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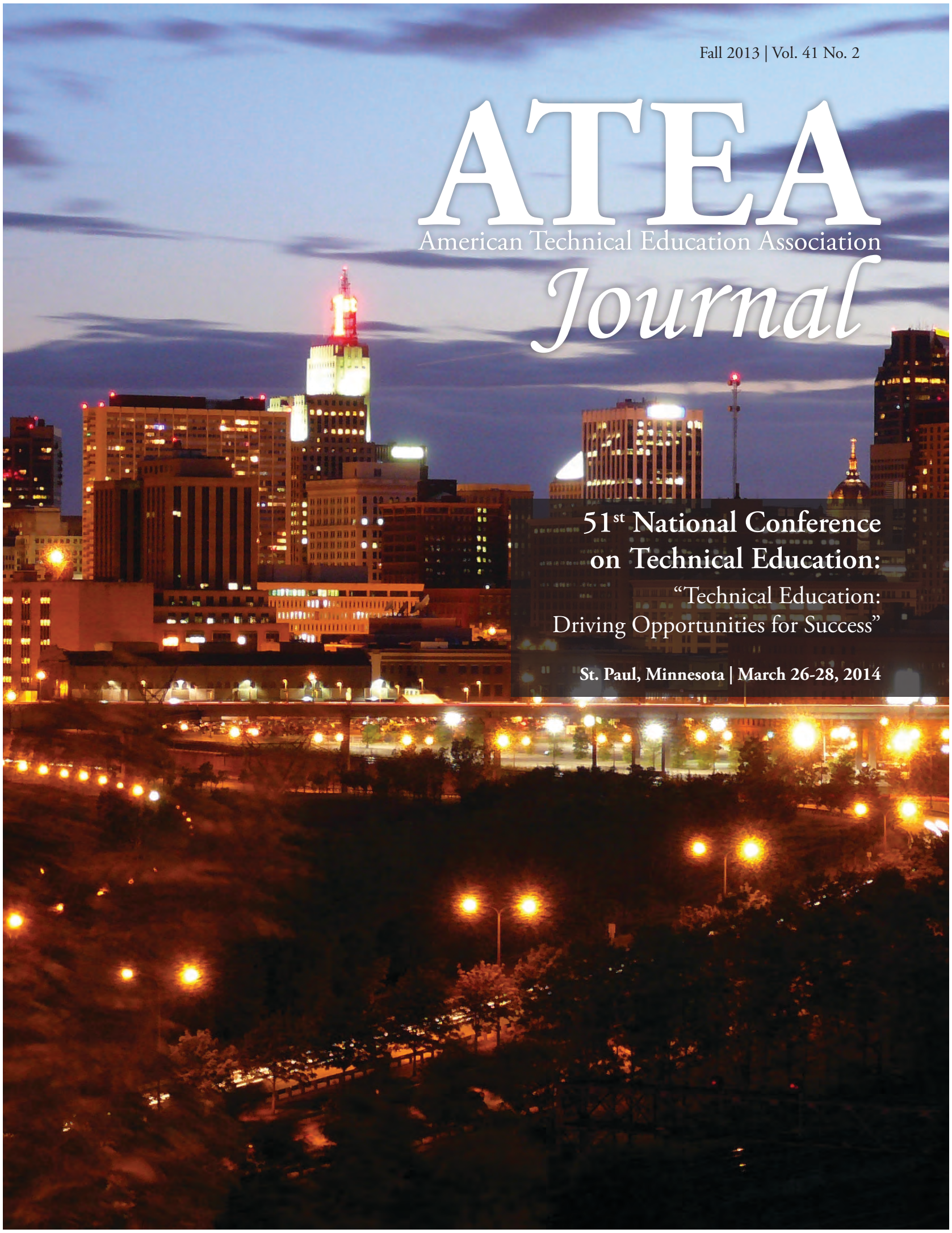
ATEA

American Technical Education Association

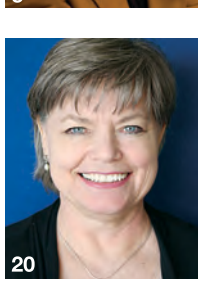
Journal

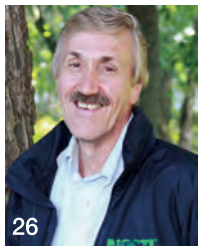


51st National Conference on Technical Education:

"Technical Education: Driving Opportunities for Success"

St. Paul, Minnesota | March 26-28, 2014





COVER PHOTO

St. Paul skyline

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The ATEA JOURNAL is the official journal of the American Technical Education Association, Inc., and is published twice annually (fall and spring) by the American Technical Education Association, Inc., Dunwoody College of Technology, 818 Dunwoody Boulevard, Minneapolis Minnesota 55403, 612-381-3315, e-mail skrebsbach@dunwoody.edu. Web site www.ateaonline.org. All members of the Association receive this ATEA JOURNAL. Corporate/business members $500 per year. Institutional members $500 per year. Individual members $75 per year. Retired persons $30 and student members $15. Life membership $600.

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.

From The Executive Director

This issue of the *ATEA Journal* continues the discussion of industry certificates in "Krystal Kleer" with an op-ed by Dr. John Foster. Dr. Foster is published in *Career Pathways Effect: Linking Education and Economic Prosperity*. In a new section "Best Practice", Tennessee Colleges of Applied Technology (TACT), shares examples of how the National Coalition of Certification Centers (NC3) and TCAT's are partnering to validate new and emerging skills in specific areas. Consider sending your best practice for publication in the spring *ATEA Journal*.

The *ATEA Journal* reports on "Science in Action" the ATEA Region V conference hosted by North Dakota State College of Science in Wahpeton, North Dakota, Thank you to Jim Erdahl who chaired the Committee that produced the high quality professional development event. The conference provided insight into moving with technology and partnering with industry. The bottom line from the key note is that technical and applied education is uniquely positioned to meet the learning needs of the generation under 26. They want skills taught by professionals with experience in the field.

The "Reviewed and Refereed" section has a new editor, Dr. Nasser Razek, clinical faculty at the University of Dayton. He and out-going editor Dr. Sandra Coyner share the "Editors Notebook" page. Jane Hildenbrand, Ivy Tech, Kokomo, Indiana, will serve as the Associate Editor to facilitate the review process and as a reviewer. Welcome to Dr. Razek and to Jane Hildenbrand. Thank you to Dr. Coyner for developing a respected journal on technical education. She will continue as a reviewer. I encourage you participate in the *ATEA Journal*. We accept articles for review on an on-going basis. The guidelines are on the ateaonline.org website.

The 51st National Conference entitled "Technical Education: Driving Opportunities for Success" will be in St. Paul and is hosted by Dunwoody College of Technology. This edition includes "Schedule at a Glance," description of tours and keynote speaker. There will be a panel of Dunwoody alumni entrepreneurs on "The Role of Technical Education in Creating Companies." ATEA members and colleagues are encouraged to present. Proposals will begin to be reviewed in December but open to February 1 for submittal.

The Board of Trustees met this fall in Indianapolis for a strategic planning session and renewed its commitment to professional development both nationally and through Regional Councils. They value your membership and may contact you. Watch for more at the national conference in March and on the web.

Look for ATEA email updates and updates on ateaonline.org.

See you in March in St. Paul.

All the best,

Dr. Sandra Krebsbach

president's letter

Let me start off by saying that it is an honor to serve as the president of the American Technical Education Association, an association I have supported for more than ten years. I have enjoyed the conferences and appreciate the commitment and passion the members share for career and technical education. On behalf of the trustees and members of ATEA, thank you to Larry Moser for your service as president of ATEA!

In October the Board of Trustees gathered in Indianapolis, Indiana, for a day long strategic planning workshop. An outside facilitator helped us brainstorm strategies to expand membership, provide relevant programming on best practices in technical education, and discuss the association's strengths, weaknesses, opportunities and threats. It was a productive day that will help us better meet your needs as together we strengthen technical education across our great nation. Thank you Tom Snyder and Ivy Tech Community College for your hospitality!

Over the past several years, technical education has gained the spotlight through local and national media coverage. Everywhere you look there are articles about the skills gap, the value of education, student loan debt, and graduation and employment rates for students. The nation is realizing the need to close the skills gap as more people are leaving the workforce than we have in the educational pipeline. These forces, the skills gap and questioning of the value of "traditional" higher education create an opportunity for technical educators and technical education. Technical educators have heard the call and have created innovative approaches to help close the gap and illustrate the value technical education provides to the community, to companies that need skilled employees, and most importantly to those individuals who look to us for a pathway to the middleclass. Whether it is training at an employer's facility to enhance the skill set of their current employees, establishing new apprenticeship approaches for workforce development, launching short-term programs in emerging industries, or leveraging technology to improve learning, technical educators are the driving force that will make sure our nation and regions have the skilled workers needed to fuel economic growth.

At ATEA we share how technical educators are shaping programs to meet the needs of today's and tomorrow's workforce from Washington to Connecticut, from Minnesota to Tennessee. The power of ATEA is that is brings together technical educators to share best practices, learn about emerging technology, develop camaraderie, and stay current in dynamic ever-changing fields. In March of 2013, nearly 1,000 technical educators came together in Chattanooga, Tennessee as we "Set the Gold Standard." The power of our movement is gaining momentum, and we certainly made a statement in Chattanooga!

Let's get ready to keep that momentum going as we come together in Minneapolis, Minnesota in March of 2014. I look forward to hosting all of you so that together we can celebrate the power of technical education. In addition to the ATEA National Conference occurring in Minneapolis, Dunwoody College of Technology is celebrating 100 years of changing peoples' lives by providing a hands-on education that leads to an immediate job and a rewarding career. The first day school director at Dunwoody was Charles Prosser, a man many have called the father of vocational education. It is appropriate that as technical education is placed in the spotlight that we celebrate at the place where the philosophical framework for the Smith-Hughes Act was created.

This is an exciting time as we face so many challenges: technology that turns over and revolutionizes industries; demographics changes in the workforce; and the retirement of the baby-boomers, which is contributing to shortage of skilled technicians in high demand in a radically different workplace. It is our time as technical educators to heed the call and meet the challenges with the "yes we can" attitude that is a hallmark of technical education. I hope to see you in Minneapolis!

Richard Wagner, Ph.D. President ATEA Board of Trustees, President Dunwoody College of Technology, Minneapolis, MN
rwagner@dunwoody.edu

Mission

The American Technical Education Association (ATEA) is the premier association for the postsecondary technical educator with emphasis on professional development. The organization is dedicated to excellence in quality of postsecondary education focusing on practical teaching ideas and best practices. ATEA recognizes outstanding performance and leadership and provides a network for career connectivity. ATEA is voice for postsecondary technical education and is a driving force behind workforce development.

ATEA Board of Trustees

ATEA Liftime Members

Thank you to ATEA Lifetime Members who joined at the $600 rate. Lifetime members make a one-time contribution of $600 which entitles them to a lifetime of the *ATEA Journal,* insurance policy access, and connection to ATEA.

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*Albert White Calf
Jerome Wolf
Darius Young
Lawrence Zane
J. Zanzalari
Allen Zimmerman

* Deceased

American Technical Education Board of Trustee Meeting and Strategic Planning session held in Indianapolis with a tour of Amatrol, Jeffersonville, Indiana

October 1-3, 2013

Craig Overmyer, an Indiana based consultant, lead the Board through a day long planning session. The session produced a commitment to high quality professional development, the *ATEA Journal*, regional and state connections for members, and expanded professional development opportunities using technology.

Thank you to Trustees, Tom Snyder and Jane Hildenbrand, and to Ivy Tech staff for their hospitality. The planning session was held at the Ivy Tech Corporate College and Culinary Center. Thank you to Paul Perkins for the tour at the Amatrol production, software design and fulfillment center in Jeffersonville Indiana.

You are invited to attend the ATEA annual meeting for more on ATEA Board direction to be held on Friday, March 28, 2014 at the national conference Crowne Plaza, St. Paul MN.

2014 ATEA 51st National Conference on Technical Education

"Technical Education: Driving Opportunities For Success"

March 26-28, 2014, St. Paul MN.Crowne Plaza

Reasons why you should attend the 2014 ATEA National Conference on Technical Education:

NETWORK with more than 300 peers, colleagues and leaders in technical education from across the nation;

LEARN the latest techniques, tools and strategies to foster learning in your classrooms and labs;

EXAMINE the latest products and services of companies who offer hardware, educational software and web activities that enhance technical education by attending the trade show;

EXPLORE the various activities Minneapolis and St. Paul have to offer and choose one of the outstanding tours of cutting edge facilities.

host

Dunwoody College of Technology Invitation to 51st National Conference

Dunwoody College of Technology is pleased to again host the American Technical Education Association's annual conference, and especially pleased to be able to do so during its Centennial year. Located in downtown Minneapolis, Dunwoody has produced the technicians, designers, project managers and entrepreneurs who have built the Twin Cities skyline, economy and way of life.

Dunwoody College of Technology President Rich Wagner invites you to join him at the American Technical Education Association's 51st National Conference on Technical Education held this year in Saint Paul, Minnesota, March 26-28, 2014. The theme of the conference is **"Technical Education: Driving Opportunities For Success".**

This is an opportunity for us to celebrate our successes and share best practices. It's also a chance to discuss how we are meeting the ongoing challenges we all face as technical education practitioners and boosters in what is an increasingly difficult higher ed landscape.
The Twin Cities area is the second largest economy in the Midwest and home to 18 Fortune 500 headquarters. It remains a powerhouse in manufacturing, especially in high precision machining for the medical device industry, and also supports robust construction, printing and packaging, technology, automotive, retail and other sectors that hire tech ed graduates. The Twin Cities area is also known for its vibrant cultural, educational, sports and entertainment offerings and the overall high quality of life its residents enjoy.
We hope you come for a visit. The conference will be great. There's also good food to eat, great places to check out, and much fun to he had. Make your plans today!

-Richard Wagner, Ph.D.
President of Dunwoody College of Technology

DUNWOODY
COLLEGE OF TECHNOLOGY

The College offers more than 30 associate and bachelor degree offerings in seven industry areas: Applied Management, Automotive, Computer Technology, Construction Sciences & Building Technology, Design & Graphics Technology, Health Sciences & Technology and Robotics & Manufacturing.

Under the direction of its first day school director Charles Prosser, Dunwoody pioneered the practice of technical education delivered via rigorous, hands-on learning in lab/shop settings taught by professionals with substantial industry experience. Students are also taught to problem solve, follow safe and ethical industry practices, and continue to master their chosen trade.

The College carries that legacy with it into its second century as it maintains its commitment to change lives by building opportunities for graduates to have successful careers, to develop into leaders and entrepreneurs, and to engage in ***"the better performance of life's duties."*** *(Quote is from the Last Will and Testament of William Hood Dunwoody).*

Tour Dunwoody College of Technology

tours

51st National Conference Tours

Tour of HealthPartners Pharmacy Mail Distribution Center, HealthPartners is an integrated health care system based in Bloomington, Minn. Health Partners was recognized by the National Committee for Quality Assurance (NCQA) ranked HealthPartners as the top health plan in Minnesota and among the 30 highest performing health plans in the U.S.

The HealthPartners mail order pharmacy integrates multiple technology systems and pharmacy personnel to provide a optimal customer experience that is highly accurate, cost effective and timely. From the start of the experience via IVR, web, mobile or live person to the prescription processing of e-prescribing, EPIC integration with pharmacy host systems, the medication orders make their way to mechanical automation/robotics and ultimately to the customer's mailbox. Along this pathway, optimizing the role of the pharmacy technician and pharmacist are important components to value added service delivery.

This tour is limited to 12 due to space and security. Those with programs in robotics, integration of systems and the role of the pharmacy technician will want this tour. Note it is earlier than the others, gather at 11:45 am leave at 12 noon and return by 2:00 pm.

Tour of the Tennant Company is a recognized leader in designing, manufacturing and marketing solutions that help create a cleaner, safer, healthier world. With a vision to become a global leader in chemical-free cleaning and other technologies, Tennant creates innovative solutions that are changing the way the world cleans. Tennant products include equipment used to maintain indoor and outdoor surfaces, as well as TennantTrue® financing solutions, equipment parts, service, and maintenance to help ensure superior cleaning performance from your Tennant machines. Products are marketed under the Tennant®, Nobles®, Green Machines®, Orbio® and Alfa brands. Tour information on the ATEA registration website.

Tour of Buhler North American Headquarters 153 years ago Adolf Buhler set up an iron foundry in Uzwil, Switzerland, and thus laid the foundations for the successful history of Buhler. Throughout the years the company evolved to be a global market leader in the supply of flour production plants, pasta and chocolate production lines, animal feed manufacturing installations, and aluminum die casting systems. The core technologies of the Group are in the field of mechanical and thermal process engineering. Buhler Group operates in over 140 countries and

tours

51st National Conference Tours

has a global payroll of over 10,000. **Buhler Inc.** in Plymouth, MN, is the North American Headquarter and operates from there since the 1950's.

The Buhler Apprenticeship Academy was set up in 2012 because Buhler saw the need to train and educate Service Engineers in-house because of the lack of sufficiently trained young people in the market. It is modeled after the apprenticeship programs found in Switzerland and Germany.

The tour will lead visitors through the Buhler Apprenticeship Academy, their workshop and classroom and the instructor will explain the program. Then visitors will see the Buhler Shop Floor where parts for Buhler machines for the milling and chocolate industry are being produced and serviced. The tour guide will also lead through the automation shop and show where the electrical panels for Buhler systems are fabricated.

keynote

Keynote Speaker:

Jack Uldrich is a renowned global futurist, independent scholar, sought-after business speaker, and best-selling author.

In addition to speaking on future trends, emerging technologies, innovation, change management and leadership, Uldrich is a leading expert on assisting businesses to adapt. He has served as an advisor to Fortune 1000 companies and is noted for his ability to deliver provocative, new perspectives on competitive advantage, organizational change and transformational leadership.

Highly regarded for his unique ability to present complex information in an entertaining, understandable and digestible manner that stays with his audiences long afterwards, Uldrich has spoken to hundreds of businesses and organizations, including IBM, Cisco, WiPro, Wells Fargo, General Electric, General Mills, United Healthcare, Pepsico, the Young Presidents Organization (YPO), Pfizer, Invitrogen, St. Jude Medical, AG Schering, Imation, Fairview Hospitals, Touchstone Energy, The Insurance Service Organization, The National Kitchen & Bath Association, The National Paint & Coatings Association and dozens more.

schedule

51st National Conference Schedule-At-A-Glance

Wednesday, March 26

8:00 am – 4:30 pm	Registration
8:00 am – 4:00 pm	Exhibitor Set Up
8:00 am – 9:00 am	ATEA Committee Meetings
10:00 am – 12:00 noon	ATEA Board of Trustees Meeting

Business and Industry Tours

11:45 am – 1:30 pm	HealthPartners Pharmacy Mailing Distribution Center*(Limit of 12)*
1:00 pm – 4:00 pm	Buhler
1:00 pm – 4:00 pm	Tennant
1:00 pm – 4:00 pm	Dunwoody College of Technology

4:30 pm – 6:00 pm	**Opening Reception in Trade Show Area** **Get Acquainted with the Exhibitors**
6:00 pm – 8:30 pm	General Session and Dinner Keynote speaker –**Jack Uldrich**, author and futurist ***"Ten Trends Transforming the Technical Education of Tomorrow."***

Thursday, March 27

7:30 am – 12:00 noon	Registration
7:30 am – 12:00 noon	**Exhibits Open**
7:30 am – 8:00 am	Coffee with Exhibitors
8:00 am – 8:55 am	***"Role of Technical Education in Creating Companies"*** -Dunwoody College of Technology Alumni Entrepreneurial Panel
9:05 am – 9:50 am	Concurrent Sessions A–8
10:00 am – 10:45 am	Concurrent Sessions B–8
10:45 am – 11:05 am	**Break with exhibitors**
11:10 am – 11:55 am	Concurrent Sessions C–8.
12:00 noon – 1:30 pm	Awards Luncheon -ATEA National Awards
2:05 pm – 2:50 pm	Concurrent Sessions D–8
3:00 pm – 3:45 pm	Concurrent Sessions E–8
4:00 pm – 5:00 pm	Reception

Check online at **www.ateaonline.org** for updates to this schedule!

Friday, March 28

8:00 am – 8:50 am	Regional Meetings –meet your colleagues and ATEA Board members
9:00 am – 11:15 am	Brunch and General Session -*"Technologies Across the Curriculum"* panel -ATEA Business Meeting -Invitation to 2015 National Conference -Door Prizes

Conference Registration: Early bird rate **$425** *Nov.1 2013 - February 1st 2014*
Regular rate **$495 after** *February 1st*

HOTEL INFORMATION:
Crowne Plaza
11 East Kellogg Boulevard
St. Paul, MN 55101
Phone: 1-866-686-2867
ATEA Rate $121+ tax
Ask for the "ATEA Rate"!

To Crown Plaza reservation website

presentation

Robbie Melton

Dr. Melton will highlight the latest innovations and impact of mobilization (smartphone, tablets, apps, and emerging technologies) on workforce development, training, and the national thirteen career clusters. Come see how your smartphone can be used as effective teaching, learning, training, and workforce tools.

Dr. Melton's awards include: 2013 Apple Distinguished Educator, 2012 Top Fifty Technology Innovation Educator from the Center for Digital Education and Converge, 2012 International ELES4-Africa Educator Technolgist, WCET WOW Education Technology Award, Tennessee Board of Regents – 2011 Catalyst Leadership Award, 2010 IMS Global Learning Leadership, 2010 MERLOT Educational Leadership Higher Education System Level.

Dr. Melton serves on the Sloan-C Board of Directors, WCET Executive Board, and as Tennessee MERLOT Project Director, IMS Global Learning Solution Higher Education Co-Chair, and Co-Chair Global Educational Center.

Call for Presentations

To present at the 2014 National Conference!

Please provide the following information:

1. Formal name of Presentation
2. Descriptive paragraph about the presentation
3. Presenter(s): Name, Title, Organization
4. Short Introductory Biography
5. Equipment needs for the presentation: (screen, projector, etc.).*please bring your own laptop*

QR Code link to Presentation Application

Presentation Proposal form link is on www.ateaonline.org (QR to proposal). Complete application form and email to.

Scan and email

prefer by December 20, 2013 but will accept up to February 1, 2014.

e-mail: skrebsbach@dunwoody.edu
–when emailing please use 2014 presentation title in the subject line.

Phone: 612-381-3315

It's time to show the Technical Educators across the nation the best of what's new!

EXHIBIT

at the

2014 ATEA 51st National Conference on Technical Education

TRADE SHOW
March 26-27, 2014
Crowne Plaza, St. Paul MN

Reach the product and service decision makers from the postsecondary technical centers, institutes and colleges from across the nation at the 2014 ATEA 51st National Technical Education Conference, host Dunwoody College of Technology.

The conference will attract 200 - 300 participants from across the nation.

The ATEA National Conference on Technical Education offers exceptional programs and opportunities to network with cutting-edge exhibiting companies.

RATES: $800 standard size booth with signage, draping, table and chairs (member discount $500).

trade show

APPLICATION AND CONTRACT FOR EXHIBIT SPACE

Company Name_____ Telephone _____

Address _____ Contact Person _____

City, State, Zip _____ Title _____

E-Mail _____ Fax _____

EXHIBIT BOOTH FEES: *Single 8'X10' booths are $500 for ATEA members and $800 for non-members. Additional 8'X10' booths are $300 each for members and $400 each for non-members. This includes piping, draping, table, chairs and an ID sign. Other furnishings must be provided by the exhibitor or the assigned decorator.*

Number of booths requested: _____

ATEA Members: 1 booth @ $500 + ____ additional booths @ $300 each = $_____

Non-Members: 1 booth @ $800 + ____ additional booths @ $400 each = $_____

BOOTH ASSIGNMENT: *ATEA will assign booth numbers in the order the contracts are received. Exhibit contracts with payment in full will receive priority. If you have any special requests, please contact our office.*

Description of product/service to be displayed: _____

_____

_____

BOOTH SIGNAGE: (for 7"X44" sign) _____

EXHIBITOR NAMES for ID BADGES: _____

_____

_____

AGREEMENT: *Complete, sign and return this Contract with your payment or credit card information. Checks should be made payable to ATEA. Notwithstanding anything else in this agreement, if the exhibiting company is not accepted or space is not available, the payment will be promptly refunded by ATEA. Applications must be received no later than March 14, 2014. ATEA will not refund payments resulting from cancellation or withdraw by the exhibiting company after March 14, 2014.*

Signature _____ Date _____

Name (print) _____ Title _____

Website address _____

PAYMENT:

____ Check enclosed ____ Please charge our Credit Card __ Visa __ MasterCard __ AmExp __Discover
(payable to ATEA)

Card number: _____ Expiration date: _____CCV (security code): _____

MAIL TO
(On or before March 14, 2014):
ATEA /Dr. Krebsbach
Dunwoody College of Technology
818 Dunwoody Blvd
Minneapolis MN 55304

ATEA use only:

Rcv'd date: _____ Total Paid: _____

Booths assigned: _____

Region V "The Science of Technology in Action"

North Dakota State College of Science in Wahpeton, North Dakota on Oct. 9-10, 2013

It was warm and sunny as the participants from Nebraska, Wyoming, Minnesota, South Dakota and North Dakota experienced another outstanding conference sharing best practices and building camaraderie among technical educators.

Mark Taylor, MSW, Ed.D.

"Understanding, Teaching and Serving Generation NeXt"

Dr. Taylor is nationally recognized consultant on the multi-generational workforce. His presentations are grounded in data and research and delivered with humor that resonates with all generations.

Take Aways on Generation NeXt—under 26 years old.

The Student:

Raised with high praise for modest effort—used to getting trophies –so entitled to an "A."

Consumers, "paid tuition therefore the right to the product--credit."

Hard wired to make choices and have options.

Due to Games and Digital Learning:

Attention spans are not shorter, can be up to 18 hours on games.

Know how to build and collaborate.

Know how to learn from each other.

Know how to seek out their own learning –find the instructions they need, often in a video and will use them.

Impact on education:

Digital resources are disrupting "live classrooms and live colleges."

"Live class" should do what is virtually impossible to do online-- what people need to be able to do in the same space.

"Flip the classroom"—move content out of class and use class for engagement with one another and with the content to build skills and to learn the value of what they are doing.

Traditional classroom with lecture is not neurologically engaging for this generation.

In the new model successful teachers are Professional Technicians–worked in the field they are teaching, "experience is absolutely necessary."

Generations NeXt learns and benefits from a "Construction Model" of education.

Region V Council Leadership

Dana Wolff, President-Elect, instructor of Financial Services and Insurance at Southeast Technical Institute, Sioux Falls SD.

President, Jim Erdahl serves through 2013 to 2014 Region V conference. Instructor Autobody Repair and Refinishing Technology NDSCS.

North Dakota State College of Science President Johan Richman

"5 A's"

North Dakota State College of Science President, John Richman, speaking at the Region V Friday keynote event identified five focus areas for North Dakota State College of Science and for postsecondary technical education for future success.

Awareness – broadcasting our student's success stories, educating young people, their parents, high school personnel and other key stakeholders of the true value that an Associate Degree has, and, of the viable career paths that exist today right here in North Dakota and at your colleges and institutes.

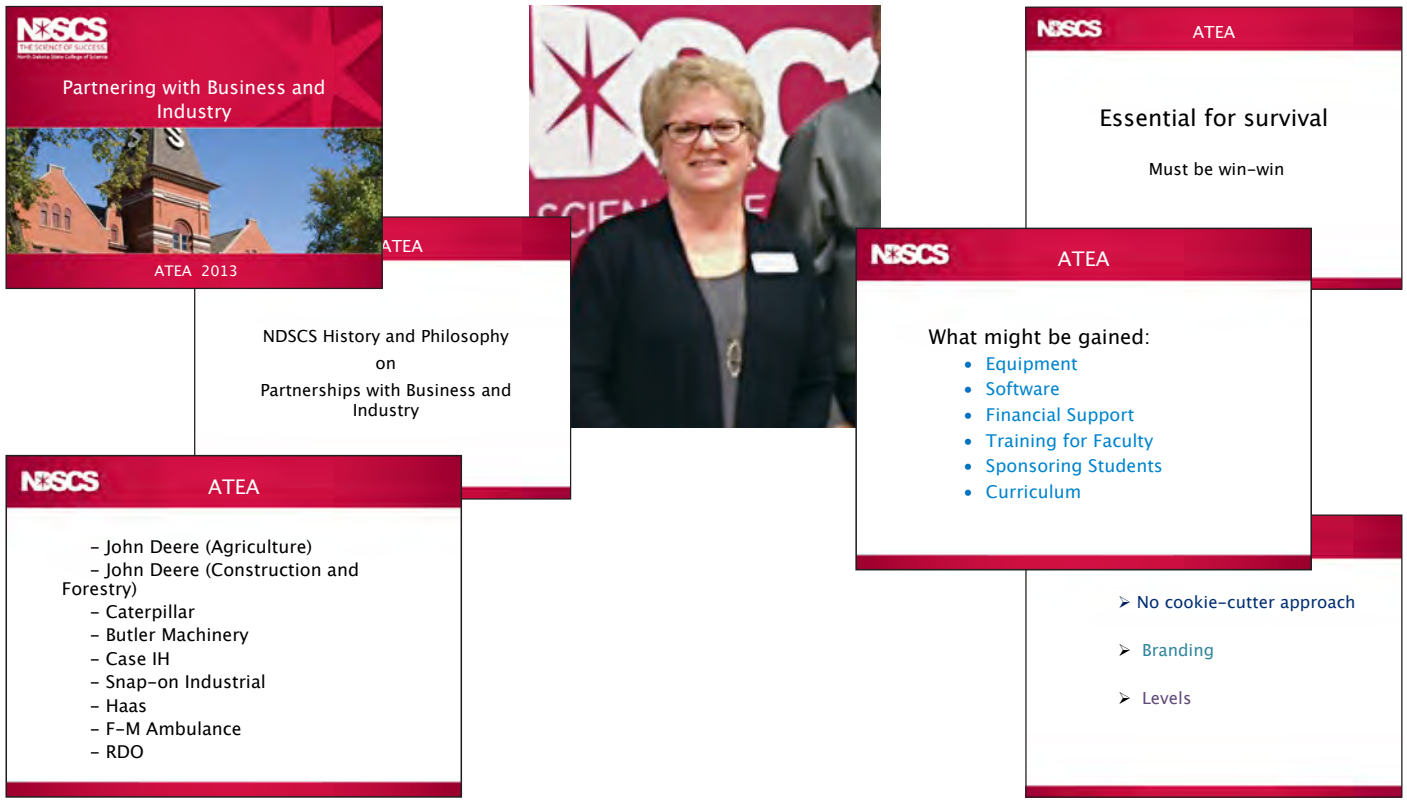
Access – creating digital learning objectives that students can access anywhere at any time; then changing the classroom environment from a "passive" learning experience to an active engaging learning experience for our students.

Attainment – Degree Attainment – knowing that more of our students will be successful if they have created a strong supportive relationship with other students, faculty or staff. We are creating those opportunities and processes that encourage these supportive relationships to be developed.

Affordability – securing external, new and alternative funding with an emphasis on developing business and industry partnerships; as well as, conducting internal assessments to identify efficiencies and necessary reallocations.

Accountability – embracing the policies, procedures and practices that will "measure" our productivity, our efficiency, our effectiveness, as well as, our success.

President Richman closed with, "World-class partnerships are igniting first-class, high-paying opportunities for those who enter NDSCS as students and graduate as career-ready professionals."



Barb Bang, Dean of Technologies and Services Division, has led her division through a major expansion in Diesel Technology with the new Bisek Diesel Center. Dean Bang presented a session on "Partnerships and Sponsorships", a hallmark of North Dakota State College of Science success.

Region V
NDSCS
Oct. 9-10, 2013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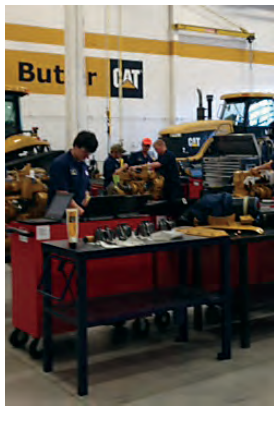
DAKOTA STATE COLLEGE OF SCIENCE


BISEK HALL
NDSCS
BISEK HALL



FALL REGIONAL CONFERENCES

You are invited to the 2014 Region V Conference

October 9-10, 2014
Northern Wyoming Community College District, Gillette Campus
Gillette, Wyoming

2015-2017 Region V Conference hosts:

2015—Southeast Technical Institute, Sioux Falls, South Dakota

2016—Mid Plains Community College, North Platte, Nebraska

2017—Minnesota State College, Moorhead, Minnesota

Thank you

Thank you to ComDel Innovations, Bobcat, St. Francis Hospital and Nursing Home, Tri-State Aviation, Giant Seeds and NDSCS for informative tours. Radio talk show host and former North Dakota State Legislator, Joel Heitkamp spoke at the Thursday evening event about the value of two-year postsecondary colleges and institutes and North Dakota strengths and challenges in the growing economy. NDSCS provided entertainment with the Wildcat singers and the faculty "Science Boys Band"—found on ATEA YouTube channel. Thank you to trade show vendors: Moss Educational and Industrial Training Solutions; Lab Midwest Corporation; Realityworks; Snap-on Tools; and Midwest 3D Solutions.

editor's notebook

Fall 2013

by Sandra C. Coyner, Ed.D. & Nasser Razek, Ed.D

PASSING THE BATON

Our professional lives are an ebb and flow of academics and experiences. Each activity contributes to our growth and development by enhancing our expertise, either through acquired knowledge or professional experiences. I am moving back into an administrative role and passing the editorial baton to a new professional. Dr. Nasser Razek will be assuming the *ATEA Journal* editorial responsibilities. Dr. Razek has extensive publication experience and is poised to support our members by providing professional development through *The Journal*. Dr. Razek will be assisted by Jane Hildenbrand, who will serve as associate editor.

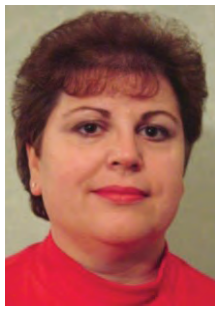
Our editorial team is responsible for the scholarly articles that appear in this publication. The articles reflect the research, activities, and best practices of ATEA members. They present the innovation and contributions that inform and promote postsecondary technical education. I am pleased to pass the editorial baton to our team as they continue our promotion of scholarship within ATEA and within our profession.

HOLDING THE BATON

In the quest for knowledge, innovation, and excellence, we rarely come across role models and pioneers to learn from. However, the challenge is always when we follow the footsteps of pioneers. We ask ourselves, "Will we be up to the standards today? Will we be up to their expectations? Did they leave us any innovation to make?".But we cannot but pledge to do our best to honor the trust, dignify the baton, and continue the quest.

Thanks to Dr. Coyner for leaving us a clear path for *The Journal* so that our members can share their innovation, serve our community and lead the nation to a better future.

Nasser Razed, Ed.D.
Editor/Interim



Sandra Coyner, Ed.D.
Past Editor

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You Tube Channel

REVIEWED ARTICLE

Career Decision Self-Efficacy and Program Completion in Post-Secondary Career/Technical Education

Kathleen Fosbinder Smith, M.A. | Tennessee College of Applied Technology—Dickson

Career Decision Self-Efficacy and Program Completion in Post-Secondary Career/Technical Education

Post-secondary student persistence rates have been a subject of considerable study in the last 30 years; however, little of this research is applicable to short-term career/technical education (CTE). Studies of full-time four-year traditional students by Tinto (1975, 1987) and non-traditional students by Bean and Metzner (1985), agree that student persistence findings are not easily generalizable. Patterns of dropout behavior vary by type of institution (Tinto, 1975) and from student subgroup to subgroup (Bean & Metzner). These studies depict the student as being shaped by and reacting to his or her external environment. They found that students withdraw when they cannot conform themselves to the learning institution academically and/or socially. CTE students (who are typically older, live off campus, and often juggle school, work, and family obligations) are not as susceptible to the same influences as traditional students at residential institutions.

Social cognitive theory holds that individuals are proactive and, according to their own self-efficacy beliefs, perform according to what they believe they have accomplished and can accomplish (Pajares, 2002). Tinto used the theory of cost-benefit analysis, predicting that a student will withdraw from school when he or she believes another form of investment of time, resources, and energy will return greater benefits compared to the perceived costs (Tinto, 1975). Pajares (1996) used Bandura's self-efficacy theory to show that students tend to choose courses of action that make them feel competent over those that do not. Pajares believed that a student's efficacy beliefs determined the time and effort spent on academics, as well his or her ability or willingness to persevere and confront obstacles (Pajares, 1996).

Peterson (1993) examined the role of career decision-making self-efficacy (the way students perceive their ability to perform vocationally relevant tasks in an educational setting) in persistence among academically underprepared students. Research cited in Peterson identified a relationship between career goal identification and persistence. De Rome and Lewin (1984) hypothesized that persistence would be positively related to students' motivation, confidence, and commitment at the time of enrollment.

Lent, Brown, and Larkin (1984) discussed the need for systematic attempts to enhance career-related self-efficacy in order to prevent weak expectations from restricting career choices in cases where students underestimate their abilities. They found that where low self-efficacy is congruent with actual ability, remedial activities should be directed at improving abilities or "encouraging the consideration of alternatives" (p. 361).

Current literature suggests new knowledge may be gained by studying self-efficacy beliefs among non-traditional career/technical students. This study was conducted to measure career decision self-efficacy (CDSE) among students entering career/technical training at the Tennessee College of Applied Technology—Dickson (TCAT-D) to determine if an association between CDSE and student persistence exists.

Content analysis of attrition records for 2008-2011 at the TCAT-D shows the two main factors for non-completion were Poor Attendance and Lack of Progress. The next two most common factors were Early Withdrawal (within 60 clock hours) and Objective Changed (the student is no longer interested in pursuing a career in his or her chosen training field). Since these two categories account for 24% of all non-completions, this content analysis suggests that loss of commitment to a training goal is a major factor in non-completion. The two programs with the highest rates of Early Withdrawal are Automotive Technology (18% of AT non-completers) and Business Systems Technology (17% of BST non-completers). Objective Change is cited as the main reason for non-completion in Industrial Maintenance Technology (14% of IMT non-completers), and Business Systems Technology (11% of BST non-completers). This study was interested in finding if a student's loss of commitment to a training goal could be related to low CDSE at the time of enrollment.

Several Questions are of interest to this study:

- Are CDSE scores higher or lower for traditional-aged students (under 25) than older students?
- Does CDSE vary by race, gender, or previous education?
- Would CDSE scores be higher or lower for students pursuing gender-traditional career programs than those who were not?
- Do students who are prescreened exhibit higher levels of CDSE at enrollment compared to students who were admitted on a first come, first served basis?

- Will students choosing training programs with high percentages of non-completion due to Early Departure or Objective Change exhibit low CDSE scores at enrollment?

Method

Participants

Participants for the TCAT-D survey were gathered for new student orientation on Monday, July 6, and Tuesday, July 7, 2012, at the main campus in Dickson, Tennessee. The survey was also distributed during orientation at the satellite campus in Clarksville, Tennessee, on July 15, 2012. These three meetings oriented all of the new students who would begin training on September 4, 2012, in every program on every campus. The sample size was 132 students, 60% female, 85% white/non-Hispanic, and 49% over age 25 (considered non-traditional). Of those reporting prior education, 5% had general education diplomas, 61% were high school graduates, and 34% indicated some post-secondary education. Demographic data provided by the National Center for Educational Statistics (2010) show average annual enrollment for TCAT-D is 650 students: 48% female, and 89% white/non-Hispanic. Student services records for 2012 show that 95%of TCAT-D students are first-time, full-time students and that 51% of the student body is over the traditional age of 25.

Materials and Procedures

This researcher obtained permission to use the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) from the authors(Betz & Klein, 1996). This survey instrument was tested for reliability and validity by Betz, Hammond, and Multon in 2005. Participants rate themselves on a five-point scale (1 = no confidence, 2 = very little confidence, 3 = moderate confidence, 4 = very much confidence, 5 = complete confidence) among five subscales (accurate self-appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving). According to the authors' scoring guide, scores above 3.6 may be interpreted as a willingness to try the behavior in question and scores below 3.5 suggest that a student will avoid that behavior. Means were calculated by totaling the five items for each subscale and then dividing by 5 to get the average response per item. The 25 item total was determined by totaling the response to all items and dividing by 25.

For this study, the surveys were explained, distributed, collected and separated from the consent forms by student services staff. No instructors were present. The total number of respondents was 132, 100% of students in attendance at orientation. This researcher tallied responses by age (over and under the age of 25), race, gender, previous education, and choice of training program.

Limitations

Time limitations on the study would allow only one sampling during the orientation for fall trimester. Due to an open enrollment policy, some programs had very few students in the sample. Cosmetology, Dental Assisting, and Practical Nursing accept students once per year so the sample included the entire class. This also caused the sample to have a larger percentage of female students than the overall student body. This study was interested in comparing CDSE between students choosing gender-traditional career fields and those choosing non-traditional career fields. The sample was 93% gender-traditional, which provides a very small sample for the comparison. A future study should sample students starting open enrollment programs during each orientation during the term.

Results

The 25 item score for the entire sample was 4.1. CDSE scores for both over and under age 25 matched the overall average of 4.1. Black and black/Hispanic students scored 3.9, each other group scored 4.1. Female students scored higher than average at 4.3 while male students scored 3.8.Students with some post-secondary experience scored 4.3 while those with GEDs and high school diplomas scored 4.0.Low scores (below 3.5) appear when controlled by program (see Table 1). Overall scores by program ranged from 3.3 (Business Systems Technology and Industrial Maintenance) to 4.5 (Machine Tool Technology). Programs with the lowest scores also had the highest standard deviation.

Table 1: TCAT-D CDSE-SF results by training program

Training Program	n	Mean	SD
Automotive Technology	4	3.6	.62
Business Systems Technology	5	3.3	1.34
Computer Information Technology	9	3.5	.48
Cosmetology	8	4.3	.62
Diesel Powered Equipment	8	4.2	.31
Dental Assisting	18	4.3	.42
Heating, Ventilation, Air Conditioning	9	4.0	.59
Industrial Maintenance	8	3.3	1.00
Machine Tool Technology	4	4.5	.53
Mechatronics	8	3.6	.58
Practical Nursing	51	4.4	.44

Students selected by standardized testing for health-related career training scored above the average of the sample (see Table 2). They also scored much higher on the subscales. Early Withdrawal and Objective Change account for only 11% of non-completions in Practical Nursing. This study asked if students who are prescreened exhibit higher levels of CDSE at enrollment. There is a relationship between prescreening and

higher CDSE scores, but students who were not prescreened gave themselves scores above 3.6.

Table 2: Scores for students enrolling with and without academic prequalification

Subscales	Health Occupations		Non-Health Occupations	
	Mean	SD	Mean	SD
Self-Appraisal	4.4	.50	3.9	.87
Occupational Information	4.5	.50	3.8	.88
Goal Selection	4.4	.47	3.9	.85
Planning	4.3	.54	3.8	.82
Problem-Solving	4.4	.51	4.0	.85
Average	4.4	.44	3.9	.79

Female students who enroll in gender-traditional career programs score much higher than those who choose non-traditional programs such as Computer Information Technology and Industrial Maintenance Technology (see Table 3). The opposite is true of male students. Those who enrolled in Practical Nursing, which is considered a non-traditional career program for males, scored much higher than male students in gender-traditional programs.

Table 3: Scores for students enrolling in traditional and non-traditional occupational areas

Subscales	Traditional				Non-Traditional			
	Female (n= 76)		Male (n = 47)		Female (n = 3)		Male (n = 6)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-Appraisal	4.3	.68	3.9	.73	3.7	.23	4.2	.52
Occupational Information	4.4	.67	3.6	.77	3.8	.21	4.2	.70
Goal Selection	4.3	.70	3.8	.69	3.4	.42	4.2	.60
Planning	4.2	.69	3.7	.69	3.6	.12	4.2	.60
Problem-Solving	4.4	.69	3.9	.76	4.0	.12	4.3	.50
Average	4.3	.65	3.8	.65	3.7	.08	4.2	.51

Female students in this sample chose to enroll in two predominantly male programs; Computer Information Technology and Mechatronics. Their CDSE scores were lower than females and males in the traditionally female occupational programs. All of the males in the sample who chose traditionally female occupational programs enrolled in Practical Nursing. CDSE scores for female students in traditionally male career programs were in line with the male students enrolling in these programs. CDSE scores for male students enrolling in traditionally female career programs were in line with female students enrolling in these programs.

Do students in programs with a high percentage of non-completion due to loss of commitment to a training goal (Early Withdrawal and Objective Change) show low levels of CDSE at enrollment? These two factors account for 28% of non-completions in Business Systems Technology (CDSE score 3.3) and 23% of non-completions in Industrial Maintenance (CDSE score 3.3).

Table 4: Percent of students recording scores indicating low CDSE by program

	SA	OI	GS	P	PS
Automotive Technology	25	25	25	50	25
Business Systems Technology	60	60	60	60	60
Computer Information Technology	11	22	22	44	22
Cosmetology	25	25	13	25	25
Dental Assisting	11	6	6	11	0
Diesel Powered Equipment	0	25	13	13	13
Industrial Maintenance	50	75	63	50	38
Heating, Ventilation, Air Conditioning	11	22	22	33	22
Machine Tool Technology	0	0	0	0	0
Mechatronics	25	38	38	33	22
Practical Nursing	3	1	1	2	2

Sixty percent of students enrolling in Business Systems Technology scored themselves below 3.4 in every subscale (see Table 4). The majority of Industrial Maintenance students scored themselves below 3.4 in four of the five subscales.

Discussion

The CDSE scale measures the student's confidence in their ability to make an accurate self-appraisal, gather occupational information, select an appropriate goal, make plans for the future, and solve problems. Students who were admitted based on academic prescreening reported higher levels of CDSE, but students admitted on a first come, first served basis did not (on average) show CDSE scores that indicated lack of confidence.

CDSE scores varied more by choice of training program than by age, race, gender, or previous education. Programs with low CDSE scores also show the highest percentage of non-completion due to Early Withdrawal and Objective Change over a five-year period.

These findings show an association between career decision self-efficacy and persistence in post-secondary career/technical education. The findings suggest that some programs attract students that have not conducted research or made an effort to determine if they are a good fit for their chosen career field prior to enrollment.

The findings may indicate a need for remediation using self-efficacy increasing techniques (structuring situations that bring success, avoiding repeated failure, role modeling, verbal persuasion, and maintaining a positive classroom atmosphere). However, these techniques may actually undermine self-efficacy when the student lacks basic aptitude or interest in the area of training.

Advising by student services staff and instructors should encourage students to conduct a self-appraisal, find occupational information, set goals, make career plans, and identify problem-solving skills prior to enrollment. These steps are necessary, especially in programs that enroll students on a first come, first served basis, in order to reduce the effect of career indecision.

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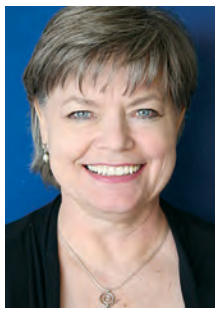

Fall 2013

Critical Shortage of Instrument—Industrial Controls Technicians

By: Glen W. Spielbauer

One of the technical fields with a critical shortage that is getting worse is that of "Instrumentation - Industrial - Manufacturing - Controls Technician". Including both equipment and processes in an industrial setting, such an area is broad. Instrument and process technicians are in diverse areas such as machine shops, automotive, chemical, petroleum, pharmaceutical, and food canning. These industries require very advanced in-depth expertise in both equipment and processes.

During the 1990's, Congress stated that America's technical and economic leadership depends as much on technicians as on engineers. This led to the passage of the Carl D. Perkins Act, Known as TECH PREP. FORTUNE magazine (August, 1994) and other publications have featured Technicians as "The new Worker Elite." Business leaders have stated that the people who really make things happen and are propelling U.S. manufacturing to world-class status are NOT Engineers or MBA Managers, but Technicians.

Technicians have the technical expertise to overlap with engineers, innovate with improved technology and methods, and are the true driving forces of our revitalized factories. Equipment includes electronics, programmable controllers, hydraulics, pneumatics, measuring instruments, sensors, and mechanical systems. Examples include packaging machines, plastics molding, beverage bottling, bilk liquid and powder mixers, and computer numeric control (cnc) milling machines for precision metal parts. Processes include chemical knowledge (such as petroleum refining or beverage ingredients) and defining the proper sequence of steps in making a product - including machining, batch mixing, temperature control, and plating processes.

Many industrial maintenance and process technicians are close to retirement. Several trade magazines such as Plant Engineering, Plant Services, and Maintenance Technology have sounded the alarms of the impending shortage. Moreover, one job posting listed a position for instrument controls technician at a pay rate of over $ 94,000 per year. During the 1980's, several large high tech firms recruited technicians from two-year community and technical colleges. Their associate degrees were in electronics, computer science, robotics, laser, or instrumentation technology. They were then trained as Manufacturing Specialists.

Today, community colleges offer programs in semiconductor and petroleum technology - which are both equipment and process based. Technicians with training in areas such as automated manufacturing, instrumentation and control, industrial electronics, and fluid power are recruited for other industries as well like soap, detergent, food processing, beverage, and pharmaceutical firms.

Marketing Your Industrial Training Programs

How can community and technical colleges market their industrial technical programs? Here are some effective strategies:

- Mail color brochures about your workforce training programs to local high school officials, public libraries, staffing agencies, and employers.
- Color photos of your high tech training labs with text describing the advanced.
- training will get the attention.
- Always mention career clusters and entry incomes.
- Utilize radio announcements, they are also effective.
- Make sure to emphasize partnerships with local industry.
- Post ads in newspapers listing a few key programs with a photo of a training lab.
- Conduct excessive and vigorous representation with local high schools, especially with "College" or "Career Night" and PTA events.

with many recent published articles stating that those with certificates and associate's degrees earn as much or even more than four-year degree graduates - especially in technical careers, one can assure that the Industrial - Manufacturing – Process Technician, career cluster is perhaps the most promising of all careers.

Glen W Spielbauer is a life member; Employed Optex Systems, Dallas, Texas; Associate of Science Degree, Electronics, Austin Community College, Austin TX; Bachelor of General Studies, University of Texas at Dallas.

National Coalition of Certification Centers (NC3) & Tennessee College of Applied Technology (TCAT)

By: Bob Robinson Institutional Development CoordinatorTennessee College of Applied Technology Elizabethton

National Coalition of Certification Centers (NC3) develops, implements and sustains industry recognized portable certifications built on national skill sets. ATEA Board of Trustee, James King, Tennessee College of Applied Technology (TCAT) vice chancellor with the Tennessee Board of Regents, said "NC3 is a network of education providers and corporations that support, advances and validates new and emerging skills in the transportation, aviation and energy industry sectors." Taking the lead in developing NC3 partnerships with local industry are TCAT's at Elizabethton, Tennessee with Snap-on Tools, TCAT Chattanooga with Volkswagen, and TCAT Murfreesboro with Nissan Manufacturing, according to King.

Dean Blevins, director of TCAT Elizabethton, Chelle Travis, associate vice chancellor, Tennessee Colleges of Applied Technology, Jon Carley, Snap-on plant manager in Elizabethton, Frederick Brookhouse, Snap-on business and education partnership manager, and Tim Smith, Snap-on district sales manager, are pictured with tons of steel in the background ready to be processed into hand tools at Snap-on's manufacturing facility in Elizabethton, Tenn.

The Elizabethton Snap-on facility produces a variety of hand tools including wrenches and ratchets. The Carter County manufacturing facility, which opened in 1974, is one of three U.S. hand tool manufacturing plants within the Snap-on Tools division that support professional automotive service technicians and industry worldwide.

"TCAT Elizabethton, which will become a national certification center, will provide specialized training for businesses and industry with a goal of improving workforce development," said Dean Blevins, director of TCAT Elizabethton.

TCAT Elizabethton applied technology programs, which may be completed in 12 to 20 months, are offered in welding, millwright skills, pipefitting and plumbing, electricity-electronics, diesel powered equipment, automotive repair, HVAC-refrigeration, computer information, business systems, and practical nursing. In addition, customizable and specific training programs are designed for business and industry on request.

On Aug. 26, TCAT Elizabethton faculty recently toured the Snap-on facility hosted by Jon Carley, plant manager, and Robin Allen, human resources manager. In the afternoon, Blevins hosted Snap-on management from Elizabethton and Kenosha, Wis., and toured the $16 million campus consolidation and expansion project now underway at TCAT Elizabethton in the Watauga Industrial Park on State Highway 91. When construction is completed in April of 2014, there will be 95,000 square feet of training space at the facility.

Snap-on Tools and TCAT Elizabethton have begun discussions to develop a partnership to provide specialized training for its employees. Frederick Brookhouse, Snap-on's business and education partnership manager, said "Companies and industries are largely responsible for determining the skills and capabilities necessary for their workforce. Employers should engage and partner with local education providers to deliver the training necessary to achieve those skills and capabilities."

An operator forges a large tool out of steel on the forge press at the Snap-on plant in Elizabethton.

Snap-on Tools is a subsidiary of Snap-on Incorporated, a leading global innovator, manufacturer and marketer of tools, equipment, diagnostics, repair information and systems solutions for professional users performing critical tasks. Founded in 1920, Snap-on is headquartered in Kenosha, Wis.

kristal kleer

Industry Credentials: An Educational Revolution

by Dr. John C. Foster

Dr. John Foster, President and CEO of NOCTI, contributed to the academic publication on certificates and credentials, The Career Pathways Effect: Linking Education and Economic Prosperity, *jointly published by the Center for Occupational Research and Development (CORD) and National Association of State Directors of Career and Technical Education Consortium (NASDCTEc) in 2012. In Krystal Kleer he moves.from the academic analysis of options to expressing his opinion on industry credentials.*

In an era where national college debt is 1.3 trillion dollars, when employers are using a college degree not for its content, but as a gatekeeper for candidate interviews, when Massively Open Online Courses are being monetized, it becomes clear that higher education is in trouble. Some would argue our current system is financially unsustainable. It is in these times that we need to look deeper at what skills we can validate that employers are interested in. Do you hold a certification? Have you earned a digital badge? Do you have a "proof of skill" outside of a diploma or degree? Does your institution support any of these industry or skill specific credentials? Credentials such as these have the potential to transform education and employment providing they are embraced by all stakeholders.

In my opinion, credentials can have a revolutionary impact because 1) they can result in improved education placement, job opportunities, and pay, 2) they demonstrate individuals have current validated skills, beyond those that can be seen from a transcript and 3) they are portable. Post secondary institutions need to remember that credentials aren't just about summative assessment. Credentials can also be awarded for prior learning in technical skill areas (Credit for Prior Learning CPL). Data from these credentials can also be used for instructional improvement, thereby providing an important component of institutional accreditation. It is important however, for those issuing, earning, and accepting credentials to recognize that not all are created equal and being able to differentiate and validate the credibility of the credential is of utmost importance.

I believe, the area of credentials can be a bit daunting for post-secondary institutions. First of all, what are they and why are they defined in so many different ways? In an effort to provide a vision for the near future, it is important to first understand some of the history and the context surrounding credentials. Credentials typically are defined as certificates or certifications and represent a form of recognition for successful culmination of technical training based on standards determined by experts in a particular industry. Individuals participating in these processes typically fall into one of four categories: 1) secondary students coming through a private or public technical training program, 2) post-secondary students (two-year, four-year, or apprentice), 3) a dislocated worker (or someone who is changing careers), and 4) individuals who are already in the workplace (incumbent workers). For the purpose of this article, a certificate program can be seen as a credential that is awarded only once and is based on a culmination of knowledge and skills acquired through a training program. A certificate program typically yields an assessment report which is detailed enough to be used for instructional improvement purposes whereas a certification program is typically scored as a pass/fail (meeting the achievement cut score).

In addition to the ambiguity surrounding the definition of a credential, there is also confusion about the value of an industry credential. Unfortunately, finding real data about individuals possessing industry credentials and credentials in general has been equated to a "black hole". Entities in the federal government have started the process of collecting information about credentials and the individuals who have them. This collection process was initiated based on the realization that the information related to credentials was severely under reported. I believe this nationwide effort will jumpstart the process of the importance of collecting information on credentials and provide the needed information to start to establish some guidelines on determining the value of a credential. Some key questions that are missing the answers include: Who has credentials? How many do they have? Are individuals placing credentials on their resume'? Does the credential have an expiration date? Who awarded the credential? A credential's purpose, components, and content all need to be carefully considered when one is determining its' value. Will the credential meet the test of credibility? Will the credential assess the actual performance (hands-on skills) of your completers? Can

the resulting data be used for instructional improvement?

Once credentials are defined and value is determined, there is still one important factor to remember: not all credentials are created equally. There are a large number of credentials that are of dubious value to any group, except perhaps the issuer. Even worse, some of these credentials may actually put institutions using them at risk. From my experience, selection consideration could be a sole focus of a future article to further educate those considering credentials.

Kristal Kleer *is the opinion of the author, and as such, is not reflective of editorial or ATEA policy. It is a regular feature in the ATEA Journal. Readers may contribute their professional opinion, not to exceed 750 words.*

Dr. John C. Foster

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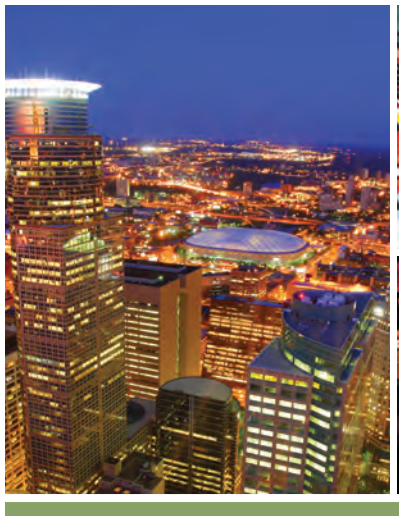
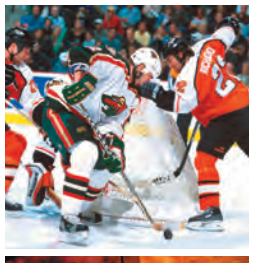


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