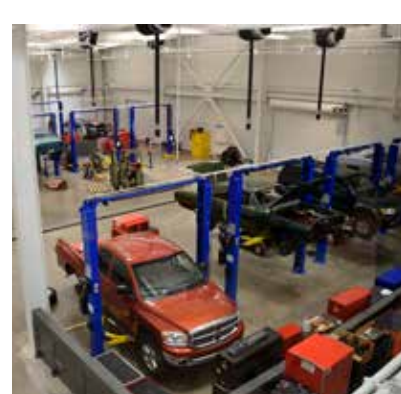


Recipient of the Jean Koch Outstanding Technical Education Achievement Award: Ron McCage



**2017 National Conference on
Technical Education
Nashville, Tennessee**





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Workforce Innovation Partnerships



L-R: Adam Smith, HAAS Corporation, Memphis, Tennessee; Burns Phillips, Tennessee Commissioner of Labor and Workforce Development; James King, Vice Chancellor of Tennessee Colleges of Applied Technology; Michael Krause, Executive Director of Tennessee Higher Education Commission; Ted Townsend, Chief Operating Officer for the Department of Economics and Community Development; Kevin Smith, Nissan North America Manager of Technical Training

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

It's my pleasure this morning to moderate this great panel on Workforce Innovation and Partnership, and I'll bet you any state in the union doesn't partnership better than the great State of Tennessee, and I think by the end of this session you will see why Tennessee works. The word of the day is partnership, and I think the committee that's come together to make this program happen is truly a partnership.

Our panel consists of some of the biggest players that recognize the importance of education and business partners working together for the good of economic development, and I think that's what it's all about. For each of us the goal is to put students to work, and at the same time, make industry work by supplying a skilled level of workforce for business industry. That is economic development.

I want to welcome the panelists:

- **Mike Krause**, Executive Director of Tennessee Higher Education Commission.
- **Burn Phillips**, Tennessee Commissioner of Labor and Workforce Development.

- **Ted Townsend**, Chief Operating Officer for the Department of Economics and Community Development.
- **Kevin Smith**, Nissan North America Manager of Technical Training
- **Adam Smith**, HAAS Corporation, Memphis, Tennessee.

Michael Krause, Executive Director of Tennessee Higher Education Commission

People all over the United States are talking about the *Tennessee Promise* and the *Tennessee Reconnect*. **Can you share what these initiatives are, and what is the most exciting thing in higher-ed and work force development?**

Michael Krause, Executive Director of Tennessee Higher Education Commission

A couple of years ago, 2012, the governor Haslam asked: **Could we change how students think about their own future? Could we change how they think about what college means?** And that was the genesis of the Tennessee Promise. The Tennessee Promise offers any student in Tennessee the opportunity when they graduate high school to attend one of our technical colleges tuition-free.



L-R: Adam Smith, HAAS Corporation, Memphis, Tennessee; Burns Phillips, Tennessee Commissioner of Labor and Workforce Development

How has that changed our state already? We became the number one state in the nation for FAFSA, the nearest state back is 20 points back. Last year, of every new FAFSA in America, 40% of the new ones were filed right here in Tennessee. So our TCATs experienced an enrollment increase ... 20% in 12 months. Our technical colleges went up 20% in 12 months, 0% more at a TCAT is 20% more Tennesseans getting a job. Because if you go to TCAT you get a job, you go to work.

Our next challenge, though is adult students. Our ultimate goal is 55% of Tennesseans with a college degree by 2025. So the governor launched Tennessee Reconnect, which provides any adult the opportunity to go to one of our technical colleges tuition-free and it went so well, we're about to expand that to our community colleges as well.

My point is we have changed how we're talking about college in the state, that ultimately leads to, we hope, changing what life looks like for an employer in this state, because that's what this is all about, that our employers are able to find the talent they need, that they're able to find people with the right skills. I have every confidence that our TCAT graduates have the right skills because of two things: 1) every single TCAT program has an advisory council from their local host so we had the opportunity to hear from an employer so the TCAT's change the program to exactly what the employers needed. 2) The TCAT culture is the college mission and students first. I see it every time I go to a TCAT.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

As the Vice Chancellor, we are seeing more high school students as 18-year-olds come to campus and 80% of those students starting the Promise, are still in the school. The change is going to save the taxpayers a whole lot on their returns. So that's a good thing.

Commissioner Phillips, as Mike has mentioned, we will not reach the goal *Drive to 55* without the assistance of the unemployed and the underemployed learning new skills. In your interaction with job seekers and job creators, do you see this applying to both technical skills and what we call interpersonal skills?

Burn Phillips, Tennessee Commissioner of Labor and Workforce Development.

We went across the state asking employers what the shortcomings were in the

Workforce that they encountered in Tennessee. They said there was a misalignment of technical skills and what was being produced by the educational system, but even more importantly, there was a shortage of individuals who had what are called soft skills, some call interpersonal skills, and it encompasses a lot of skills that are not technical in nature, but can be transferred between one job and the other: being able to communicate, being able to write, and to respect your place of business. Each year we distribute 60-80 million dollar across the state for training. We rely on the TCATs primarily, and community colleges to provide that kind of training. We fund it, we don't do it. Individuals that go to TCAT in Tennessee, they are trained to perform. The TCAT's are learning to be agile, timely and relevant. Because in today's world, technology is changing the workplace, the very nature of work itself, and it's changing it for them... five years from now, three years from now, two years from now. Technology is changing the demand skills across the country and of course in Tennessee at warped speed. Skills have a very short shelf life.

So individuals that want to attend the four-year institutions, that's fantastic, it's a great opportunity in Tennessee, unlike any other state to go to TCAT, community college or four-year school. It's up to everybody in the educational system, everybody who's a policy maker, and the business community to make sure that those individuals are guided to occupations and careers that will provide self-sustaining and family-sustaining wages. We gave to determine that. And when individuals go to TCAT, they do come out with more of an alignment with what the business needs, because TCATs interact with businesses on a regular basis.

And the education community today has got to be responsive to... not lead the way, but be responsive to business, the needs of business. Today it's difficult to project two years, much less five years down the road, especially when you're just trying to make sure that you're looking at the bottom line, and you're taking care of your employees, it's hard to determine what you're going to need, the skill sets that you're going to need may change in six months. We work with businesses who said they can't find employees. We bring an assessment to that

organization to identify the health of that workforce—the education and training, and identify what may be needed by that business and we reach out to other stakeholders, like James King and say here's an opportunity. We reach out to ECB, local elected officials, and other businesses who may be able to participate all we do is facilitate it to make sure that those businesses can focus on what they need. It actually this works, and what we're trying to do is come up with a template that will work across the state that would help businesses all across the state, regardless of what area they're in, what sector they're in, to satisfy the needs they have for skill sets, and by bringing everybody to the table, we're trying to educate everybody about how it must be, the systems that must be grown. That's what is going to move the state.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

The Commissioner and his staff aren't shy about calling. The best partnership I've ever seen in this country was during the recession with TCATs, community college and labor. We put Tennesseans back to work, better than any state in the nation did, and it's because the partnership made it work.

And so we're going to shift gears slightly, and we're going to hear from the industry side. You know, last night you had the great opportunity to tour one of the progressive facilities in the country and it hasn't been many years ago that Kevin Smith and I were jotting down the design of the building on a napkin over lunch and what we would love to see and the governor made it happen. Kevin, I want you to talk about the partnership that made that training center happen and the need for trained technicians in your business at Nissan, and how we took that idea from a napkin to reality.

Kevin Smith, Nissan North America Manager of Technical Training

I'm delighted to be here this morning. Nissan gave me the opportunity back in 2011, to join an organization called the Manufacturing Leadership Council. It was a group of manufacturers in Rutherford County Tennessee area. We came together because we all had the same issues: couldn't find enough skilled employees to work in advanced manufacturing to keep our equipment running. So, what we did was as an organization, we talked to those issues, so, working with Rutherford County schools, the state, and with TCAT's, we all came together. I found talking to Carol (Dr. Puryear), who was the director of the TCAT we partnered with at that time, was that they did not have enough space to be able to train students to fill all the openings. At that time, we were getting ready to expand. We had openings for 120 maintenance technicians. We were producing 220,000 vehicles a year, to

where last year we produced 648,000. Just let than sink in a minute, 648,000 vehicles in one year out of one facility.

We were able to do that. We worked with TCAT to basically design a new apprenticeship program. We took our old apprenticeship program that took four years to get through the curriculum. We redesigned that and with the help of their faculty, to complete in two years. We cut the time in half that we could actually get those people out and onto the floor, and doing what we needed them to do. And subsequently, we've had two of those groups that have graduated. And each time, we would test over 400 production technicians, who wanted to get into maintenance, and we would select 24, and so the competition was good, we got very good students, and the results were with the help of TCAT, we improved our overall comprehensive scores for most individuals coming out of that program over our four-year program. So, one of the things we were able to do was we were able to take them on five-week cycles of classroom-training, and five weeks of master-trainers in the plant, working on the equipment. We covered electrical in theory with part hands-on labs at the training center, with their master-trainer working on electrical components in the plant so everything was completely reinforced. As educators, you know that is the most critical part of any type of training. You have to reinforce the learning. And that was one of the successes.

The TCATs needed more space. We (Nissan) had to be able to do more programmable logic controller training. So, we also needed more space. We made an offer to the State of Tennessee, we can provide you with the land, and do you think you can build the facility that we can share for our mutual benefit? And I know there's a lot of partnerships out there between states and auto manufacturers. There's not too many of them that actually share the facility and are open to the public and train the residents of that area, as well as the employees of that company. And we're pretty proud of that fact.

And as you saw the results last night at the opening event are incredible. One of the things we wanted to be able to do with the building was to be able to bring in middle schoolers, high schoolers, their parents, their teachers, their counselors, we wanted them to see these are good careers. It's amazing to see the parents' eyes open up when you can tell them their son or daughter can go 18 months to industrial electrical mechanical mechatronics program, that's free... and come out and make \$50,000-\$60,000 a year. And 100% placement right out of that program (applause).

So, I think the results speak for themselves. It's been a great partnership. The people on the panel were very instrumental in making that happen. Speaking for Nissan, we really appreciate

it. It's been a wonderful partnership for us and we hope it continues for the next 30 years, when our lease is up. Thank you.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

Kevin, we thank you and we thank Nissan. Nissan was one of the first automotive industries to establish in the south in 1982, and it's been a great partner for the State of Tennessee. Going back to what our commissioner said, we adapted that program, cut the time in half and turn out more workers, and so it's been really exciting.

You know, one of the most exciting things we've been involved in over the last couple of years is Medical Devices. Tennessee is the second largest producer of medical devices in the country. It's a hub in the Memphis area, of six major industries that produce this, and we've been working with them probably since the mid-90s and they complained since the mid-90s about not having enough of skilled labor. And we're talking about high precision machining skills. And so finally, those six industries basically had been stealing employees from each other for years until now they're running out of employees to steal. They formed a Greater Memphis Alliance Partnership, and we've been working with Haas, and this young man we're bringing up next has been really involved in that Greater Memphis Alliance for the medical device industry along with TCAT Memphis and Nathan and Roland and their staff. So I would like to bring Adam Smith forward today just to talk about what you've seen, where that's going, and Gene Haas' view and what role they plan to play in that center.

Adam Smith, HAAS Corporation, Memphis, Tennessee

Memphis is becoming the next medical capital. There are close to 50 medical manufacturing facilities in the Memphis area, which makes Shelby County the second largest county in the nation for medical manufacturing. We recently talked to one of these companies and asked them how many people in 2017 do they think they will hire? At a minimum, 200, but more than likely closer to 400 that's a lot. Filling these positions is difficult. One of the things that TCAT Memphis has done that is major in the medical manufacturing is they have gotten machinist programs back in hospitals. That is actually where I got my start, when I was in the hospital. I was a machinist, went on to be a machinist in the Air Force. That was pretty much started my career.

TCAT Memphis is preparing them for a career in medical manufacturing. There are a lot of companies that have branched off from these larger medical device companies that were started by former students at TCAT. The Gene Haas Foundation has given \$537,000 in scholarship money in the



L-R: Michael Krause, Executive Director of Tennessee Higher Education Commission; Ted Townsend, Chief Operating Officer for the Department of Economics and Community Development

State of Tennessee alone. Over \$300,000 of that has gone to TCAT schools. The rest has gone to other universities and high school programs, but the Gene Haas Foundation has also donated a million dollars to our new medical device training facility that's going to be located in Memphis. And I'll just tell you, a million dollars goes a long way towards this new facility and, it's our pleasure to get to work with the TCAT system. Thank you.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

We've got to come together and work together to make this happen and then when you've got partners like Gene Haas Foundation, the city, the state, it just continues to grow and no one entity could do it by themselves.

Ted Townsend, Chief Operating Officer for the Department of Economics and Community Development.

Partnership requires intentionality, right? What you have heard of here is a very intentional process in which the state, and industry and all the partners have made a collaboration and said we must do better. And I'm going to give you a perspective on how we represent a driving force behind that intentionality for partnership. We have partnered with businesses on projects over 1000 times since that term. And that represents the announcement of 136,000 net new jobs to the Tennessee economy. They're backed by 27 billion in capital investment from those businesses, so they're expanding their operations, they are providing jobs for our citizenry and we have a responsibility to fulfill that demand. Education is the tip of the spear on fulfillment. It's one thing to stand up in governments and shovel dirt and celebrate the company saying we're going to reinvest in our operations here or we have made Tennessee a destination of choice, but it's only different if we can't make those job commitments fulfilled by people.

So, we have seen over the last six years an increase in jobs year over year exponentially. Last year alone, we announced over 21,000 jobs, 5.3 billion in capital investment. Tennessee

leads the nation in job growth for direct investment two of the last three years. We have more Tennesseans working now than ever in our state's history. Our GDP has grown at 12.5% from 2010 through 2015. That also leads the southeast states and is fourth in the nation. We have seen median household incomes increase as well, 6.4% to be exact, that is first in the southeast, and 2nd in the nation, and all this activity that you heard today is driving that. Those are the results of being able to say we're going to partner with industry we're going to work better and align ourselves as a state with all of the agencies and deliver what industry expects, that is customized, that is catering directly to their operations. Whether it's investing in that facility... and Kevin was being modest... 648,000 units in one year... that makes the Nissan plant the highest producing automotive manufacturing facility in North America. That cannot be done without the incredible workforce that they have and the TCATs are driving that. They are delivering on that demand.

The medical device industry, that is second only behind Warsaw, Indiana, and mind you, we have our sights set on being number 1, and we can do that because of the investments we will have in this new facility, because of the partnership. The Tennessee brand is world-renowned. We focus on Made in America, but we also say it's mastered in Tennessee. And in fact, Tennessee as recognized by the Brookings Institution, is the number 1 state in the nation for advanced industry jobs.

What keeps me up at night, not a newborn child... mine's 16 years old... she keeps me awake for other reasons. But in totality of the 136,000 new job commitments that I expressed to you, we are right now at 60% fulfillment rate. So there's a sobering fact, that while we have placed this tremendous amount of pressure and demand on industry, we have work to do, but I will say that because of Tennessee Promise, because of the *Drive to 55* Tennessee Reconnect, because of the partnership, and the fact that everyone on this panel and in the room gets it, we will succeed, and so I think that is how everything has influenced what we do on a daily basis and we are able to go out and market the Tennessee brand locally.

And most recently the success story was the acquisition of LG and the manufacturing facility that will go up in the Clarksville area. That's a huge deal, and they would not have come here, because it was highly competitive, we were battling it out with multiple states. It was an eight-year process. This really ramped up in the summer of last year when they started making site visits and they started to talk to us and others... and Commissioner Phillips was an integral part of this recruiting process, to top out the workforce. That was primary on their list of criteria. Would you have the workforce

to fulfill what we're looking to do here? We're looking to create 600 jobs. We're looking to produce the highest end washing machines in the nation and produce this for a new market we've got. They chose Tennessee because we were able to articulate the confidence with the educational system that we have and the programs that are producing a pipeline of future workforce. That's how we won, and we're going to continue to win with your help, and I hope that those from other states can take this experience back and say, if you learn one thing, it's the partnership, the education in workforce development and this development equals economic and community development. Thanks very much.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

PARTICIPANT QUESTION: Gentlemen, thank you very much for taking my question... I'm from Salt Lake City, Utah, and I was raised in a country where people that pursued education and skills, 4-year apprenticeship program, were treated with the same equality as people that pursued university degrees. Are there companies in the State of Tennessee that would hold me back from advancing into supervisory and management positions because I chose the skills path? Does Nissan people form TCAT the opportunity to advance through Nissan's organizations into supervisory or management positions? Thank you for taking my question.

PARTICIPANT: Kevin Smith, Nissan North America Manager of Technical Training

ANSWER 1: I can answer that question we've already had two of the gentleman that graduated from that first apprenticeship group are already supervisors. We do also encourage those tradesmen to go on and get an Associate's degree or a Bachelor's degree, and we pay for those. We have the tuition reimbursement program, so yes, that's encouraged to get additional education, but that technical skill never holds them back.

PARTICIPANT: Mike Krause, Executive Director of Tennessee Higher Education Commission

The biggest thing I hear from employers that they want are people skills. And the TCATs, I think engender that in a couple of different ways: One, there's some inherent soft skill learning that TCATs have embedded, you have to show up on time, you need to not be on drugs when you do so, and you need to be dressed appropriately. But TCATs, because of the total model, students stay with that same group of students throughout the continuum, and they learn about people. And what I find, and even in my own hiring practices in the military, is being a leader ultimately becomes about how well you connect with people, and so I think that we actually

have a credential correction underway where the technical certificates, by the way it's really important to note, we count those as credentials now as a state, just as we do a Bachelor's degree. But I would love to revisit your question in about two years, because my sense is in Tennessee, we might be putting it to rest kind of once and for all right now.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

Great question, thank you. One more question? Yes from one of our students... our state Skills USA president.

PARTICIPANT QUESTION: One thing I'd like to know, is when I was going to high school, technical college was not really discussed. You were told this is the community college, and this is the university, but that wasn't the right choice for me. I wanted to go to a technical college and it wasn't being discussed or offered as widely as other places. So how do we start a discussion of this is also a pathway that's just as good?

PARTICIPANT ANSWER 1: It's a great question. I like practical answers... we need to train school counselors. School counselors counsel what they know. They all have Bachelor's degrees and Master's degrees. That is a 20-year-old message, versus this more current message. I would love to see some way where we've got school counselors with more tangible TCAT experiences so they know that that's a tool in their toolkit.

PARTICIPANT ANSWER 2: The Tennessee Promise, there's a mentor approach. Riverdale High School in Murfreesboro, and I see a room full of students and parents talking about technical and community knowledge. So, we're changing the landscape and it's not going to change overnight, but thank you, we need more folks just like you coming to see us.



Dr. Arrita Summers, Director TCAT Dickson and Clarksville

**Dr. Arrita Summers,
Director TCAT
Dickson and Clarksville**

Good morning. So, I'm sure by now you've noticed that the theme of the conference is Workforce Innovations in Partnerships, and what a way to start with this esteemed panel, who has come in today to show what that really means and in truth how it can be replicated in your states across the nation. If you go back

and you look at... and what you've heard today and you've listened to, the key here is, according to Mike, not just the college degree, but the right college degree, and that led into Commissioner Burn saying, "It's the alignment of the right degree with the people and the businesses and the education, it takes the right alignments". And Kevin Smith said "It's getting together leadership councils and bringing people across the same industry and instead of being competitors, rather coming together and saying, what do we collectively need?" And we had Adam Smith who said, again, alliance partnerships among like manufacturers. How do we bring together high school students starting out as a high school dual enrollment machinist, and then going on to post-secondary and even military credentialing to bring them back to Tennessee and say, "We want you to retire here, we want you to bring your talent to us," and then finally Ted Townsend says, "Partnership requires intentionality. How do we mitigate the risks so that we can grow businesses and grow the family income?"

Vice chancellor King mentioned the centerpieces. We are a technical education conference, and so I want to tell you a little bit... these are 3-dimensional printing techniques. The students helped assemble and paint the centerpieces, and I also want to point out that along with TCAT Nashville, TCAT Moorestown, and Pulaski also contributed to it so again, these are going to be given out. I again want to thank them for their work.

I also want to point out that we will have commemorative picks. If you notice on our logo, the logo this year celebrates the musical history of Nashville, the country music and rap and gospel, and Christian, it comes out of Nashville, so there will be picks on the table for each person, and we hope that you will take that back and share that with those you love who play the guitar or other instruments. The most important thing is learning. What are we here? We're here to network and we're here to learn.

MODERATOR: James King, Vice Chancellor of Tennessee Colleges of Applied Technology

These guys have some great information on this. Folks, have a great rest of the day, see you at lunch.

ATEA Regional Conference Region 3 & Region 6

The Transformation of Reno Nevada: The Community College's role in Scaling for the Gigafactory.

November 8, 9 and 10 meeting in Reno, Nevada to learn about scaling technical education from Truckee Meadows Community College.

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ATEA Regional Map



Gigafactory for Tesla and Panasonic



Truckee Meadow Community College, Reno Nevada



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Committee members

Sue Smith VP for Technical and Applied Sciences, Ivy Tech Community College, Region 3

Deb Davidson, Vice President of Business and Workforce Solutions, Gateway Technical College, Kenosha WI, Region 3

Mary Kaye Bredeson, Executive Director, COE Aerospace and Advanced Manufacturing, Everett WA, Region 6



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Scholarships: Over the past several years Bobcat has provided three 1,000.00 dollar scholarships for students enrolled in STEM programs. Bobcat has also signed a long term commitment to continue the scholarship program and provide an additional 2,000.00 per year for classroom technology. The total commitment is 50,000.00 dollars over the next 10 years.

Sponsorships: Bobcat Companies does not provide sponsorships but it's supporting dealer network does.

Training: Several years ago Bobcat moved its affiliate training site from NDSCS to M State and we became one of eight such sites in the United States. Bobcat also provides training for M State instructors on a yearly basis with all other Bobcat affiliate trainers nationwide.

Advisory Committee Member – Contributions: Bobcat has two people who serve on the Diesel Advisory Committee one of which is a graduate of the Diesel program.

Business Award – In 150 words or less explain why you feel this industry partner deserves this award: I can think of no other company that is more deserving of this award than Bobcat!!! They have supported the Diesel program and M State through equipment donations, parts, supplies and money. As a college M State facilities uses a donated A220 skid loader to sweep the parking lots and walkways of snow and dirt. They provide an endless supply of engines and equipment to be used by the Diesel Department to train students with. Bobcat also showcases our facility by conducting classes for technicians who work in Minnesota and the Dakota's. The most impressive thing I can say about Bobcat is that they provided support when our program was at its lowest point, that is not always easy to do.

Registration opens on July 18 watch for ATEA email or check the website for the link



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MOTIVATIONAL SPEAKER, KEYNOTE

Mark Lindquist

CONFERENCE CO-CHAIR

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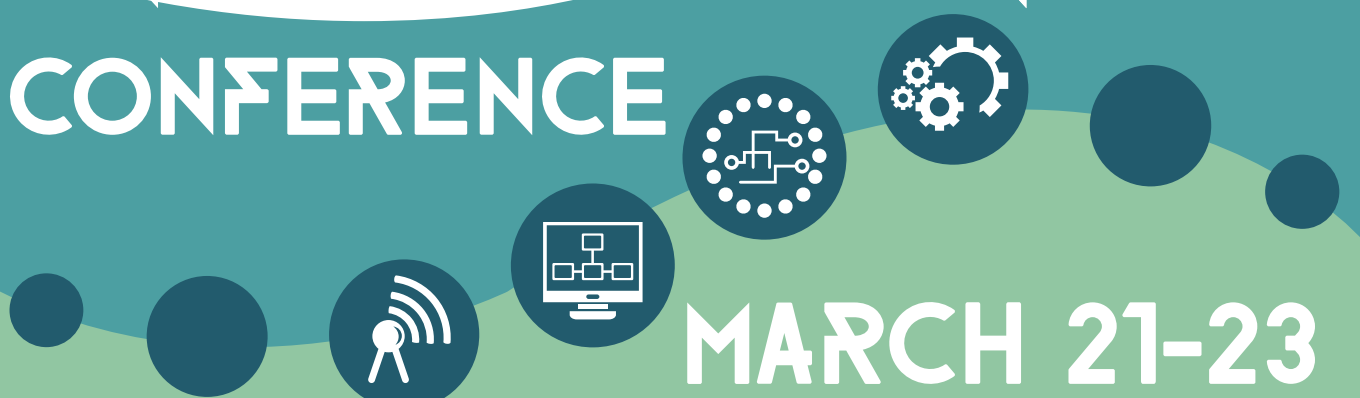
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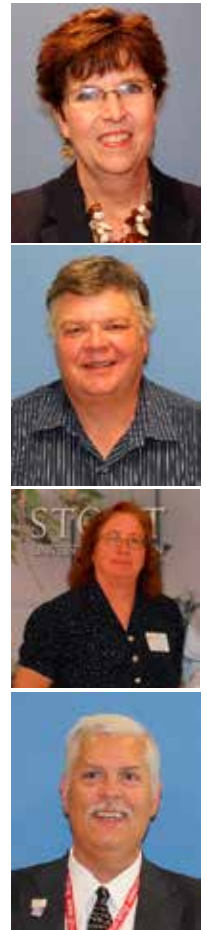
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Keynote and reception hosted by: Nick Pinchuk, CEO of Snap-On Tools all with Wisconsin hospitality--watch for registration to open for members in July and open registration begins after October Fest--which is November!



Committee members back row L-R: Mike O'Donnell- Dean, Allied Health & Veterinary Sciences; Larry Hobbs- Divisional Chair, Automotive Diesel Technology, Horticulture & HVAC/R Facilities Maintenance Instructor; Dr. Matt Janisin - NC3 Coordinator/Instructor; Dr. Bryan Albrecht -Gateway President & Chief Executive Officer / ATEA President; Eric Doherty - Director, IT User Experience; Scot Eisenhauer - Director, Law Enforcement Training; Ray Koukari - Dean, Racine Campus Affairs, Business & Information Technology
 Front Row L-R: Mary Harpe - Assistant to President; Stephanie Skiba - Vice President, Community & Government Relations; Marv Campbell - Technology Support Coordinator; Jayne Herring - Director, Marketing & Communications; Kelly Bartlett - Assistant to President
 Small individual photos to the right top to bottom: Deborah Davidson, Vice President of Business and Workforce Solutions; Gregory Herker, Manager Fab Lab; Dr. Sylvia Tiali, UW- Stout; Pat Hoppe, Electrical Technology Instructor



Chair: Dr. Bryan Albrecht, President, Gateway Technical College
 Honorary Co-Chair: Dr. Bob Meyer, Chancellor, University of Wisconsin-Stout.



The Rise and Fall of State-level Research and Development in CTE¹

By Ronald D. McCage

Legislation for the support of vocational education is a prime example of Congress working to solve problems. In fact, vocational education legislation has been one of the major vehicles used by Congress to address new and emerging social issues. The Smith-Hughes National Vocational Education Act of 1917 utilized vocational education as a method of training and rehabilitating the general population, as well as veterans returning from World War I (McCage, 1980)—a pattern which has been replicated several times during the 100-year history of what we now know as career and technical education (CTE).

When John F. Kennedy became president in 1961, he was deeply concerned about the economy, as well as the education of handicapped and disadvantaged youth, and the training of adults. Consequently, he appointed a blue-ribbon panel to study how to expand and improve the delivery of vocational education to a broader base, one in a series of steps that led to the enactment of the National Vocational Education Act of 1963.

Research and development were not a significant part of vocational education until the passage of this Act, which was the most far-reaching piece of CTE legislation enacted since Smith-Hughes. Prior to the passage of the '63 Act, most of the research and development conducted in vocational education took the form of faculty-initiated studies, unfunded dissertations or personnel development (McCage, 1980).

The most significant aspects of the Vocational Education Act of 1963 were that all programs funded under this Act had to be based on industry need, with a major focus on special populations. In addition, this landmark piece of legislation funneled 10 percent of its funds to the U. S. commissioner of education (now secretary of education) for support of federal research grants and for the establishment of research coordinating units (RCUs) in every state and trust territory.

The State RCU: A Bright Spot

In the immediate years following the passage of the '63 Act, Members of Congress were concerned that they were not seeing the changes in the educational landscape they were hoping for. As a result, a major review was conducted in 1967. During this review, Congress concluded that the RCU concept did have merit and was working better than expected, but further adjustments were needed; this resulted in the enactment of the Vocational Education Amendments of 1968.

Consequently, with these amendments, Congress made three major changes that helped to further facilitate the conduct of vocational education research and development at the state level, which drove the way these funds were administered for the next 15 years.

In effect, when Congress added Part C—Research and Training in Vocational Education and stipulated that half the funds go to the states, the new law made research and development an integral part of the vocational education enterprise. This also meant that a state director now had a powerful tool for improving his or her state's system.

After these changes went into effect, a major shift occurred regarding where RCUs were located. Prior to 1969, more than 60 percent of the RCUs were located at major universities; however, by 1977, only eight of the 56 RCUs (15 percent) remained at a university (McCage, 1980).

It should be noted that just because an RCU was located at the state level did not mean that universities did not play a major role in the state's research, curriculum and personnel development agenda. To the contrary: Universities were often the ones carrying out the majority of the work in partnership with the state. The best example being Mississippi, which still maintains a traditional RCU at Mississippi State University.

Expanding the Scope of the RCU

With the '68 Amendments, Congress also added Part D—Exemplary Programs and Projects, which provided an equal share of funds to the commissioner of education and to the state RCUs for the support of grants for showcasing model programs and disseminating promising practices. Another addition was Part I—Curriculum Development in Vocational and Technical Education, with all the funds going to the commissioner.

In 1972, the commissioner, through the Bureau of Occupational and Adult Education, initiated the National Network for Curriculum Coordination. This move proved to be a very cost-effective way of sharing resources across state lines. Later, this network became a subtitle under Programs of National Significance under Perkins III. This did not mean that states could not support curriculum, it just meant they had to use basic grant, research or state funds to do so.

¹ This article is reprinted from *Techniques*, February 2017 Issue, with permission of ACTE. Slight modifications have been made by the author. Special thanks to Margaret Mitchell for her tireless efforts through the publication process.

One State's Approach to Research and Development Coordination

The Research and Development Unit of the Illinois Division of Vocational and Technical Education (DVTE) was one of an initial group of 24 RCUs to be funded under the '63 Act. These 24 began operation on August 1, 1965, and were maintained through a series of federal grants until the '68 Amendments were implemented in 1969. I was privileged to join this unit in 1970 and to serve as its director from 1972–1980. It was during this time that I became very involved in legislation and policy issues.

Illinois developed and operated a very functional RCU as evidenced by how much it was emulated by other states and written about it in the professional literature. Our formula was simple: We started by setting state priorities using results from an annual survey of constituents, coupled with a series of hearings around the state where everyone in the system had an opportunity to participate. As required by law, we interfaced with the Illinois State Advisory Council for Vocational Education and our University Liaison Council, which was made up of a representative from each of the eight state universities that operated vocational teacher education programs.

Once we had set our priorities, we developed a request for proposal (RFP) for each activity that had been identified for funding. For the most part, every project lasted three or four years, starting with a research phase followed by a developmental phase. During this phase the “product” was developed and tested—a process that could take up to two years depending on the expected outcomes, which were usually research or evaluation projects, model programs, curriculum designs or a set of instructional materials. Today, some form of skills assessment or competency certification would be a routine outcome.

Once the product or service was developed, we had an in-service/demonstration/ dissemination phase that usually lasted a year or more given the scope of the project. Throughout this process we conducted various reviews and evaluations that were designed to improve the product, as well as the process. Determining impact was also an important part of the process. Every year we had an open-ended RFP that solicited innovative ideas not identified during the priority-setting process.

During the 1970s, Illinois was the fourth largest state, and 20 percent of our annual allocation came to approximately \$5 million which supported between 75 and 100 projects per year. These funds also supported a staff of 10 to oversee the process.

The most successful personnel development program we operated was created by Bill Reynolds, the initial director of the DVTE's Curriculum and Professional Development Unit. It involved the selection and support of at least one graduate student per year from each of the eight state universities to intern in our office (or at other entities) for up to a year. Overall, it can best be described as a true mentoring experience in that each intern identified a person or persons he or she wanted to learn from. In practice, interns shadowed their mentor everywhere they went, including to conventions. They also received regular staff assignments in the unit they were attached to, as well as a monthly stipend and reimbursement for travel. As it turned out, they had more freedom and opportunities than regular staff did, which became a problem later.

Several leaders emerged from this program: two became state director in Illinois and one became the executive director of a national CTE-related association.

COVERD's Impact on the '76 Amendments

Prior to the formulation of the Vocational Education Amendments of 1976, Congress conducted several hearings to determine the strengths and weaknesses of the '68 Amendments. Simultaneously, no less than four studies were conducted to determine the effectiveness of the \$250 million that had been spent on research and development at the federal and state levels from 1965–1975. Without a doubt, the most significant of these studies was conducted by the Committee on Vocational Education Research and Development (COVERD) under the auspices of the National Academy of Sciences, whose involvement, in and of itself, was a major coup since it signified how important research and development in vocational education had become (COVERD, 1976; McCage, Batsche, & Hansen, 1980).

By 1975, this so-called “research and development system” featured an RCU of some configuration in every state and six territories, along with several important federal initiatives supported by the commissioner of education. Since the release of the COVERD report and the emergence of the '76 Amendments overlapped, it was virtually impossible to determine how much influence the COVERD findings actually had on the '76 Amendments. However, hindsight has revealed that at least 11 of COVERD's 14 recommendations were included in the amendments in some fashion.

The Congressional Response to COVERD's Major Findings

Generally speaking, the findings and recommendations of the COVERD review were positive toward the RCU and were sincerely aimed at improving the RCU system, which included

all aspects of Part C—Research (federal and state), Part D—Exemplary Programs and Projects (federal and state) and Part I—Curriculum Development (federal only). Nevertheless, COVERD charged that these programs were conducted in isolation of each other and had been operated without a sound set of long-range priorities, as well as no comprehensive plan for management. (COVERD, 1976; McCage, Batsche, & Hansen, 1980)

In formulating the '76 Amendments, Congress decided to eliminate the line-item format prevalent in the '68 Amendments by consolidating, under Subpart 3—Program Improvement and Supportive Services, the following six sections: Research, Exemplary Programs and Projects, Curriculum Development, Personnel Development, Guidance and Counseling, and Grants for the Elimination of Sex Bias and Sex Role Stereotyping.

Congress further mandated that 20 percent of the funds allocated to the states be used to support the six categories of Program Improvement and Supportive Services, and that a comprehensive plan for program improvement be developed, which included the structure of the state's:

- RCU
- priorities for program improvement (defined as Research, Exemplary Programs and Projects, Curriculum Development and Personnel Development)
- method for addressing these priorities
- allocation of resources by priority
- procedures to be used for the dissemination of the state's products and services to the local level (COVERD, 1976; McCage, 1980).

It should be noted that while guidance and counseling and sex-equity grants were a part of the six elements supported under the Program Improvement and Supportive Services title, they were not required to be included in the RCU's comprehensive plan for program improvement unless the state so chose since each state had its own set of guidelines for management and set-asides for funding.

COVERD further charged that the \$250 million expended for some 5,000 research and development activities at the federal and state levels during the previous 10 years had no documented evidence of significant impact at the classroom level. While most of the RCU directors believed that documentation of impact was absolutely critical, they also believed that this particular finding was unfair given that the law had not clearly specified that the classroom was the ultimate target of every activity (COVERD, 1976).

Nevertheless, this resulted in Congress mandating that every state use a "contracts-only" approach to funding and that each project include an impact statement. While this provision was well-intended, it caused problems in several states because of the various ways states defined "contract."

Preparing for What Became Perkins

Not long after Gene Bottoms went to Washington, DC, in 1978 to become executive director of the American Vocational Association (AVA), which is now the Association for Career and Technical Education (ACTE), he paid a visit to Rep. Carl Perkins of Kentucky. During this visit Bottoms learned that vocational education had an "image problem" on the Hill, and its proponents were perceived as not speaking with one voice as evidenced by the fact that those purporting to represent the field were more prone to promote their own discipline as contrasted to the field as a whole.

As a consequence, Bottoms and Mel Barlow (1980), a professor and researcher at UCLA and author of *History of Industrial Education in the United States*, wrote a white paper based on the work of nine study groups. These study groups, working as one, were charged with studying the issues of the day to create research-based recommendations for reauthorization of the '76 Amendments.

In December 1979, the following research and development entities existed:

- National Center for Research in Vocational Education (NCRVE)
- National Academy for Vocational Education
- ERIC Clearinghouses for Adult, Career and Vocational Education at NCRVE
- *Resources in Vocational Education*, an NCRVE publication
- National Vocational Education Curriculum Coordination Network of Regional Centers
- RCUs in all 50 states and six trust territories
- Leadership Development in Vocational Education Fellowships
- State Systems Program in Vocational Education Fellowships

Up to this point, the federal and state research and development entities listed above were constantly expanding and improving, which meant that they were becoming increasingly important to the field. Little did anyone know that nearly all these groups were at their peak and would soon begin to slowly disappear from the vocational education system.

As an off-shoot, three professional organizations grew out of this close knit research and development community. The first was the American Vocational Education Research Association, now the Association for Career and Technical Education Research, a long-time and loyal affiliate of AVA/ACTE, which just celebrated its 50th anniversary at CareerTech VISION 2016. The second was the National Research Coordinating Unit Association, which later became the National Association for Vocational Education Program Improvement, and today is the National Association of Workplace Improvement. The third was the American Vocational Education Personnel Development Association, another long-time affiliate of AVA.

The Transition to Perkins

The common practice for handling any legislation related to education was that it was formulated in the House, sent to the Senate for review, consolidated in joint committee and passed by both bodies in a friendly and bipartisan way. This was especially true as it pertained to the Vocational Education Act of 1963 and its subsequent amendments.

But in 1984, the process changed in that both bodies wrote and openly promoted their own version of what would eventually become the Carl D. Perkins Vocational and Technical Education Act of 1984. Nevertheless, it was still generally accepted that the House version would prevail since Perkins was viewed as the de facto leader in anything related to education and labor. Unfortunately, very near the end of the process he died, and literally overnight the situation reversed itself in that the Senate version became the framework for what emerged as the final bill.

Unfortunately, under the '84 bill, the four key elements of Program Improvement and Supportive Services (Research, Exemplary Programs and Projects, Curriculum Development and Personnel Development) that were always presented as part of a coordinated and cohesive research and development system were not retained as such. Instead, they were scattered throughout the law as something that was permissible, with a major emphasis being placed on curriculum and instruction.

In fact the word "research" is very hard to find in any part of the law that pertains to state functions. It does appear in the sections that pertain to the National Center for Research in Vocational Education and the federal research grants under Programs of National Significance.

Given the structure and content of the two versions of the proposed bill, there is little question that had the House version prevailed, Program Improvement and Supportive Services would have remained intact and been strengthened given the language that was emerging from the reauthorization process and the fact that the House version was pretty much a

major edit of the '76 Amendments.

In hindsight, had Congress just reduced the funds from 20 to 10 percent and kept Research, Curriculum Development, Exemplary Programs and Projects, and Personnel Development as the key elements of Program Improvement, the RCU would have survived; however, expanding the list to nearly 30 items eligible for support coupled with a 10 percent de-crease in funds was the straw that broke the camel's back.

Examples of Impact

While I could fill this Journal with case by case antidotes regarding the success of this system, I will just comment on three outcomes. It seems that about 4 years ago I was wandering through a public library in Duluth, Georgia. As I was passing through the stacks I came across a book entitled, "Applied Physics" which I pulled from the shelf thinking it might be one of Dan Hull's books from CORD's many years in Tech Prep. Instead, it was the 9th Edition of one of two publications the Illinois RCU had funded with Parkland Community College in the early 70s.

One of the first projects I visited when I went to work in Illinois in 1970 was titled Computerized Vocational Information System which very quickly became known as CVIS. CVIS was one of the very first cases in this country where an actual computerized vocational information guidance system was successful developed and operated in a high school environment. CVIS was initially developed by JoAnn Harris and her staff which consisted of a high school math teacher and a fellow guidance counselor using John Holland's Theory of Career Choice while at Willow Brook High School in Oak Brook, Illinois. When asked, how her team was able to make this concept work when other key leaders and companies in the field had failed, she replied, "We didn't know it couldn't be done".

But this is only the beginning. Once CVIS was up and running JoAnn, along with Larry Blasch from IBM and others from her staff came up with an even bigger version of CVIS they dubbed DISCOVER which was estimated to be 9 times more comprehensive than CVIS. When they came to our office with a proposal to expand the system we told them the concept was fantastic but it was too big for our pocketbook; consequently, we agreed to provide them \$75,000 for one year as a match to the \$75,000 in staff time that IBM had agreed to while they looked for other funding.

To assist them in this effort, my staff worked with them to write a proposal to the Feds for a Part C Research grant which was successful. As a consequence the project was initially funded to operate out of Willow Brook; however, later in the process JoAnn Harris decided to become JoAnn Harris

Bowlsbey and move to Western Maryland University where by mutual consent the project followed.

To make a long story short, this system which started with support from the state's share of federal funds, then obtained funds from the federal share along with a private sector partner to expand and grow it to fruition. In the end it became a product of a not-for-profit under the umbrella of American College Testing (ACT) and is still available today in various forms and applications.

Gender equity was a major emphasis of the Education Amendments of 1976 P. L. 94-482. However; gender equity actually surfaced as a priority in surveys conducted by the Illinois RCU as early as 1972. Consequently; development of curriculum materials in gender equity in vocational education was presented to and approved by the State Board of Vocational Education and Rehabilitation in late 1972 after which a request for proposal was issued.

Following the receipt of several viable proposals, Steiger, Fink and Smith, Inc. of McClean Virginia (later Steiger, Fink and Koscoff, Inc. of Santa Monica California) was chosen to conduct the activity. During the first year, research was conducted which resulted in a report entitled Vocational Preparation for Women which was then used as the basis for designing curriculum during phase 2.

Several of the major recommendations contained in the report were used by D. Joanne Steiger in testimony during Congressional oversight hearings in preparation for the 76 Amendments. Consequently, this report had direct impact upon the sex equity language that was incorporated into P. L. 94-482. The project then moved to the curriculum development and testing phase that resulted in a final product called Expanding Career Horizons, a kit which contained five units that could be integrated into any classroom situation from grades seven through fourteen.

As phase three began, a proposal was submitted to the U. S. Office of Education (now Department of Education) which resulted in a Part C Research Grant of \$72,552 to the Illinois RCU for the final revision and dissemination of the materials. In addition, a portion of the funds were used to develop a film titled When I Grow Up which was used as an introductory activity for several in-service activities conducted around the country. This film was awarded a bronze medal for excellence at the 1977 New York Film and T. V. Film Festival. As a result of this joint federal and state venture more than 1,000 kits were disseminated throughout Illinois.

Finally, in 1978, the Commissioner of Education charged the National Center for Research at the Ohio State University with the annual task of selecting six products for national dissemination. The first product selected was Expanding Career Horizons and by 1980 at least 35 other states had received the product during national diffusion and dissemination activities with twelve states having requested workshops in their states. Another Illinois RCU product titled Occupation Survival Skills authored by Robert Nelson from the University of Illinois was one of the other five selected in year one.

Being able to truly document meaningful outcomes in even the best of circumstances is very difficult at best given the context of operation both in terms of the time it takes to development, test and fully implement an innovative practice. In fact, researchers tell us that it takes from 7-21 years to implement a major concept in an educational environment which conflicts with the fact that most legislators want concrete results by the time their term ends or at least during the cycle of a given funding period which for vocational and technical education legislation is 5-10 years with an average of about 8 years².

While I deeply regret the loss of the coordinated approach to research and development at the state level, I am happy to report that high-quality research and development do still occur. Increasingly, it takes the form of federally supported initiatives such as School-to-Work. Today, partnerships between business and industry and education are becoming the norm, along with regional and national consortia.

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²Note: Most of these are documented in *Managing Program Improvement: One State's Approach*.



Ronald D. McCage, Ed.D.

Ronald D. McCage served as the Executive Director (1980-2007) and President (2007-September 2012) of the Career and Technical Education Consortium of States (CTECS) (formerly VTECS), a not-for-profit organization that specializes in performance based instructional design and assessment

strategies for career and technical education. From 1970-1980, Ron served as Director of the Research and Development Section, Department of Adult, Vocational and Technical Education, Illinois State Board of Education.

Ron was directly involved in the efforts of the U.S. Department of Education and U.S. Department of Labor to develop voluntary skill standards and certification systems during the 1990's and was heavily involved in the recent Career Clusters Initiative which was his second time around for Career Clusters having played a key role in the Career Education movement of the 1970s as promoted by Dr. Sidney P. Marland, then Commissioner of Education. Ron recently retired from the ATEA Board of Trustees serving from 2003 to 2017.



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