

# The ITEEA Headliner

The Most Recent and Pertinent News and Information for the Technology and Engineering Education Field

Volume 2, #4 / September 2016

## ITEEA STEM Professional Development Webinar Series Launches!

On August 22 at 3:00pm ET, ITEEA launched the first installment of its “STEM Professional Development Webinar Series.” The first webinar was on the topic of Authentic Project-Based Learning (PBL) in Technology and Engineering Education and was presented by Jorge Valenzuela of Richmond Public Schools. The goal of each online PD webinar is to provide proven instructional strategies and ideas to support everyone’s efforts in delivering the best possible instruction for ALL students to become technologically and engineering literate. The webinar series is FREE for ITEEA members and \$49 per webinar for nonmembers.



**We NEED YOUR HELP** in getting the word out about upcoming PD webinar opportunities. To learn more or to register go to: <https://www.iteea.org/STEMCenter/EbD-PD/STEMWebinars/94834.aspx>.

## ITEEA Disseminates Recruitment Poster

Dr. Tyler Love, along with Kevin Sutton’s Graphic Design class at NC State, Dr. Steve Shumway, and Dr. Marie Hoepfl (CTETE President), worked together over the summer to produce a recruitment poster for technology and engineering teachers. The poster was included in the September issue of *TET*, supplementing an article describing recruitment methods to help teachers inspire students to pursue a career as T&E teachers. ITEEA’s Institutional Members are listed as universities where one can earn a T&E education degree. This article and poster were identified as a top priority last year by the ITEEA recruitment task force and the CTETE members due to declining program enrollments. Members of these committees believed an appealing poster widely dispersed to the membership via *TET* would be beneficial for teachers to display in their labs/classrooms or school’s guidance suite to increase interest and enrollment numbers. The poster was sponsored, in part, by Kelvin, CTETE, and TSA. Download the poster here: [www.iteea.org/BetterPracticesforRecruitingTandETeachers.aspx](http://www.iteea.org/BetterPracticesforRecruitingTandETeachers.aspx)

## ITEEA Leads Texas Tech STEM Ph.D. Candidates on Capitol Hill

ITEEA conducted a two-day STEM Advocacy Program in Washington, DC for 21 Texas Tech STEM Ph.D. graduate student candidates on June 13 and 14th. Day one of the program included an array of PD topics such as STEM policy talk, STEM advocacy, and preparations to make the most of their group visits with legislators the next day on Capitol Hill. Steve Barbato presented information to the group about ITEEA and how they need to become active participants in our profession through ITEEA, as well as be I-STEM Education leaders in their local school systems with our support. This presentation can be downloaded and viewed by [clicking here](#).

Jenny Buelin (ITEEA’s STEM CTL Director, Digital Initiatives and Professional Development) presented on how STEM CTL leads our profession’s initiatives through the research, assessment, curriculum, and professional development projects and activities. Jenny emphasized the importance of their active participation and highlighted one of the new initiatives being launched this fall to develop an I-STEM Education Professional Learning Community (PLC). This PLC is designed for practicing teachers, preservice teachers, graduate students, and other stakeholders seeking a community of practice for successful implementation of Integrative STEM Education. The PLC will be “housed” in ITEEA’s LMS (Learning Management System), EbD-BUZZ, and grounded in 10 monthly interactive online sessions during the 2016- 2017 academic year and be comprised of presentations, discussions, networking, and Q&A opportunities. [Click here to view the presentation](#). Additionally, Della Cronin (Washington Partners LLC) gave an extensive overview of STEM-related policy initiatives being

worked on by our legislators. The second day began with the cohort meeting at the Longworth House of Representatives building. Representative Randy Neugebauer (R-TX) provided greetings from Capitol Hill and gave the group an overview of his perspectives on where he sees STEM education going on the “Hill” and what they can do to support these initiatives in their locale. After their group Hill visits, we held a debriefing session and shared our outcomes. All in all it was a very positive activity for ITEEA and the students appreciated our efforts to bring them this experience.

## **ITEEA’s STEM ⇄ Center for Teaching and Learning News**

In May ITEEA’s STEM ⇄ CTL held three different Institutes in Baltimore, Maryland.

- Authorized TEC Institute (ATI): Each year the Center holds an Authorized TEC (Teacher Effectiveness Coach) Institute to help provide states with Authorized/Certified EbD trainers. Maryland, Pennsylvania, New York, Illinois, and Kansas sent teachers and PD specialists to receive their certification in an EbD course. Participants engage in activities needed for them to deliver a consistent EbD Professional Development experience in their home state. The representatives from Kansas, Maryland, and Illinois were there as part of the NSF funded GET ET (Engineering Technology) project and will deliver workshops this summer and next as the states provide articulated credit with the Community Colleges in their state.
- Maryland TEC Recertification Institute: Representatives from Maryland attended the Institute to update their EbD knowledge and skills related to the courses that they are certified to deliver in-state. Participants were trained on the new EbD-BUZZ system as well as being paired with an experienced EbD TEC to learn the latest updates. Kudos to Dr. Jennifer Buelin, the Center’s Director for Professional Development and Digital Initiatives, who ran both Institutes in parallel to each other.
- Focal Points Institute: ITEEA’s FocalPoints initiative is going strong and has undergone another level of review. Dr. Tanner Huffman led the Institute and engaged Dr. Nathan Mentzer (Purdue), Dr. Tyler Love (University of Maryland Eastern Shore), and Dr. Michael Grubbs (Baltimore County Public Schools). Their task was to review and revise where necessary and identify the delivery method to consortium states.

## **ITEEA Establishes International Center in Mainland China**

ITEEA recently announced the establishment of an ITEEA Integrative STEM Education Center in Mainland China during an opening ceremony in Nanjing, China. The ITEEA China International Center will operate under the direction of Dr. Jianju Gu in collaboration with ITEEA. Dr. Gu represents a panel of technology education experts under the leadership of the Chinese Ministry of Education. This project’s Initial groundwork for the Center occurred through the ongoing and diligent efforts of Dr. William Dugger, ITEEA Senior Fellow, with assistance by Dr. Phillip Reed of Old Dominion University. Both worked to seek and form relationships with Chinese educators with a common goal of providing technological and engineering literacy for all students. Technology and engineering classes are compulsory for every secondary student in China. With this emphasis, ITEEA is well-positioned to provide support to schools in China to ensure that all students have the opportunity to become educated about technology through an Integrative STEM Education methodology.

This fall, the Chinese Center will begin a program in which 200 schools in China will become Group Members within ITEEA. Every STEM teacher within these designated schools will receive an ITEEA International Membership, including complimentary journal subscriptions, discounts on conference registration and publications, eligibility for scholarships and awards, and online access to many “members-only” features on ITEEA’s newly redesigned website. If all goes according to expectations, it is hoped that additional schools will join in the future. Any individual or school within Mainland China “joining” ITEEA will automatically become part of the ITEEA China Center with a unique profile.

ITEEA’s International Center China will be centered at Nanjing Normal University (NNU) in Jiangsu Province, China. Nanjing Normal University is a comprehensive university and an established leader in educational research where Dr. Gu is part of the School of Technology and Engineering Curriculum Standards and Professor of Pedagogy. The Center has been established primarily to provide curriculum and professional development opportunities, including training, for technology and engineering teachers in China.

## ITEEA Bylaws Vote Complete

On May 4th, every voting member of ITEEA was sent an email with an overview explanation of proposed Bylaws changes and a link to fully review the actual Bylaws, with the changes marked. Members were informed that they would have a period of 30 days to review the amendments prior to being asked to vote via a separate email, which was delivered on June 2. Bylaws changes require a 2/3 majority vote in order to be passed. The proposed changes were intended to keep the association current and functioning at its most efficient level. Members reviewed the details of each proposed amendment and then voted to support the leadership to continue moving the association forward and the Bylaw updates passed with a wide margin.

## “Learning Better by Doing” Project: Update

The ITEEA “Learning Better by Doing” project’s fourth and final survey opened on Monday, July 25, 2016 and will remain open through the Annual Conference in Dallas in 2017. An email was sent to over 28,000 teachers via email from a list developed by project director Johnny Moye over the last year. ITEEA will also continue to announce through social media channels. The direct link to this project’s page on the ITEEA website is [Learning Better By Doing Project](#). Please share with your colleagues at the elementary, middle, and high school grade levels to complete the last-round survey.



**WE NEED YOU TO MAKE IT HAPPEN!** Learn more about the Project, take the survey (it’s important to participate in as many rounds as possible), and encourage other educators to participate.

## ITEEA Asked to Provide Input for NSTA Press Book on STEM

Dr. Jeff Weld, the Executive Director of Iowa Governor’s STEM Advisory Council is in the process of writing a STEM book for NSTA Press. The final chapter will feature the voices of experts and practitioners reacting to these two questions: “What is the one thing about America’s STEM movement that most worries you that we need to get right to fulfill the promise of STEM?” and “What is the one thing about America’s STEM movement that most wows you about the great promise of STEM?” ITEEA Executive Director Steve Barbato was asked to make a contribution to the final chapter.

The goal in contributing to this chapter was to convey to the readers how important it is that all students have equal access to multiple opportunities throughout their schooling to learn and apply their STEM skills, which are more than just science and math. Barbato emphasized the importance of Integrative STEM Education and supplied a link to the ITEEA webpage that offers the definition and more importantly, examples and vignettes of best practice through technology and engineering educators delivering instruction through Integrative STEM Education.

## ITEEA Website Banners Updated to Include an “International” Landing Page

In an effort to begin enhancing the experience of our international members and website visitors when viewing the ITEEA website, we have added a banner in the opening rotations for our “International” members and friends. The link takes visitors to the “ITEEA International Centers” page link and PATT program links. The goal will be to grow our International Centers and include more of a customized set of materials for each country and region.

## National Assessment of Educational Progress (NAEP) TEL Assessment

The National Assessment Governing Board (NAGB), which oversees the National Assessment of Educational Progress (NAEP – The Nation’s Report Card), released national results in late May from the 2014 Spring Technology and Engineering Literacy (TEL) Assessment. Dr. William Dugger and Dr. Johnny Moye attended the day-long program in Detroit representing ITEEA and were able to provide remarks and interact during the live streaming program. The NAGB Press Release can be viewed at [NAEP TEL Webcast](#). An excellent video explaining the assessment results is located at “NAEP 2014 Technology and Engineering Literacy Results: An Overview for Grade 8.” There are additional resources located at “[The Nation’s Report Card\TEL](#).” It is important to note that the NAEP TEL assessment measures three interconnected areas of technology and engineering literacy: “Technology and Society,” “Design and Systems,” and “Information and Communication Technology.” The framework specifies three kinds of practices that students are expected to demonstrate when responding to test

questions: “Understanding Technological Principles,” “Developing Solutions and Achieving Goals,” and “Communicating and Collaborating”

Additionally ITEEA was part of a panel presentation by NAEP held in Baltimore to address the TEL Assessment and “What Testing Technology and Engineering Literacy Means for Education.” The presentation allowed us each to express our views, discuss what the implications are for testing and instruction, and what the lessons learned from this new assessment can mean for educators, students, and policymakers nationwide.

### **“Vital Signs” Reports on the Condition of STEM Learning in U.S. By “Change the Equation”**

In late May, ITEEA was invited to attend and participate in a release of the “Vital Signs” reports on the condition of STEM learning in the United States. Board President Jared Bitting attended, along with Dr. William Dugger, Barry Burke, and Steve Barbato. “CTEq” is comprised of members who are the CEOs of Fortune 500 companies representing a coalition committed to promoting K-12 STEM learning. CTEq members represent more than 20 different industries and share the vision of providing a high quality STEM learning program to every K-12 community in the U.S. [Click here for more about CTEq.](#)

The Vital Signs publication summary statement includes:

“Technology and engineering have played central roles in forming our national identity. We see the United States as a nation of tinkerers and inventors who have helped chart the course of global innovation for centuries. Only time will tell if we can continue to live up to this conception of ourselves. New data from the first-ever Nation’s Report Card on Technology and Engineering Literacy (TEL) are not reassuring. Well less than half the nation’s eighth-graders are on track to become proficient in a set of skills they will need to thrive in society and the workplace. Change the Equation’s unprecedented analysis of survey data from TEL reveals that millions of American youth spend precious little time tinkering, troubleshooting, or doing the kinds of hands-on problem-solving that are at the heart of technology and engineering. Girls, minorities, and low-income students do least of all—dampening hopes to create a more diverse STEM workforce in future years. *Without intentional strategies to expose many more young people to technology and engineering, we are leaving a critical aspect of students’ education to chance.*”



### **ITEEA MEMBERSHIP**

ITEEA is always on the lookout for new members to join us.

We need YOU to make it happen! Please direct anyone who is interested to the Membership area of the ITEEA website at [www.iteea.org](http://www.iteea.org).

### **ITEEA Offers a 50% Membership Discount to all First Year Incoming STEM Teachers**

In July, every collegiate student member was invited to renew membership as a “First-Year Teacher” (Professional Membership) and pay 50% off of the first year rate. This promotion will be announced in STEM Connections as well as on the ITEEA home page, Facebook, and on the Professional Membership page. This new membership promotion was recommended at the 2016 Membership Roundtable breakfast meeting that was held at this year’s annual conference in Washington DC.

### **Annual NEW Student Membership Promotion: College Students Save 50% on Membership:**

Once again, NEW Student Members can join and immediately save 50% off the regular student rate of \$40.00. This promotion will be highlighted on the website, *STEM Connections*, and via social media. New Student Code is ST2016 available until September 30.

## **New Membership Video is Now Available**

Trenton McGregor, a student at Brigham Young University, volunteered his time and talent to provide the latest membership videos. They are now in the News > Multimedia page and also are featured videos on the [Membership page](#). Please take a few minutes to preview these videos and share them with your colleagues. Dr. Tyler Love, Liz Gallo, Scott Bartholomew, and Bob Behnke all participated and highlighted the benefits of networking, professional development, annual conference and group memberships. Spread the word!

## **Makey Makey Helps ITEEA Promote Membership**

ITEEA recently launched a professional membership promotion with Makey Makey. Makey Makey is an invention kit for the 21st century. It's a simple invention kit for beginners and experts doing art, engineering, and everything in between. Makey Makey believes that the Maker Movement is more than just robots, 3D printing, or STEM, or even building things. It allows students to become hardware engineers and solve real-world design challenges by providing a landscape that fosters curiosity and creates vibrant learners. Tom Heck, Makey Makey's VP for Education Initiatives, approached ITEEA regarding offering Makey Makey's long distance workshop attendees the opportunity to join ITEEA. Tom shared the special offer with his workshop participants and speak to the benefits of joining ITEEA. We are excited about this opportunity to spread the word virally!

## **ITEEA PUBLICATIONS**

### ***Technology and Engineering Teacher and Children's Technology and Engineering Undergo Redesign***

Beginning with the September 2016 issues, ITEEA's *Technology and Engineering Teacher* will and *Children's Technology and Engineering* will each introduce a new design. The updated looks are intended to make the journals look more current and create a positive reading experience for print journal subscribers. Both *TET* and *CTE* are also available to subscribers on the ITEEA website in pdf and html formats.

## **OUTREACH INITIATIVES**

### **ITEEA Participates in 2016 STEM Forum Hosted By NSTA**

ITEEA had a successful strand of presentations and booth activity at the 2016 STEM Forum hosted by NSTA. ITEEA, ASEE, NCTM, and ISTE participated with STEM Forum host NSTA as partners at this year's event. Jared Bitting represented ITEEA in his role as President and Dr. John Wells, (Virginia Tech) did a great job representing ITEEA and our profession on the "Defining STEM" panel general session.

### **ITEEA Participates in 2016 Technology Student Association Conference!**

Barry Burke, Tanner Huffman, and Steve Barbato represented ITEEA at the 2016 Technology Student Association (TSA) Conference at the Gaylord Opryland Resort & Convention Center. ITEEA's STEM  $\oplus$  CTL coordinated and ran the National TEAMS (Tests of Engineering Aptitude, Mathematics, and Science) competition. There were over 1,000 TEAMS students competing in this national event and over 7,000 total students attending the conference with an additional 800 teachers. Steve Barbato presented to the TEAMS coaches on Tuesday and then with the TSA Advisors at the daily "Advisor Update" sessions. His goal was to share the importance of joining ITEEA and being an active member in their professional teacher organization. There were several hundred Technology and Engineering Teachers in this audience and we received a good deal of positive teacher feedback. ITEEA participated in the TSA "Meet and Greet." This is basically an "Exhibitor" time for attendees to visit with TSA's partners. We were available to meet with teachers and their students to encourage membership and recruit students to become a technology and engineering educator in the future! Barbato also presented to the TSA State Advisors in their update session. This group is key to sharing our current initiatives and encouraging membership along with active participation within their respective states. The following is a brief excerpt from Tanner Huffman addressing the TEAMS students and coaches at the beginning of the opening event session <https://www.iteea.org/News/282/93874.aspx>.

## **ITEEA Attends ASEE 2016 Conference**

Dr. Tanner Huffman and Dr. Jenny Buelin represented ITEEA at ASEE's 2016 conference held in New Orleans on June 24-28. This conference provided ITEEA with excellent marketing exposure and networking and is part of a mutual collaborative agreement. As a result of ongoing conversations with ASEE's Membership Director, Stephanie Harrington, ITEEA has received the following promotional exposure before, during, and at the conference:

- Recognition on "Thank You" signage located in high-traffic areas of the New Orleans Convention Center.
- Recognition in the advance program (February 2016 double issue of *Prism*).
- Recognition in the annual conference final program.
- Company logo w/hotlink in Sponsors' section of the Annual Conference website
- Full-page color ad in an upcoming issue of *Prism* Magazine (March/April or Summer).
- Full-page color ad in the Annual Conference program.
- Advertorial (button ad and text) in all four issues of the Pre-Conference Newsletter
- Button ad in Conference Connections, daily newsletter and blog running during the conference.

In addition, ASEE and ITEEA have plans to promote "dual membership" in each other's organizations that will ultimately increase awareness and add new MEMBERS! We have worked hard to establish this mutually beneficial relationship in which both organizations offer in-kind marketing opportunities

## **ITEEA Participates in Texas Career Education Conference (TCEC) Program**

ITEEA Executive Director, Steve Barbato, attended the Texas Career Education Conference (TCEC) this summer in Fort Worth, TX. ITEEA 2017 conference co-chairs, David Worley and Bob Behnke put together an excellent set of programmatic activities to advertise our upcoming 2017 ITEEA conference to the Texas educators and administrators. We were also able to present to the attendees and also host a VIP reception for Texas CTE Directors due to the wonderful generosity of Bud Johnson and Paxton/Patterson. We were able to provide a wonderful personalized networking event through this reception. Barbato presented the opportunities that await them at the ITEEA Dallas conference and highlighted what their teachers would gain by actively participating in our conference and association activities. The Texas Technology and Engineering Educators booth had over 50 new and renewing educators join ITEEA!

## **CONFERENCE NEWS**

### **Video Overview of ITEEA's 2016 Exhibit Hall**

Thanks to Michelle Whitaker, a student at Brigham Young University for creating and sharing a fun video overview of just a few things that attendees were able to do and see on ITEEA's 2016 Exhibit Floor. We think this could be a useful promotional piece – particularly for new vendors – to give them a feel for the "cool factor" that takes place in the Exhibits Area of the ITEEA conference. Please view at 2016 [ITEEA Exhibit Brief](#)