

INTERFACE

Volume 62 • No. 3 • Spring 2023

Journal of the WTEA

Focusing on the Future

SPECIAL FEATURE:

• Fab Labs: A Case Study

Other Highlights:

• Spring Conference
Highlights & Awards





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Cover Design
 by Doug Dimmer &
 Anna Vitale

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Educator of the Year, Program
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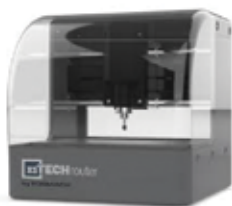


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PRESIDENT'S MESSAGE

2023 WTEA Conference Reflection

By Doug Dimmer, WTEA President



As I reflect back on when I made the decision to run for president of our association, my goal was to look at all the past traditions and milestones that our association had accomplished and endured and told myself, "Self, how can we continue to enjoy the success of the past, continue steady growth, and provide the best possible experiences that show how great our state teachers are, to people who have never attended one of our events?" I knew it would take a great team, and a buy-in from our current members to continue to work hard in the classroom and be open to sharing their stories, be it struggles or victories, and having vendors, schools, and private industry support how we are pushing the thresholds of what is necessary to develop students in industry standards, prepping them to excel in the working world. Fast forwarding to the few weeks prior to the conference, knowing the amount of communication and planning by committee chairs, board members, teachers, vendors, and all others preparing for the event seems endless and sometimes overwhelming; to the point, it feels like is it all the worth the effort.

Well let me tell you, it is absolutely worth every waking moment, and it shows! Wow, how I have to step back and just observe and soak it in. I don't even know where to start, but I am just amazed at the quality of everything, from the point of registration down to the final minutes of Friday afternoon. For me, it's like my favorite holiday when I was a kid, and having everything that I asked for sitting downstairs waiting in crazy sparkling packages, or waiting for that ride at Great America that would either suck all the air out of you from screaming/or laughing so hard or puking on the people behind you! If I had to choose what I enjoy the most about the conference, I would have to say it's the people. Seeing old friends, colleagues, businesses/vendors and just talking or telling stories is what makes it great. Knowing that we are in it not only making ourselves better teachers/instructors, but creating new avenues, pathways, and friendships, is why I do it. I can't explain to my wife and family how exhausted I am after these couple of days, they don't get it, but I am 100% sure, that if you don't feel the same after one of our conferences, you are lying to yourself or you can fake it pretty damn well when you make it home.

I don't even know where to start in thanking people for giving me this experience but I know without a supportive administration team at Cedarburg letting me attend these types of events, I would be lost and disappointed, drowning in the monumental tasks of developing ideas and

methods on my own, not an easy task. I also would like to thank my WTEA board members for continually representing their districts throughout the year and focusing a good part of their time on developing concepts and opportunities to highlight, not only the conference, but other great events throughout the year. I want to give special thanks to Steve

Johnston, Tom Barnhardt, Steve Meyer, Joe Ciontea, Jesse Domer, and their families for committing all of their personal free time to the success of our conference.

Finally, I want to thank you for supporting our events and bringing everything you know and are dedicated to, as a professional, and sharing it with whoever will listen. It's always great to hear and see how you are making changes with the growth of technology and adapting that to give students the best possible chances to be successful within their areas of interest.

Lastly, I want to thank my family, for letting me stay late and leave early to try and make my second family better, and for letting me crash Friday evening when I get home! Prost all!

"...how can we continue to enjoy the success of the past, continue steady growth, and provide the best possible experiences that show how great our state teachers are, to people who have never attended one of our events?"

A promotional graphic for Gateway Technical College. At the top, a red banner with white text reads "OWN YOUR FUTURE". Below this, two images are shown: on the left, a female healthcare professional in a white lab coat with a stethoscope around her neck, holding a small vial; on the right, a male student with long blonde hair wearing a light blue shirt and a grey cardigan, looking at a laptop. At the bottom, the Gateway Technical College logo is displayed, featuring a red swoosh and the text "GATEWAY TECHNICAL COLLEGE". Below the logo, the website "GTC.EDU" is written in white on a red background.

WTEA BOARD NEWS & CALENDAR

Winter Board of Directors & General Membership Meeting Summaries

By Mac Chopin, WTEA Secretary/Treasurer

Winter 2022-23 Board Meeting Summary

- Meeting at Chula Vista Resort, Jan 20-21. 19 members in-person; 1 virtually.
- Call to Order 7:41pm, Jan. 20 - Doug Dimmer
- Approval of agenda
- Approval of past meeting minutes
- Program Coordinator Update - Steve Johnston
- Board Changes - Doug Dimmer
 - Vice-President - Anna Vitale
 - Director At-Large - 2 Vacancies
 - ITEEA Representative - Vacant after this year
- Pres. Report - Official WTEA Apparel - Doug Dimmer
- Vice President's Report - Anna Vitale
- Elections
 - President-Elect - Mike Paquette
 - Secretary-Treasurer - Mac Chopin
- Exhibit Coordinator Report - Tom Barnhart
- Project Showcase Coordinator Report - Steve Meyer
- Executive Director's Report - Joe Ciontea
- Operations Coordinator Report - Jesse Domer
 - Motion for executive council to find gift (\$25 max) for 25 year award
 - Motion to change WTEA Bylaw VI
- WTC System Report - Roger Stanford
- ITEEA Report - Mason Pautsch
- Webmaster Report - Mike Beranek
- Marketing Committee - Mac Chopin
- Interface Report - Duane Apel
- University Reports
 - UW Stout - Barb Bauer
 - UW Platteville - Duane Elfering
- District Director Reports
 - District A - Emily Fransway
 - District B - Brian Schiltz
 - District C - Brennen Mickelson
 - District D - Jon Larson
 - District E - Alan Mamerow
 - District F - Eric Sutkay
 - District G - Stephen Hadfield
 - District H - Art Pronschinske
 - Director At Large - Matt Schultz
 - Director At Large - Mason Pautsch
- Committee Reports
 - Awards Committee Report - Matt Schultz
 - Executive council motion to move forward with videos like last year to be funded by WTEA and/or donations
 - Student Ambassadors Report - Matt Schultz
- Capital Conference Tech Ed Meeting - Mac Chopin
- New Business
 - Motion to purchase 2000-member plan of Wild Apricot & raise annual membership dues, per bylaw, by \$5/year; other membership categories to be adjusted accordingly, effective July 24, 2023
 - Discussion - Should we continue to formerly associate with ITEEA?
- Motion to adjourn, 1:30pm, Jan. 21

2023 General Membership Meeting - March 10, 2023

- Approximately 45 people in attendance; Chula Vista Resort
- Call to Order - Doug Dimmer
- Approval of Minutes
- Board Member Announcements
 - Anna Vitale is announced as Vice-President
 - Mike Paquette is announced as President-Elect
 - Jesse Domer is announced as Operations Coordinator
 - Roger Stanford is announced as Technical College Rep
- Financial Report - Joe Ciontea
- 25 Year Awards Presented
- Award Committee Chair Report - Matt Schultz
- Student Ambassador Program Report - Matt Schultz
- Program Coordinator Report - Steve Johnston
- Interface Editor Report - Duane Apel
- New Business
 - Aviator High Tech Weekend - June 13-14th, 2023
- Announcements
 - 55th WTEA Annual Conference, March 6-8th, 2024
 - ITEEA - April 12-15th, 2023
- Motion to Adjourn

For additional information contact any member of the Board of Directors. Complete minutes are available from Mac Chopin at machopin.wtea@gmail.com

◀ Mark Your Calendar ▶

WTEA Foundation Scholarship Deadline
May 15, 2023.....wteafoundation.org

Aviation Careers Teacher Retreat
June 14, 2023Oshkosh & Appleton

SkillsUSA National Conference
June 19-23, 2023Atlanta, GA

WiFAB West
June 20-22, 2023UW-Stout

WATDA Summer Teacher Training Institute
July 10-12CVTC

WiFAB East
July 18-20, 2023FVTC

ACTE CareerTech VISION 2023
Nov. 29-Dec. 2, 2023Phoenix, AZ

55th Annual WTEA Annual Conference
March 6-8, 2024Chula Vista, Wis Dells

ITEEA National Conference
March 6-9, 2024.....Memphis, TN

DIRECTORS' MESSAGES

Updates From Your Executive Director

By Joe Ciontea, WTEA Executive Director



The New WTEA Membership Portal

By the time you read this our membership database should be imported into Personify Wild Apricot (WA). Wild Apricot is cloud-based software for membership management. The URL for our website will not change but it is now linked directly to our membership records stored in Wild Apricot. Some of the information and pages on our website will remain accessible to anyone interested, but the WTEA resources, curriculum files, and *Interface* archives will be restricted to current members. You will need to login with your email address and password to access those files. You will be able to update your member profile (email address, mailing address, etc.) and view your membership status anytime you are logged in. When you renew your membership or register for WTEA events and provide a credit card for payments your record will be automatically updated. Transactions completed with school purchase orders will still need to be manually entered and updated by a representative of the WTEA. You will receive renewal reminders and event notification directly from our WA membership portal. They may come from jc.wtea@gmail.com or from the email address of WTEA Board members. This system will be active and available for the upcoming summer aviation seminar. If you have trouble accessing our website please contact the WTEA Webmaster, Executive Director, or Operations Coordinator. Their contact

information is in the right sidebar of our home page.

WTEA Dues Increase

Like everything else, our association's annual expenses have gone up significantly in the past few years. Due to increased expenses, the board of directors has voted to increase the annual membership fee by \$5.00, effective July 24, 2023. The rate for multiple-year memberships will change accordingly. Our last dues increase was 13 years ago. You can still renew your membership before the July 24th deadline at the current rate and save a few dollars.

What's Next?

The conference leadership team has already begun working on arrangements for next year's conference. President Doug Dimmer is planning a summer board of directors meeting where we will explore new initiatives for the WTEA. Let's not forget the summer aviation seminar! Details are included in this issue of the *Interface*. Space is limited so don't wait too long to register.

I hope your school year ends on a positive note.

Professionally yours,



Joe Ciontea
Executive Director



It's Been An Honor

By Dave Stroud, WTEA Past-President

Now that my time as the president of the WTEA has officially ended, I just want to take a moment to thank the members of the WTEA Board of Directors and the general membership for helping to make the experience a positive one. The role of president is to guide and direct the association in a direction that continues to create opportunities for the membership to learn and grow. I believe we accomplished that goal even though there were major obstacles put in front of us.

Just one week after becoming president, I was attending the ITEEA Conference in Baltimore, Maryland when the world came to a screeching halt due to COVID-19. The pandemic would become the largest disruption to public education (as well as everything else) that we would experience in our lifetimes. The WTEA Board jumped into action to find and create resources for our membership to use while they tried to teach hands-on subjects virtually

over the course of the next year. The board also made the decision to hold the 2021 conference as a virtual conference for the first, and hopefully last, time in our history. Over 400 people attended the conference, and even though it wasn't the same as seeing all of our friends and colleagues in person, we still think it was a success. Two years later, and our most recent conference was back to business as usual.

In closing, I would like to thank all of the members of the board that served during my time as president. Their hard work and effort creates many great opportunities for teachers to learn and grow. I would also like to thank the membership for attending the conference, bringing projects for the Project Showcase, presenting breakout sessions, attending district meetings, and providing feedback so the WTEA can continue to grow and improve. It's been an honor to serve as your president.



DIRECTOR'S REPORT

Paid Sabbatical Leave? Waterloo School District Steps Up!

By Mac Chopin, WTEA Secretary/Treasurer



Many school districts around Wisconsin are having trouble retaining quality teachers. Some are looking outside the box. The Waterloo School District recently decided to try an idea. Along with a raise across the board, longevity pay, and a vision insurance plan, they instituted a sabbatical plan. After five continuous years in the district, teachers are eligible for two weeks paid vacation. The district instituted it this year, and I was among the top 10 in seniority, so I was able to take two weeks off during the school year.

While most of us technology education instructors dread being out of the classroom, I decided to embrace it.



I really wanted to have something for students to work on that was still really meaningful to them. Having

some time to plan, I was able to figure out ideas that would keep the students engaged and learning, despite not be-



ing able to work in the workshop.

This brings up the idea of what to do or where to go on my two weeks off. For anyone that does not know, I teach SCUBA diving

in the summer and on weekends, and my shop had a trip planned from before COVID-19 hit. It was delayed twice and then landed during the 2022-23 school year. So, with some planning and last-minute flights, I was booked for 10 days in Fiji.

This was going to be the farthest that I had ever traveled, but I was really excited to be able to make this trip with others from my dive shop. I left on a Saturday and flew from Madison to Chicago, then on to LA. I had a 15-hour flight from LA to Fiji. I arrived in Fiji on Monday, which took a bit to adjust to, due to the fact that I lost Sunday completely. I met up with others from the dive shop at the airport in Nadi, Fiji. We had a 5-hour bus ride to our first resort in Suva, on the southern coast of Fiji. We spent four days diving and enjoying the weather and then boarded another bus for a 6-hour ride to the other side of the island for our other half of the trip.



We spent five days at Volivoli Resort on the northern side of Fiji doing more diving. We also did a tour in the middle that included seeing a Fijian village in the hills and rafting down a river. We all had a great time and after the final resort had a 4-hour bus ride back to the airport in Nadi, where we boarded a plane for home. Thanks to the international date line, I left on Thursday and got home on Thursday. I had a couple of days to recover from my time traveling, or jet lag, and returned to work the next Monday.

While I did still check email maybe once a day, I was pretty much shut down from school and had a great trip that I would not have been able to go on without this new perk for teacher retention at Waterloo School District. It was hard to separate from the students, but a great way to have an extra break and refresh myself for the rest of the year.

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Please contact
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DIRECTORS' REPORT

Ashwaubenon Students Explore Construction & Manufacturing Careers at NWTC

By Tom Barnhart & Dave Stroud



Barnhart

Stroud

Recently, students in construction, CNC, and automotive classes at Ashwaubenon High School traveled to Northeast Wisconsin Technical College (NWTC) to learn about apprenticeship opportunities in the construction trades, manufacturing, and the electrical power distribution industry. NWTC staff discussed how apprenticeship in Wisconsin works, how to gain entrance to an apprenticeship, what to expect while in an apprenticeship, and the many benefits associated with apprenticeship. Students were also able to participate in hands-on activities in masonry, flooring, heavy equipment operating, and pipefitting, while also seeing demonstrations of CNC milling machines and plastic injection molders. Feedback from the students was extremely positive and helped many of them with their post high school planning. We would like to thank NWTC for hosting this event.



A student learns about different types of connectors used in the pipe trades.



Students get instruction on how to lay brick.



Students learn how to lay out a carpet pattern.



AHS students use a virtual trainer.

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SUMMER TEACHER RETREAT

Aviation Careers Exploration Teacher Retreat

One Day Event - June 14th



Gulfstream G500 Luxury Jet (image taken from: www.gulfstream.com)

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Aviation Careers Exploration Teacher Retreat.

EVENT INFORMATION

Date and Times:

June 14th, 8:30 AM – 9:00 PM

(Make it a mini vacation – hotel options are available)!

Locations:

June 14th

Morning – EAA
Oshkosh, Wisconsin

Afternoon – Gulfstream
Appleton, Wisconsin

Sign Up Procedures:

Email Steve Meyer at
steve.meyer0369@fvtc.edu

*Sign up due by **5/12/2023**

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PROJECT SHOWCASE WINNERS

First Year of New Contest A Big Success



All three award winners received a free conference registration for next year's conference.

Congratulations to the winners and thank you to everyone who participated!



CRAFTSPERSON PROJECT AWARD:

Recurve Bow
School: Southern Door
High School
Instructor: Seth Wilson



NEW TEACHER'S CHOICE AWARD:

Multi-Tool
School: Unity High School
Instructor: Jake Lee



MOST INNOVATIVE PROJECT AWARD:

Compound Bow
Phone Mount
School: Little Chute HS
Instructor: Jon Larson



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CALL FOR SCHOOL SPECIALS

WTEA CONFERENCE HIGHLIGHTS

54th Annual Spring Conference & Trade Show



Mark Your Calendar for the 55th Annual Conference!

“Technology Education: Purpose • Pathways • Professionalism”

March 8-10, 2023

Chula Vista Resort, Wisconsin Dells



“Focusing on the Future”

March 6-8, 2024

2023 WTEA Awards and Recognition



WTEA TECHNOLOGY EDUCATOR of the YEAR “For Outstanding Contributions to Technology Education”

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Goodheart-Willcox Publisher



Mike Paquette (left) - Peshtigo HS & Jesse Domer-WTEA Board.

LIFETIME ACHIEVEMENT AWARD “For Distinguished Achievement & Leadership in Technology Education”



Dr. Bryan Albrecht (right) - Retired President, Gateway Technical College, with daughter, Alyssa Sanders, & WTEA Board members Pete McConnell & Joe Ciontea.

WTEA 25 YEAR AWARD “For 25 Years of Service to Education” Sponsored by First Technologies, Inc.

Jason Kraus (left) - Hartford Union HS, with Bob Werner of First Technologies.

Other recipients (not pictured):

Ken Odekirk -

Plymouth HS &

Eric Siler -

Lincoln HS,

Wisconsin Rapids



WTEA LEADERSHIP AWARD “For Commitment and Service to the WTEA” Sponsored by Goodheart-Willcox Publisher



Dave Stroud (right) - WTEA Past-President (2019-2023) - Ashwaubenon HS & Joe Ciontea-WTEA Board

Previous Lifetime Achievement Award Recipients:

Len Sterry - 2002
M. James Bensen - 2004
Jeff Dowd - 2005
Fred Schroedl - 2007
Doug MacKenzie - 2008
Dennis Skurulsky - 2012
Carl Hader - 2013
Pete McConnell - 2015
Joseph Ciontea - 2016
Bob Abitz - 2017
Mike Roth - 2019

WTEA SPECIAL RECOGNITION AWARD “For Contributions and Service to Technology Education”



Laura Benisch - The Lincoln Academy, Beloit & Doug Dimmer - WTEA Board



James Michlig (right) - Muskego-Norway School District, & Doug Dimmer-WTEA Board



Wade Latz (right) - Manufacturing SOS Alliance & Doug Dimmer - WTEA Board



WTEA AWARD of EXCELLENCE
"For Exemplary Achievement in Technology Education"
 Sponsored by Goodheart-Willcox Publisher



Jeff Lehr (right) -
 Lake Mills High School &
 Eric Sutkay-WTEA Board



Heather Kiefer -
 Slinger Middle School &
 Eric Sutkay-WTEA Board



Ryan Stace (right) -
 Oregon High School &
 Eric Sutkay-WTEA Board



**WTEA HIGH SCHOOL
 PROGRAM of the YEAR**
***"Outstanding High School
 Technology Education Program"***
 Sponsored by Goodheart-Willcox Publisher



Hamilton High School, Sussex
 Anna Vitale-WTEA Board, Chad McLaughlin,
 Kathy Rose, Natalie Elfering, Tom Schlueter,
 Alan Mamerow, Joe Premo.

**WTEA MIDDLE SCHOOL
 PROGRAM of the YEAR**
***"Outstanding Middle School
 Technology Education Program"***
 Sponsored by
 Goodheart-Willcox Publisher



**Templeton Middle School &
 Silver Spring Intermediate School, Sussex**
 Anna Vitale-WTEA Board, Megan Sykes,
 Natalie Elfering, Shannon Flaherty.

KNOW ANY DESERVING CANDIDATES? If you know of an educator, a Tech Ed program, or a partner in business or industry that is deserving of an award, the WTEA encourages you to nominate them! Contact Matt Schultz, awards chair, or go to the WTEA website for more information: wtea-wis.org

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Pictures (above & below) from the WTEA state conference WATDA training sessions at Easton Motors, including the two shop cars given away to Manitowoc Lincoln High School & Menomonie High School.





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WTEA CONFERENCE SURVEY RESULTS

- 1) 92% satisfied or very satisfied with the conference program book.
- 2) 95% satisfied or very satisfied with the program agenda and timeline.
- 3) 93% satisfied or very satisfied with the general quality of the presenters.
- 4) 88% satisfied or very satisfied with the relevance of material presented.
- 5) 87% satisfied or very satisfied with the selection of vendors in the trade show.
- 6) 97% satisfied or very satisfied overall with the 2023 WTEA Spring Conference.
- 7) 73% satisfied or very satisfied with Chula Vista as our conference center.
- 8) 96% satisfied or very satisfied with Project Showcase.
- 9) 94% of respondents want to keep the conference on a Thursday and Friday.
- 10) 22% of respondents used Yapp to view the conference program at least 50% of the time.

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WTEA Foundation Scholarship Applications Due May 15

The WTEA Foundation is offering a renewable \$1,000 scholarship for a high school senior or graduate who commits to pursue a career as a K-12 Technology & Engineering educator.

ELIGIBILITY:

- Wisconsin resident
- Enroll in technology education at a Wisconsin university and start the fall semester
- Submit completed application form and 250 word essay by May 15

Details of the scholarship and the application form can be found on the WTEA Foundation website at www.wteafoundation.org

FAB LABS - A CASE STUDY

Are Wisconsin Fab Labs the Best They Can Be?

By Ryan Ubersox - WTEA Director-at-Large and

Mechanical Design Technology Instructor/Program Director - Madison Area Technical College

The longer I'm in this profession, the more reflection and investigation I find myself doing. One movement that recently grabbed my attention was the implementation of fab labs in Wisconsin schools.

As instructors at the K-12, technical college, and university system, we continue to find ways to lead people in the world of technology and industrial education. We are seeing researchers state some alarming concerns. American schools are running out of incentives to entice young people into the fields of STEM (Stacey, 2014). Traditional STEM careers are perceived as too difficult (Kennedy et al., 2018) and traditional STEM coursework is "terribly boring" (Stacey, 2014, p. 228). Those few quotes sum up the challenges facing us now in the world of career education. Currently, extracurricular activities or an encounter with nature is more influential to students choosing a career than classroom experiences (VanMeter-Adams et al., 2014).

Have fab labs in education helped with these concerns? Anyone in this career for an amount of time has needed to balance cutting edge technology with tried-and-true traditional knowledge and skills in order to offer our students at all levels a glimpse of what the future holds. Can fab labs give us yet another way to teach application of "terribly boring" STEM topics and entice students into careers they may not have considered?

What is a Fab Lab?

With help on funding from the National Science Foundation, the Massachusetts Institute of Technology (MIT) and specifically, Neil Gershenfeld, developed and fostered growth of digital fabrication in a structured lab to expand



Fab Lab Layout Example

opportunities past what was reserved for high-tech businesses. A fab lab, according to MIT's standards, is a digital fabrication lab that includes digital machines including a laser cutter, 3D printer, high resolution CNC mill, CNC router, and a suite of electron-

ics components. Seeing the opportunity and growth of fab labs sparked both schools and politicians to explore how fab labs could be utilized in Wisconsin schools. The Wisconsin Economic Development Corporation (WEDC) was directed by the Wisconsin legislature to develop a match-

ing grant to "help expand community resources and grow Wisconsin talent through digital fabrication" and "support hands-on science, technology, engineering, art and math education by assisting public schools with funding purchases and equipment for digital fabrication laboratories (WEDC Biennial Report, 2015, p.62).

Can fab labs give us yet another way to teach application of "terribly boring" STEM topics and entice students into careers they may not have considered?

What Do Fab Labs Look Like in Wisconsin Schools?

This case study set out to answer three questions directed at teachers, administrators, school board members, and community members across the state who have implemented a fab lab. A short summary is shown below of triangulated data from grant applications, participant interviews, and documentation regarding both discussed and written local literature about Wisconsin fab labs:

1. Question 1: What is the purpose of a fab lab in a Wisconsin PK-12 school district facility?

Findings:

- Reimagining technology education
 - Update to current technology education
 - Response to industry
 - Preparation for college and career readiness
- Building stronger connections with community
- Providing increased access to updated technology to improve skills

2. Question 2: How does fab lab implementation reflect the school's identified purpose of the fab lab?

Findings:

- Improved equipment and facilities to reflect an enhancement of technology education
- Changes to course offerings reflecting the purpose of enhancing college and career readiness

3. Question 3: How does Wisconsin's implementation of a fab lab in schools align with MIT's (Gershenfeld's) purpose of the fab lab?

Continued on next page...



Fab Lab Community Workshop Example

Findings:

There are many aspects to this finding. Wisconsin fab labs don't necessarily follow Gershenfeld's original vision. One could argue Wisconsin is really implementing makerspaces instead of fab labs. (Colgrove, 2013; Lacy, 2016; Litts, 2015; Martinez, 2017; Van Holm, 2015). The vision of Gershenfeld was an open lab concept where socially networked problem solving happens through digital fabrication leading to a globally connected, more digitally literate society (Gershenfeld, 2005). WEDC's vision is to support STEAM education to grow Wisconsin's talent of tomorrow's workforce (WEDC Biennial Report, 2017). Fab labs in Wisconsin offer a wide range of learning opportunities, and regardless of whether these labs are affiliated with MIT or not, there is a common vision of improving the local community and involvement. While schools are attempting to blend STEAM in fab labs, to this point in Wisconsin, programming of fab labs most commonly falls in technology education departments and therefore access is based on the culture of the technology education department, courses offered in the technology education department, and physical design/visibility of each technology education area. Schools explained limitations placed on their labs due to safety of and for the students and the challenges of community access. Additionally, some Wisconsin fab labs show they can be a place where people from different backgrounds can come together to learn to solve problems in a true democratization of engineering, but both Gershenfeld and others warn that schools are too restrictive to allow students and communities the full potential of fab labs (unlike labs housed in libraries or museums).

Observations and Recommendations:

Schools implementing fab labs have run into challenges including interdepartmental ownership, addition-

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When: Designs DUE in December, 2023 with winning design to be used beginning with 2023-24 winter issue.

How: Email *Interface* editor, Duane Apel, at interface.wtea@gmail.com for specific criteria and magazine spec's.

Award: Certificate of achievement for winner & name & photo included in magazine.

Theme: The WTEA theme (to be used on the cover) will be determined in October.

al funding required, and time required to offer quality education in fab labs. Educators in fab labs could benefit from the following:

1. Support through a Wisconsin fab lab network
2. Mentoring program for new fab lab educators
3. Consistency and quality training for educators working in fab labs
4. Decentralized training options for educators
5. Focus group made up of WEDC, DPI, manufacturers, fab lab teachers, fab lab directors, and administrators

Future Research and Improvements:

This case study found that the current approach to fab labs in Wisconsin is to reimagine technology education programs by adding new equipment, modifying existing classes and buildings, and breaking down barriers in STEAM education. While educational fab labs might not exactly follow Gershenfeld's vision, they may serve a more important role in Wisconsin as they reflect and support local communities through digital fabrication. This study was a snapshot of fab labs in Wisconsin schools in their infancy. It will take longer to realize the goals set out in the WEDC grants and there are many paths future initiatives and research can take to help us understand a more complete picture of fab labs in Wisconsin schools.

To read this case study in its entirety, and see the complete list of references, visit:

<https://minds.wisconsin.edu/handle/1793/82554>

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WTEA EDUCATOR OF THE YEAR

Mike Paquette, Peshtigo High School



Teacher of the Year. Honestly I never thought I would be nominated, much less win the award. I am honored by the person who nominated me - that alone is a fantastic compliment. But, to win is huge, not because I feel I deserve it, but because I am being honored by an organization that I have been a member of since college 20 years ago. I am blessed. Blessed with a lovely wife, a supportive school district, colleagues and friends, all of whom have helped and challenged me over the years.

Although I have won the award, I dare say others deserve recognition as well for this was a team effort. My administrative team allows me to take time off, other teachers impart the lessons I can not. Others in the community help as well, Waupaca Foundry in Marinette has repeatedly donated thousands of dollars to Peshtigo's Technology Education Program. Matt Berendt, who works at Waupaca Foundry, and Cari Sieracki, our School Literacy teacher, serve as SkillsUSA advisors and all the SkillsUSA parents volunteer time. Together, this year we ran a robotics competition we dubbed "Robot Rodeo," for the second time, and we are working on next year. Students volunteer to take tech ed classes and participate in SkillsUSA. Finally, my wife, whom I have been dating for 20+ years, may be the most worthy for the award as she tolerates my long hours and is constantly recruited to help with events and review documents. Without everyone's guidance, perseverance and innovative ideas I would not have won the WTEA Teacher of the Year, so it is difficult to say this is my award.

So, I won the teacher of the year award...now what?



A Peshtigo student test drives their Electrathon vehicle built for ChallengeUSA competitions. It's powered by 12 lithium ion Milwaukee batteries.

I have achieved the award that some of my idols like Pete and Al have achieved. What is the next challenge? I do not know - back to the grind, I guess, and remembering what got me here. 1. Ask for feedback, it is a gift - even if it is an unwanted gift. This has been a running joke since I took Wood Badge Leadership Training for BSA Scouting in 2017, but has served me well. You may hear things you already know, but if you relax,

not be defensive, you learn a ton.

2. Build a team. Team building means you are not always right, but it brings in help, sometimes in a very unique way that you may not have thought of. Cari and Matt have been helping me for four years. Cari does all my event paperwork, Matt is the second hands-on adviser that I need.



Pictured are several of Mike Paquette's colleagues who dressed up as Paquette for Halloween. They sported bow ties and safety glasses all day.

3. "It's an evolution not a revolution." Fix things one at a time, or bring new ideas in one at a time. Often the system is not broken but rather needs grease in the correct places. 4. Take care of the little things. No matter how hard it is, smile with the kids, dance to the music, grade the work every night. As you constantly take care of the little things, big things happen.

As you may have noticed if you have read to this point,



Peshtigo's all girls Battlebots team, and "Fuzzy," their Battlebot. BotsIQWi sponsors a high school Battlebots event open to high school kids to build a 10-15 lb Battlebot. This has been a great event and has sparked interest in the manufacturing field for several kids.

I feel two things about this award: one is humbled and blessed, the second is anxious. I am anxious that I will not live up to expectations, I am anxious that I will not do enough to further technology education. I am anxious I will not do enough to step up as a leader. I am anxious that I will not hold up my obligations at home. I am anxious I will stress out and yell at someone. I feel like I have been on the best roller coaster of my life and I am unsure if I can lead the next group to the next thing.

Where do we go from here? How can we do better? These are questions that I always seem to be left with. The

answer is, I do not know. What I do know, is that I need to give back to the WTEA. I need to represent technology education and the best in all of us. I need to continue working on the little things. I need to thank all of those who continually help me and put crazy ideas in my head along the way. What better compliment can I give than to help the WTEA board by being a member, which makes me excited and happy to announce my confirmation as president-elect for the WTEA Board. See you next year at the Spring Conference!!!



The Paquette family, after a 4-day canoe trip in the Sylvania wilderness.

WTEA PROGRAMS OF THE YEAR

Hamilton School District: Hamilton High School, Templeton Middle School, and Silver Spring Intermediate School

This spring, Applied Engineering and Technology (AET) programs across the Hamilton School District had the honor of being named WTEA Programs of the Year.



A welding student practices TIG.

These programs span three schools across our district, are comprised of nine teachers, and reach over 1800 students each year. Students are introduced to AET classes in 5th grade, and take required courses in 5th, 6th, and 7th grade. 8th grade Technology and Engineering is an elective course that runs at maximum section capacity each year, and high school students have a wide variety of course options, including architecture and construction, engineering, graphic arts, machining and automation, welding, and woodworking.

Program Goals and Coursework

The mission of the Applied Engineering and Technology Department is to develop successful citizens, employees, and lifelong learners through the use of rigorous design-based and experiential curriculum.

United States manufacturers spend millions of dollars each year to train new personnel. The goal of the Hamilton School District AET Department is to graduate students with high-level technical skills and abilities, design and systems thinking attributes, who are better prepared for their future. By assisting in increasing the skills of en-

try level employees or post-secondary education students, local businesses will realize a significant decrease in training expenditures and the benefits of a higher functioning workforce. Educational institutes will also benefit by having better prepared students. With support, the Hamilton School District AET program will provide financial and human resource benefits to local businesses, post-secondary schools, and the greater community for years to come.

Through the coursework of the AET Department:

- Students understand processes to create products, solve problems, and think critically, thus better preparing them for future endeavors.
- Students are better prepared for post-secondary institutions because of experiences with applying critical thinking, problem solving and design process thinking.
- Students are exposed to a wide range of curriculum and content that is relevant and applicable in today's world.
- Employers are provided a workforce that is better prepared with the skills and design thinking process to be immediate assets to their companies.

As a significant part of a 2018 referendum, AET shops at the high school saw complete renovation, and Silver Spring Intermediate School was built. This led to new experiences for students across the district, as this brought tech ed classes to the 5th grade level, and brought a variety of new technology to students in high school AET classes, including a CNC plasma cutter, CNC mills and lathes, updated CNC routers, additional laser engravers, an increase in 3D printing technology, and much more.

5th and 6th graders at Silver Spring Intermediate take one quarter of Applied Engineering classes each year, as do 7th graders at Templeton Middle School. 8th graders have the opportunity to take a year-long Applied Engineer-

Continued on next page...



Graphic Arts students set up the offset press to print memo pads.



A Machining and Automation student programs the UR-5 industrial robot.



Machining & Automation students simulate their G-code before running it on Haas mill.



Students in a summer school STEM class learn how to use the laser engraver.

ing course. At Hamilton High School, students can choose from six different tracks to pursue. Our department offers two levels of construction, four levels of engineering, four levels of graphic arts, two levels of machining, two levels of welding, and three levels of woodworking.

Across all grade levels and courses, one thing that our department focuses on is giving students ample opportunity to take pride in and showcase their work. Every course includes multiple projects that students can customize and make their own before taking home. From 3D printing to laser engraving to CNC machining, all of our projects focus on finding ways to make academic rigor and industry relevance a fun and engaging experience for Hamilton School District students.



Graphic Arts students printed 300 two-color shirts for JP Cullen to commemorate 2018 referendum construction.

Extracurricular Opportunities

Outside of coursework, students in the Hamilton School District have a variety of co-curricular opportunities for students interested in building on what they have learned in their various shop classes.

Students at Silver Spring Intermediate School have countless opportunities to complete bonus projects involving 3D printing and vinyl cutting. Students have printed



Hamilton SkillsUSA students at the Fort Atkinson District competition.



Architecture and Construction II students built a shed for one of Hamilton's elementary schools.

earrings and name tags, and designed and cut stickers for their water bottles, helping to display what happens in Applied Engineering to the rest of the school.

At Templeton Middle School, students have built flower pots to donate to Hamilton School District's "Seniors and Students" program, in which local senior citizens work with elementary school students regularly throughout the school year. To show appreciation they are gifted flower pots created by 8th grade tech ed students.

Hamilton High School offers a wide range of co-curricular opportunities. Graphic Arts

Club is the longest-running Applied Engineering co-curricular at Sussex Hamilton.

It meets after school or Saturday mornings, usually to print shirts for other school clubs. Graphics Club tackles a variety of shirt jobs, ranging from single or two-color shirts for small groups, to five-color prints numbering in the hundreds. This group regularly includes Graphic



Window artwork for the shops designed and printed by Hamilton students.

Arts students who go above and beyond the course curriculum and are looking to get more involved. These students can be found being leaders in the classroom, demonstrating use of the offset press, wide format printer, vinyl cutter, heat press, or automatic shirt press to their peers.

Continued on page 30...



Welding students show off donations from Milwaukee Tool.

WTEA LIFETIME ACHIEVEMENT AWARD

Dr. Bryan Albrecht Honored for Numerous Achievements Over 38 Year Career

On March 8, 2023, the WTEA Board of Directors presented Dr. Bryan Albrecht with the WTEA Lifetime Achievement Award capping a 38 year career in technical education. Bryan started his career as a technology education teacher for the Cornell and Kewaunee School Districts. As a teacher, coach, VICA advisor and local vocational administrator, Dr. Albrecht led the transition from industrial arts to technology education. His involvement and support for the WTEA was evidenced by serving as a presenter, author, and contributor to the profession during this important time in the history of the technology and engineering profession.

"I have been fortunate to have had some inspirational mentors throughout my career starting with the faculty and administration at Fond du Lac High School and UW Stout. Wisconsin has a rich leadership history in the field of technology and engineering education led by nationally recognized professionals like Dr. Jim Benson, Dr. Len Sterry, Dr. Lee Smalley, Dr. Bob Hendrick, Dr. Howard Lee, Dr. Tom Baldwin, Dr. Carol Mooney and so many more. My early years of teaching with Denny Beaulieu (Cornell), Jack Neubauer (Kewaunee) and Bob Ellison (Kewaunee) served as the foundation for my teaching practice and every step of my career I had the WTEA to continually introduce me to more great colleagues and friends."

Dr. Albrecht's career quickly led him to the Wisconsin Department of Public Instruction where he served for sixteen years in various positions of leadership. Starting as the Wisconsin consultant for technology education Dr. Albrecht was instrumental in transitioning our state and profession



Dr. Bryan Albrecht

...Students are what drive our mission. Your involvement in organizations like the WTEA is what empowers the next generation of skilled workers, and technical education teachers, counselors, administrators."

years of debate over what we should call our profession. Serving on the national ITEA Board helped to solidify my position that as industrial educators we have much to be proud of in our history, but we needed to focus our efforts on the future and the impact that technological discoveries have on career opportunities. Under the guidance of Richard "Dick" Kitzman, we were able to provide support for teachers through curriculum guides, videos, hundreds of school visits, and professional development workshops. It was a very busy decade that allowed me to build relationships with teachers throughout the entire state. One of my strongest growth opportunities was serving as State Director for VICA, now SkillsUSA. To see our schools partner with industry and acknowledge students for their achievements was an honor I will never forget. Students are what drive our mission.

Your involvement in organizations like the WTEA is what empowers the next generation of skilled workers, and technical education teachers, counselors, administrators."

After years of state service Dr. Albrecht went on to serve Southeast Wisconsin as President of Gateway Technical College. Gateway was the

perfect fit as it brought together three important areas of interest evidenced throughout his career; secondary career and technical education, postsecondary adult technical education and industry partnerships. "I am particularly proud of the fact that while at Gateway we were able to increase dual enrollment to over 6,000 high school students annually. This allows a much better prepared graduate as to what their career choices might be and how postsecondary education can support them." Gateway has built a national reputation for having strong business and industry partnerships with companies like Snap-on, Haribo, SC Johnson and Trane Corporation. In

Continued on next page...



establishing a foundation of support, President Albrecht also initiated a series of philanthropic investments in area high school students through Promise, STEM Scholars and Presidential Scholarship programs. “Our greatest resource is our youth and by supporting programs like the WTEA Foundation scholarship we can all invest in the security of



our profession.”

Dr. Albrecht has received many accolades throughout his career for academic, community and economic development but the one thing that others comment on most often is how approachable and supportive he has been toward teachers and students. “My career has been enriched by the people I have been honored to serve, starting with our WTEA Executive Director, Joe Ciontea.

Joe was my high school teacher and I could not be prouder to have traveled my career journey alongside him. Along with Lisa, Alyssa, Anthony, Little Bryan and Logan, we are grateful to have included hundreds of teachers, administrators, business partners, coaches, advisors, graduates and friends into our life’s work and consider you part of our extended family. Thank you to the WTEA Board and membership for this very special honor. I am equally grateful for your service to our profession.”



At Dr. Albrecht’s retirement, when Gateway named him their first President Emeritus, the accolades came roaring in. In just the past three months Bryan has received:

- ◆ The 2022 UW Stout Distinguished Alumni award
 - ◆ Mahone Fund Living Legend Award
 - ◆ ACTE Distinguished Leader Award
 - ◆ Boys Scouts of America Silver Beaver
- ◆ American Technical Education Association President’s Award
- ◆ FANUC America Distinguished Automation Educator Award
 - ◆ WTCS Eagle Award
 - ◆ NC3 Distinguished Service Award
- ◆ United Way Advancing the Common Good Award
- ◆ Kenosha Area Business Impact Award

We honored Bryan for a lifetime of service to our profession. Serving the WTEA as a member, advisor, consultant, fundraiser, author, speaker, donor, board member and friend throughout his entire career Bryan serves as an example of professional commitment and servant leadership.

ACCOMPLISHMENTS:

- | | |
|--|--|
| ◆ Invited speaker at the White House | ◆ ITEA Conference Committee |
| ◆ Testified before Congress | ◆ National Skill Standards Board |
| ◆ Governor’s Task Force | ◆ National ITEA Technology for All Americans Standard Review Board |
| ◆ State Apprenticeship Board | ◆ National Women in Technology Board |
| ◆ UW Stout Distinguished Alumni | ◆ WVA Board Service |
| ◆ Distinguished Citizen-Boys Scouts of America | ◆ Campus Compact Board |
| ◆ Football, Basketball and Baseball Coach | ◆ WATDA Board Service |
| ◆ ITEA Distinguished Educator | ◆ CRAY Academy |
| ◆ Wisconsin Technology Literacy Award | ◆ STEM Academy Board |
| ◆ National Entrepreneurial College President | ◆ Rotary Member |
| ◆ UW Stout Educator in Residence | ◆ United Way Board |
| ◆ VICA National Board of Trustees | ◆ Lions Club Member |
| ◆ ITEA National Board of Trustees | |

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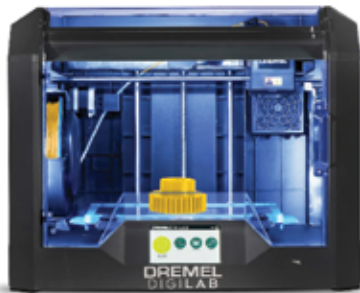


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A VISION, A REFERENDUM AND A BUILDING

The True Story of New Construction and Reconstruction of a TE Wing:

Part 2 - The Work, and What We Wish We Would Have Known

By Anna Vitale, WTEA Vice President; & Jeff Schultz, Dodgeland High School

Recap from the last article (printed in the Winter Interface): The equipment on our Wish List was approved and the wheels were in motion for the new construction of a Tech Ed wing. "Admin" and the architects asked what we wanted for a physical environment. Our biggest challenges were a lack of storage, not enough space for students to move safely around equipment, and an inability to bring in new, updated equipment due to funds, lack of space, and insufficient electrical and ventilation systems.

Dr. Annette Thompson, our district superintendent at that time, is one of the most inspirational, hard-working, caring, and authentic administrators I've ever had the pleasure to work for. She made sure our voices were heard.

There were a lot of long, 2-3 hour virtual meetings. We were glad to be included since we had heard from colleagues in other districts that they were not involved in the planning stages of their tech ed construction or remodeling projects. We were asked where, how much and what kind of storage (storerooms, trays, shelves, cabinets with pegboards for hanging tools). We were able to discuss where equipment and furniture should be placed, drop-electrical wiring needs, etc.

There were lists of equipment to research and compare, quotes to obtain, specifications to compile - down to details such as voltage, various dimensions, ventilation specs, where the power supply comes out of the equipment, etc.

Then it was packing time - another challenging part of the project. Preparations started in the graphics lab as school began in September of 2020 and by December all my classes (Basic Home/Auto, Graphics, Photography, middle school PLTW) were being taught out of one classroom and we went almost completely digital with curriculum and projects. In November, we tackled the wood and metals labs and the storage room where supplies, materials and projects had been stuffed.

We went through 20+ years of previous teachers' accumulation of...stuff - sifting out what we wanted to keep, packing, labeling, ready for the outdoor storage containers. We organized which equipment or supplies would be sold

on the auction website or added to the shipping carton being sent to a partner school in Haiti.

Most days felt like complete chaos. There was so much to accomplish in such a short time. We all have those superstar students who are willing to take on any project and help out, and we were fortunate to have these students who were eager to pitch in and be a part of a significant chapter in our school's history. I have pictures of these stellar students dismantling the darkroom tube doors, moving wood, sorting equipment, etc.

Another challenge was trying to teach tech ed classes without labs of any kind. That meant alternate lesson planning and completely re-vamping the curriculum for the rest of the school year till ...???

Construction took the better part of a year, plus a few months for the metals and woods labs. Walking jaw-

dropped into my new classrooms for the first time during construction, was an out-of-body experience (and yes, I did tear up). I never dreamed I would be so lucky to have such incredible spaces and the ability to do so much more for students with the new equipment and technology.

We all have our "Why" for what we do. My "Why" is: "To help students see beyond the walls of a school building and to know that learning and education is an investment in themselves."

In the past, when I had attended WTEA sessions, I always walked away with awe, but a sense of frustration that I would not be able to use any of the amazing things I was learning or emulate what others were doing. Now, with the new construction and referendum funding, it became a reality that I could have my students learn and create in the same way that other students were doing around the state. That's a very powerful and meaningful feeling, knowing that I can now provide my students valuable skills and knowledge and help them be more successful in their futures. Our new construction, supported by our families and community, directed by our (now retired) superintendent, has given new scope and breadth to my "Why." And for that, I am deeply grateful!

Continued on next page...



Collaboration Space



Metals Lab



PLTW Lab



Graphics Lab



Woods Lab

What We Learned Through the Process and Wish We Would Have Known

Here's what you really want to know about this whole experience!

- Always ask for as much as possible, if you don't ask, the answer is always "No."
 - See equipment in person before purchasing, pictures don't tell the whole story on how much space they will take up.
- Convince admin/architects/engineers/etc. you know what is best for the given area. When the referendum is over, you are the one spending time in the space for the entire day, they are not.
 - Architects are wonderful people...but they don't always understand how the equipment in the spaces really work. Pay attention to where they place equipment and whether it makes sense (i.e. the large table CNC router should not be placed in front of the overhead doors).
 - Insist on being in the weekly building meetings, so many problems could have been avoided, which in turn delayed the process (if you're kicked out of your shop anyway and students are in a classroom, you might as well join weekly meetings that are an hour long).
- Woodshops should have a closed "office" so you don't get dust all over your desk 'stuff.'
- A small space, is a small space, is a small space...it doesn't matter how it looks on the blueprints.
 - Straight shots are best, eliminate any walls/layouts that have 90 degree angles (easier to move materials).
 - Bare walls are best, the less space taken up by mechanical boxes/pipes the better.
 - Bigger the better, you can always utilize more shop space in the future
 - Make sure you have plenty of storage space for students projects.
 - Have wide classroom doors that a lift/pallet jack can fit through.
- In computer labs, be sure tables have free configuration possibilities.
- Projection screens can be on the wall higher than a traditional classroom setting (allows more wall space to be utilized under it).
- Storage rooms should have easy access for what is being stored in there; How will it be put in, how will it be taken out?
- Electrical drops at work tables are not a luxury. It makes life incredibly easy. Ask for as many outlets as possible.
- Rooms with high ceilings do actually work just fine...as long as you have soundboards.
- Pay attention to cabinetry - what do you want locked? How many pull-out trays?
- Ventilation can be interpreted in different ways by different people. Pay attention to the architect/electricians/etc choice of ventilation systems for your shops and finishing rooms.
 - Woodshops should have improved ventilation for fine dust given off by sanders.
 - Make sure you have several floor trap ventilation areas to sweep up any sawdust in the shop.
- Shops: Make sure shops have overhead doors for a forklift to fit through.
 - Have the shop phone hooked up to the loud speaker so you can hear when you have a phone call.
 - Ask for a "clean up" button that can be pressed and let students know the end of the hour.
- Interior decorators and interior finishers need to pay attention to your needs, how the furniture will be used. If your teaching a class that uses small parts (like my Automation and Robotics class), get tables that have grooved edges so parts don't roll off.
- A collaboration area is great, but boundaries (for both students and staff) need to be established and followed through on.
- When we boxed things up, we clearly labeled everything. This helped the moving crew when it came time to determine what was stored, what went in first, and when things came out, where they should go. They were very grateful.



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DIRECTOR'S REPORT

Many Contribute To Another Successful Conference

By Brian Schiltz, District B Director



Greetings colleagues. It was great seeing everyone at the WTEA conference. It is always a great time learning from the rest of you and the professionals in the world of TECHNOLOGY. I would like to give a shout out to Steve Johnston (Program Coordinator), Joe Ciontea (Executive Director) and his wife, Jaye (Office Coordinator), as well as Jesse Domer (Operations Coordinator) for all their hard work behind the scenes ensuring that you get the opportunity to enjoy a great conference. I also want to give a thank you to the rest of the board members, and those not on the board, that helped make this year's conference a success.

Lastly, THANK YOU, WTEA membership. Without your attendance at the conference and willingness to present at the conference we would not exist. You are a valuable asset to the organization and to all the lives you will impact over time. If you are interested in becoming more involved with WTEA, please contact one of the executives or directors on the board. You can find those who are serving at <https://www.wtea-wis.org/wordpress/>. Best wishes to you.

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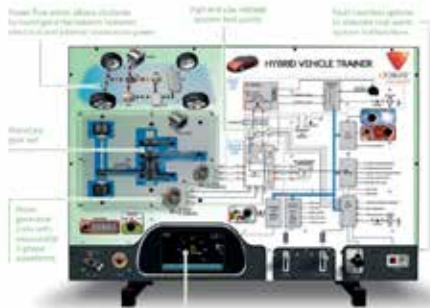
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STUDENTS ENJOY WTEA CONFERENCE

UW-Stout Students View It As Preparation for Their Career

By Ben Schmitt, ITEEA President, UW-Stout

The 54th WTEA conference was held March 8-10 in Wisconsin Dells. WTEA invited UW-Stout's Technology Education students to attend. This year fifteen student members of TEECA (Technology and Engineering Education Collegiate Association) attended. For most this was their first time. Several student teachers from Stout also attended with their cooperating teachers.

On Thursday, a majority of Stout students attended the new teacher seminar for their first session. Sophomore Dan Spaeth said, "The new teacher seminar was a great way to be introduced about topics that aren't always covered in the classroom. I got to learn about retirement programs, insurance, balancing work and life schedules, and other useful topics for a new teacher." The make-and-take sessions on Friday were also a highlight for many Stout students. Many took time to make printed graphics and others participated in the mini foundry demonstration.

Students also explored the trade show to talk to vendors, try different products, find resources for their future classrooms, and watch demonstrations. Senior Tyce Todd was

"very impressed with the trade show." He elaborated, saying, "I was able to demo digital welders, observe and price check tabletop CNCs, and speak with the employees of Sawstop. The safety demo was my highlight of the trade show." Along with the trade show, students explored the project showcase. Sophomore Jacob Scheffler said, "It was very helpful and inspiring to see what other schools are doing. Projects I saw at WTEA this year will help me develop my future projects and curriculum."

Thursday evening, Stout students attended the President's Reception. Senior Sam Konieczny stated, "It was a great opportunity to network, connect with teachers, and learn about opportunities and programs in Wisconsin." Students

had opportunities to meet with Stout alumni, student teachers, former teachers that they had pre-student taught with, as well as meet new teachers.

WTEA was extremely well received by all Stout students in attendance. Senior Ben Schmitt recounted, "When I was encouraging new members to sign up, I told them it is the highlight of our year. It lived up to expectations."



UW-Stout students joined by Bryan Albrecht (center front), WTEA Lifetime Achievement recipient, and Barb Bauer (front, 2nd from right), UW-Stout Program Director - B.S. Technology Education.

UW-Platteville Students See Event As A Bridging of Generations

By Dylon Ecker, UW-Platteville Student

March, 2023, was my first time attending the WTEA conference. Although previous attendees had shared experiences, I really had no expectations. To say I was astonished would be an understatement. I was amazed at the wealth of knowledge and community that the technology educators had. Hearing the keynote speaker and the passion of the breakout speakers helped reaffirm that I am getting into the right career. I get excited knowing that I, as a future technology educator, will be helping students develop a passion for not only high-demand jobs, but also lifelong careers that will set students up to succeed and impact future generations. Technology and innovation start in our classrooms - in technology education.

The annual WTEA conference offers so much to both upcoming teachers, and teachers who have been attending for years. It serves as a bridge between generations of technical educators and ensures Wisconsin has strong,

unified technology education programs. By hosting this event every year, the sharing of ideas and curriculum that works is encouraged and can benefit everyone. I was most impressed by the breakout sessions, where teachers were

willing to present on topics and curriculum that worked well in their classroom, and then also help other teachers modify their curriculum to make it work in different classrooms. In addition to the support from other teachers, I also appreciated the companies and organizations that showed up in booths to offer tips and lessons, as well as supplies and materials. Seeing the tremendous support for technology education, especially knowing not all schools value technology education,

was amazing. I cannot express how grateful I was to come to a place and feel so supported and welcomed. Again, this was my first time attending the conference, and I know it wasn't my last. I am truly thankful for how big of an impression this conference has left on me.



From left: WTEA President-Elect, Mike Paquette, UW-Platteville students Hailey Gabriel, Noelle Elfering, Dylon Ecker, and WTEA District E Director, Alan Mamerow.

THE TECHRISE CHALLENGE

Pilgrim Park Middle School Students' Proposal Selected by NASA

By Eric Hagen, Communications Specialist, Elmbrook Schools

Pilgrim Park Middle School students' proposal for the NASA Techrise Challenge was one of the winning proposals! The team consists of Quentin Justin, Etienne Justin, Jack Antonetti, Emma Socha, Grant Dugan, and Augie King. For the proposal, the students get \$1,500 to build a low-pressure propeller system under the guidance of NASA engineers and scientists this spring before testing their experiment in a high-elevation balloon!

"The Future Engineers organization was incredibly impressed by the students' proposal, experiment plan and thoughtful answers," said team advisor and coach, Rochelle Halstead. "I am so proud of these students and I cannot wait to see the skills and experience that their build brings."

The students' proposal acceptance was announced during a virtual event on January 12, which featured several NASA speakers.



The Pilgrim Middle School Techrise team consists of (L to R) Jack Antonetti, Grant Dugan, Quentin Justin, Etienne Justin, Augie King and Emma Socha.

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WISCONSIN ACP Academic and Career Planning

Program of the Year *(From page 21)*

Woodworking club is Hamilton's newest co-curricular group. The club meets regularly during advisement period on Fridays to work on personal projects above and beyond the regular woodworking curriculum or to work on projects to improve the shop or school. This year, woodworking club held a cutting board fundraiser in December which not only produced cutting boards, but also got staff to work on making their own designs for laser engraving and taught teachers how to use the laser engraver.

Since fall of 2016, Hamilton has had an active SkillsUSA chapter, attending District, State, and National-level Leadership and Skills Conferences. Hamilton's chapter is very well-rounded, with members competing in contests ranging from Teamworks, to Related Technical Math, to Advertising Design. Hamilton SkillsUSA has also worked to bring awareness to Applied Engineering in the past by hosting a winter fundraiser for Hamilton staff. Staff had the opportunity to create cutting boards, mugs, shirts, or canvas prints in time for the holidays with the help of SkillsUSA

members. This activity took place during the first semester following the completion of referendum construction, so that teachers got to see the new and improved Applied Engineering facilities.

Hamilton has also had an active ChallengeUSA team since 2016 and has had three vehicles compete at both Fox Valley Technical College and Road America each year. The Hamilton Supermileage Racing Team has made community outreach a focus. During spring break, students involved in the program have offered a lawnmower tune-up event to staff which involved sharpening blades, changing oil, and cleaning push mowers before mowing season begins. The students have also made local business outreach a priority, meeting with and touring over 50 local businesses this year.

If you would like to apply for the WTEA program of the year, or nominate someone for other WTEA honors and awards, contact Matt Schultz, Awards Committee Chair. See the Interface WTEA Board of Directors page for Matt's contact information (page 2), or go to the WTEA website (Awards) for more info.

RETIRED INSTRUCTOR STAYS ACTIVE

Jack Schindhelm's Woodworking Skills Continue to Benefit Many

"When I retired, I knew it would be necessary to keep my mind and body active. I have been doing woodworking all my adult life. I grew up with black and white TV, no microwave oven, no cell phones or computers. So, I had to learn new technologies. I looked into purchasing an affordable laser. In 2014, I purchased a Full Spectrum hobby laser. Last year I purchased a fantastic replacement: a 50W CO2 laser engraver cutter, 12"x 20," with rotary axis."

A retired tech ed teacher, John "Jack" Schindhelm's garage is full of aromatic cedar boxes, plaques, decorative bowls, tissue boxes, goblets and many more wood creations. "I make all kinds of wood creations besides engraving. I sell them at craft fairs and by word of mouth. 100% of the money raised from the sale of 'Jack's Wood Creations' goes to the school of religion or adult education at my church and other charities. I have donated kneelers, crosses and prayer plaques to the shrine, Our Lady of Good Help, in Champion, Wisconsin."

Schindhelm also makes plaques and key chains to commemorate special events,

such as confirmation or first communion, for children at his church. Special wood projects have included plaques commemorating the 150-year anniversary of the Diocese of Green Bay and a piece chronicling the history of St. Rose Parish, Clintonville.

On behalf of the Knights of Columbus, of which Schindhelm is a member, he also makes wooden crosses for funerals at St. Benedict, which are given to the family.

"My dad was conservative, frugal. I inherited that," he said. "For most of my wood, I saw up



Jack Schindhelm, retired tech ed instructor, with several of his woodworking creations.

logs. My kids bring me old furniture, so most of my materials — other than for my decorative bowls, that's exotic wood — I don't have to buy."

A graduate of UW-Stout, Schindhelm began his education career teaching industrial arts in Hortonville and then moved on to Neenah, where he taught 10 years. He later worked as a patternmaker for several years. Schindhelm eventually earned a master's degree in special education at UW-Oshkosh.

"When I got to Oshkosh, I learned that industrial arts had changed to tech ed and there were all kinds of jobs," he said. "I took a fast track of nine credits and got a (teaching) job in Bonduel. I loved it, but I commuted 40 miles." He finished his career teaching 13 years at Kaukauna, near his home. "I've taught everything, except auto mechanics — electronics, power mechanics, graphic arts, woodworking, printing, computers, you name it," he added.

Schindhelm, whose craftsmanship is also displayed in several pieces of furniture he designed and built for his home and his children's homes, retired in 2011. "The reward is a little bit of pride that I made that," he said, "but if there is anything that someone needs that I can make out of wood, I will make it. I love giving things to people."

One thing I want to let them (other tech ed teachers) know, is what they are doing makes a difference. Many of my students thank me for teaching them the things that I did because they ran circles around their college classmates because of the knowledge they acquired in technology and engineering classes.

To contact Schindhelm about a custom-made wood product, email him at jfschindhelm@aol.com.

Excerpts were included in this article from "The Compass," Official Publication for the Catholic Diocese, Green Bay, WI.



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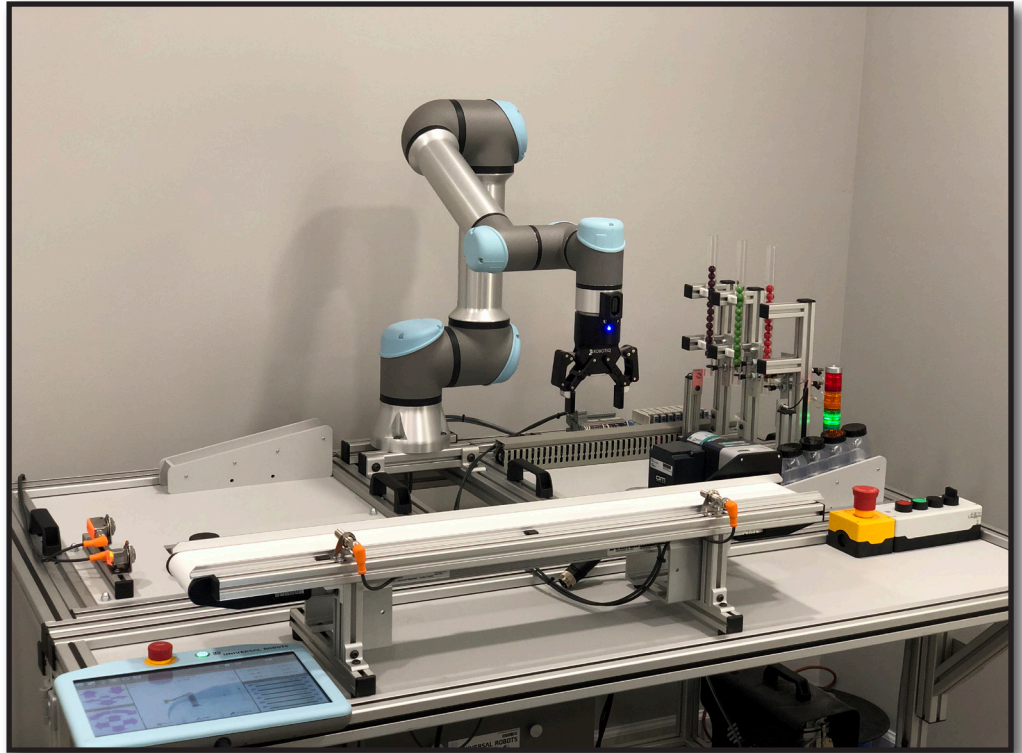
See page 28 of this magazine for details and QR codes for easy access.

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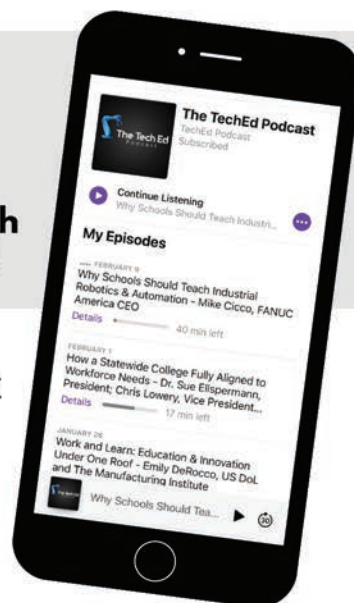
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