

HIGHER ENGINEERING EDUCATION ALLIANCE PROGRAM

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HCMC People's Committee sends 10 executives to Smart City Workshop at ASU

By Catalina Monsalve



Ho Chi Minh City People's Committee with Arizona State University Leadership at the Smart City Executive Workshop held at the ASU Tempe Campus. From left: Do Duc Trung, Vo Minh Thanh, Lam Nguyen Hai Long, Jennifer Carter, Kyle Squires, Nguyen Huynh Long, Tran Anh Tuan, Le Bich Loan, Le Quoc Cuong, Bui Hong Son, Doan Minh Huy, Jeff Goss and Ly Khanh Tam Thao. Photo courtesy of HEEAP.

Intel Products Vietnam (IPV), and the Office of Global Outreach and Extended Education (GOEE) at Arizona State University, organized a Smart City Executive Workshop for 10 delegates from the HCMC People's Committee on April 24-28, 2017. During the Smart City Executive Workshop, ASU leadership, researchers and scientists proposed models to help define and design projects to further support the 2016-2020 breakthrough programs in the Ho Chi Minh City Smart City Plan.

The plan aims to target seven main focus areas: traffic congestion and traffic accidents, pollution, urban flooding, quality of human resources, administrative



Ho Chi Minh City People's Committee visit Intel Chandler Campus for an IoT session. From Left: Tran Anh Tuan, Do Duc Trung, Vo Minh Thanh, Ly Khanh Tam Thao, Nguyen Huynh Long, Rigo Lopez, Nehal Mehta, Susan Tauzer, Le Quoc Cuong, Kathy Wigal, Michelle Pham, Bui Hong Son, Doan Minh Huy and Lam Nguyen Hai Long. Photo courtesy of HEEAP.

reform and digital government, urban renovation and development and finally economic competitiveness and development.

The HCMC People's Committee and the Vietnam Post and Telecommunication Group have jointly developed a strategic plan to transform Ho Chi Minh City into a Smart City by 2025. With citizens being the core focus, the vision of the HCMC Smart City Plan is to facilitate sustainable and effective growth with continuous improvement of livability and services to citizens by leveraging modern technology. As part of a comprehensive approach, ASU is taking on a mentor role to share models for optimizing and improving the



Ho Chi Minh City People's Committee completes a week-long Smart City Executive Workshop held at Arizona State University. From bottom left: Angela Harguess, Kathy Wigal, Le Bich Loan, Michelle Pham and Catalina Monsalve. Second row, from left: Lam Nguyen Hai Long, Nguyen Huynh Long, Jeff Goss, Le Quoc Cuong, Tran Anh Tuan and Ly Khanh Tam Thao. Top row, from left: Do Duc Trung, Doan Minh Huy, Vo Minh Thanh, Jose Quiroga and Bui Hong Son. Photo courtesy of Susan Garrison.

HCMC Smart City Plan by analyzing and exploring models for implementation.

The workshop's objective was to foster the development of ideas and to guide the People's Committee in the selection of various projects. These projects are aimed to target key issues, provide technical support through faculty and research centers, and to implement information and communication technology, internet of things technology as well as cloud and big data solutions for Ho Chi Minh City.

The workshop was successfully conducted in close cooperation with IPV. During the workshop, the delegates met with 30 ASU experts, 3 local city government authorities and 7 industry partner leaders. The workshop culminated in a facilitated outcomes session in which the delegates identified pilot projects to be pursued in the form of a "test bed" prior to executing ideas at scale, and in the form of student masters applied projects.

As a key technology corporate partner, Intel Products Vietnam, made an official announcement early March to sponsor the Intel Grand Challenge Masters Fellowship Program at ASU. This program will further support the implementation of Ho Chi Minh City's plan. The project's goal is to develop a bi-lateral smart city institute for fellows to implement the applied projects. The long term expected result is a future state partnership facilitation between Intel, Saigon Hi-Tech Park, HCMC People's Committee, ASU and other strategic industry partners. ■

BUILD-IT constructs makerspace to drive innovation, creativity in Vietnam

By Monique Clement



U.S. Ambassador to Vietnam Ted Osius (fourth from right) leads the ceremonial ribbon cutting with Tran Nam Tu (second from left), vice director general, Department of Science and Technology, Ministry of Education and Training, Le Hoai Quoc (fourth from right), and Mary Tarnowka (second from right), U.S. consul general. Photographer: Quynh Giao

Arizona State University continues to foster Vietnamese STEM innovation and skill-building with the opening of the Maker Innovation Space in Ho Chi Minh City's Saigon Hi-Tech Park.

Launched on June 8, the Maker Innovation Space is part of the Building University-Industry Learning and Development through Innovation and Technology program known as BUILD-IT. This \$10.8 million project, funded by the United States Agency for International Development, brings academia, industry and government together to invest in a dynamic ecosystem for STEM innovation in Ho Chi Minh City, Vietnam.

The opening of the Maker Innovation space is an important part of the program to help improve applied curricula and advance innovation and entrepreneurship in Ho Chi Minh City.

"Today, on behalf of the management board of Saigon Hi-Tech Park, I would like to express my happiness and appreciation

to USAID, BUILD-IT and Arizona State University, who chose SHTP as one of two sites in Vietnam to build the Maker Innovation Space," says Le Hoai Quoc, president of Saigon Hi-Tech Park. "This takes a very important part to boost the making and innovation activities of students as well as startup projects. Being prepared with the equipment in the Maker Innovation Space, in a short period of time, young people can design, innovate and make their innovative ideas [into] real products."

The space provides resources for faculty and students in the many universities near Saigon Hi-Tech Park to access machinery and materials for projects, courses, workshops, entrepreneurial development and industry-led student competitions.

"The Maker Innovation Space will be a place for university students to design, create, prototype, and invent products and services through a variety of entrepreneurial and curricular platforms



Arizona State University helped launch the Maker Innovation Space in Ho Chi Minh City, Vietnam, as part of the Building University-Industry Learning and Development through Innovation and Technology program known as BUILD-IT, which brings academia, industry and government together to invest in a dynamic ecosystem for STEM innovation in Vietnam. Photographer: Quynh Giao

being introduced through the BUILD-IT Alliance,” says Jeffrey Goss, associate vice provost for Southeast Asia Programs at ASU and executive director of Global Outreach and Extended Education. “We will partner with industry, local community based organizations, and university partners to launch service oriented programs, such as Engineering Programs in Community Service (EPICS), industry-sponsored eProjects, hackathons, design thinking competitions, and senior design capstone projects.”

These tools and programs will better prepare Vietnamese graduates to meet the needs and capabilities of industry.

At the launch, U.S. Ambassador to Vietnam Ted Osius said innovation is key to continuing Vietnam’s growing economy.

“The United States promotes innovation through a partnership between academia, the private sector and the government,” Osius says. “Linkages between these three partners form an environment that allows creativity and innovation to take root, and ultimately to power the economy. This system has helped to make America the world’s innovation leader. I see the beginning of that here in Vietnam.”

ASU has been an active part of recent



Jeffrey Goss led a panel to discuss developing the next generation of innovators at the launch. Panelists included Do Van Dung, president of Ho Chi Minh University of Technology and Education, Sherry Boger, vice president of Intel Products Vietnam, Francis Tuan Anh Nguyen, evangelist at Microsoft, Nhan Nguyen, general director of FabLab Saigon, and Ban Hoang The, expert of technology transfer and innovation at Saigon Hi-Tech Park. Photographer: Quynh Giao

STEM innovation initiatives in Vietnam, including the 2017 STEM Conference hosted by Arizona State University’s Higher Engineering Education Alliance Program and BUILD-IT, the Women in STEM Leadership Program, the Vietnam Engineering Education Conference, and the university invited Vietnamese faculty to campus to learn more about the emerging field of Internet of Things with Intel. ■

[SOURCE: fullcircle.asu.edu/outreach/new-makerspace-in-vietnam-brings-innovative-tools-and-space-for-university-students-and-faculty/](https://fullcircle.asu.edu/outreach/new-makerspace-in-vietnam-brings-innovative-tools-and-space-for-university-students-and-faculty/)



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Ted Osius
U.S. Ambassador to Vietnam

Maker curricula presented to 56 faculty at HCMUT

By Brooke Coley



As a wrap-up to the workshop, participants were challenged to come up with a slogan that captured the essence of the workshop and what they would take with them back to their institutions. "Share passion, make big steps" was another innovative slogan.

In an effort to provide an understanding of active learning and the maker pedagogy, ASU Engineering Professors Nadia Kellam and Brooke Coley held a workshop in Can Tho, Vietnam on July 18-20, 2017.

Titled "Inclusive Maker Pedagogies and the Power of Story for Innovative Engineering Education," the three-day workshop drew 56 faculty and staff members from Ho Chi Minh City University of Technology.

Participants developed a deeper understanding of making and the possibilities to integrate maker pedagogies and active learning into their engineering courses. As there is a new makerspace at Saigon Hi-Tech Park and one in Danang, the workshop served to provide potential ways to utilize and collaborate with those spaces. As a major takeaway from the workshop, participants developed an educational innovation to be implemented in one of their courses this year as well a prospective evaluation plan for that innovation and a community



Faculty members at the HCMUT workshop were divided into smaller collaborative groups to develop an educational innovation to be implemented in one of their courses.

for sustainable support throughout the academic year.

Particularly unique to this workshop for engineering educators was a focus on the power of story where participants were introduced to Joseph Campbell's "The Hero's Journey." By sharing the stories of faculty that had successfully transitioned to student-centered pedagogies in their classrooms, participants became aware of and empowered through their own stories as faculty and educators. The workshop also included an intentional focus on creating inclusive classrooms, which resulted in an awareness of the varied

experiences of diverse students in their classrooms.

Participants shared with the instructors that although the nature of the workshop was very different than anything they had experienced before, they felt it was both powerful and transformative in enabling them to think outside of the box in their approaches to education. As a wrap-up to the workshop, participants were challenged to come up with a slogan that captured the essence of the workshop and what they would take with them back to their institutions. While there were several great slogans generated that addressed working with passion and breaking away from traditional molds, one that well-articulated the overall intent of the workshop was, "Change the way, change the life." By enhancing our pedagogical approaches as faculty and staff, we have the potential to greatly impact the outcomes and successes of students for generations to come and conveying that value indicates the success of this 2017 HCMUT workshop. ■



We invite you to discover HELIX

The Higher Education Learning and Innovation Exchange

Resources and toolkits are curated to deliver teaching and learning resources, workshop materials and technology tools. HELIX gives you the opportunity to collaborate and share your ideas with a network of educators, students, industry, government officials and employers through our discussion boards.

Be a part of our network of education innovators: builditvietnam.org/join

BUILD-IT and National Instruments address need for applied project-based learning models

By Phuong Nguyen



Many participants indicated that the sessions of the workshop they found most useful included those that covered the project spine model, the sample curriculum and syllabus for project-based learning, and the hands-on activities, like the one pictured above, with National Instruments.

One of the challenges of higher education in Vietnam is the gap between theoretical knowledge and practical knowledge taught in schools. Graduates are not adequately equipped with skills to apply concepts or to translate knowledge into practice. To help address this challenge, on May 29, 2017, the BUILD-IT Project-Based Learning Models Workshop was conducted in partnership with National Instruments in Ho Chi Minh City. The workshop was facilitated by Associate Professor Scott Danielson of Arizona State University, Phan Nguyen Quy Nhon of National Instruments and Danang University of Science and Technology's Professor Ngo Dinh Thanh. Thirty-six participants enthusiastically explored the details of various project-based learning implementation models while experiencing typical project-based, hands-on activities.

Breakout discussion sessions throughout the workshop gave participants the chance to learn about how a specific Vietnamese university

is planning for curriculum change to incorporate project-based learning. This case study was found especially helpful as it provided insights applicable to each respective university. During the workshop, participants came up with ideas to set up small-scale student projects to enhance graduate communication and project management skills, and at the same time attract the involvement and investment of industry into building a qualified labor market.

Many participants indicated that the sessions of the workshop they found most useful included those that covered the project spine model, the sample curriculum and syllabus for project-based learning, and the hands-on activities with National Instruments. They praised the workshop stating that the topics discussed significantly increased their knowledge, skills and professional development. Leaving the workshop, many professors stated that they felt ready to update their curriculum to incorporate project-based learning in their programs. ■



BUILD-IT Upcoming Events

We invite you to visit our website and discover all of our upcoming events.

Our activities are driven by the active voice of our four multi-stakeholder solutions councils, supported by a network of maker innovation labs and the HELIX web-based repository.

- Student-Industry engagement events
- Executive Leadership training
- Women in STEM mentorship programs and Leadership forums
- Developing Quality training
- Certified Facilitator programs
- Project-based curriculum
- Maker Innovation Network
- HELIX Portal

Don't miss out on the incredible workshops we are offering in September 2017!

Offered in Hanoi, Ho Chi Minh City, Can Tho, and Danang, BUILD-IT is hosting a number of workshops focused on Developing Quality Systems. Visit our website to learn more about these unique opportunities!

Visit builditvietnam.org to learn more and register

HEEAP 2017 university cohort set to transform education in Vietnam

By David Benson



The cohort made time to tour the ASU Polytechnic campus where they learned about Senior capstone projects and visited the ASU Makerspace lab.

During the early summer of 2017, a cohort of Vietnamese engineering professors participated in workshops at Arizona State University on outcomes-based assessment and active learning techniques. This marked the last university cohort of the HEEAP program, which included faculty members from five different universities across Vietnam: Ho Chi Minh City University of Technology, Danang University of Technology, Ho Chi Minh University of Technical Education, Can Tho University and Hanoi University of Science and Technology.

During the workshop, faculty learned about different pedagogies and teaching philosophies, centering on Bloom's Taxonomy and Kolb's Experiential Learning Cycle, as well as a number of different techniques for engaging students. These approaches were used by the faculty to both analyze their own teaching methods and approaches and to intentionally organize and structure future units.

Faculty members also participated in units on "Integrating Professional ('Soft') Skills", where they developed activities such as scripts and videos to use as "entry events" in a flipped classroom. These videos were developed to engage students by exploring practical

applications of the content and providing a shift in responsibility for content at the Knowledge and Understanding levels of Bloom's Taxonomy. In this unit on professional skills, faculty members also developed Content and Language Integrated Learning units to teach their technical subjects in English.

A central element of this year's workshops was a unit on the engineering design process and problem/project-based learning where faculty developed wearable electronics solutions to a design problem. This project is similar to what can be accomplished in an undergraduate introduction to engineering design course and involves both technical skills such as programming and circuit construction as well as human-centered design principles such as ideation, client profiling and



Faculty members participated in units on "Integrating Professional ('Soft') Skills", where they developed activities such as scripts and videos to use as "entry events" in a flipped classroom.

interviewing.

The faculty members constructed wearable systems using a disaster relief simulation, experiencing the design project from a student perspective. This year's activity transformed two classrooms into a loud and confusing test chamber where the faculty had to navigate a "hazardous environment" to find survivors and report on their status to a master coordination program using Wi-Fi protocols. Through this experience faculty members learned how to frame problems for their students and develop milestones to guide student success. Faculty also learned about team process and methods for assessing student performance when working in a group.

At the end of the university workshop, faculty members participated in a robotics workshop with Senior Lecturer Yinong Chen using VI/PLE, a Visual IoT/Robotics Programming Language Environment developed at ASU. The faculty members programmed robots to navigate a maze using a simple and easy to use process-oriented interface.

During their training, the cohort learned valuable lessons that would not only benefit their own classes, but also serve to transform education at their institutions and in their country as a whole. ■

Executive leadership seminar tackles wicked challenges in higher education policy formulation

By Marcus Ingle & Kathy Wigal



Professor Marcus Ingle (front row, fifth from left) sits for a final picture with the workshop participants including representatives from the Ministry of Education and Training Southeast Asian Ministers of Education Organization, USAID, and ASU.

From May 9-11, 2017, leadership teams from ten Vietnamese universities gathered in Nha Trang to identify a STEM Policy Agenda for their institutions.

Led by Professor Marcus Ingle of Portland State University in collaboration with faculty from the Southeast Asian Ministers of Education Organization Regional Training Center in Vietnam and implementing partner Arizona State University, the seminar was the second in the series and gave participants an opportunity to build on the work of the previous event.

Focused on leadership roles and skills needed to lead policy formulation, leaders emphasized effective prioritization and feasibility elements to design and present policy briefs to their rectors for approval. These briefs address the current “wicked challenges,” a theme used throughout the seminar series to refer to the critical issues faced by leaders in Vietnamese higher education.

The leadership teams proposed policies for critique and feedback from leaders and peers, including mechanisms for market-based tuition increase; leveraging academic program

accreditation to accelerate university reputation and ranking; incentives to increase international peer-review publications; job forecasting and student career guidance; project-based learning development for STEM education; enhancing graduate workforce-readiness; and strengthening university-industry cooperation.

Strong participant enthusiasm, engagement and knowledge transfer between university teams included frequent sharing and questioning of one another’s policy issues, advocacy strategies and completed exercises. One of the university vice rectors characterized his experience, “I learned not only how

to formulate a policy but also so many innovative ideas of our colleagues from other BUILD-IT partner universities to tackle our challenges.”

Seminar participants were also joined by two representatives from the Ministry of Education and Training, Dang Van Huan, Official at International Cooperation Department, and Nguyen Thi Thu Thuy, Senior Official at Higher Education Department, who shared updates regarding the resolution on training human resources to meet requirements of Vietnam’s planned, fourth industrial revolution and a decree on university autonomy.

At the conclusion of the event, many participants developed policy briefs tailored to the STEM improvement requirements of their universities. The seminar participants were prepared to share these briefs with their university rectors for consideration and policy decisions.

A highlight of the seminar was the sustained, high-level of engagement of the university participants in the learning process. They arrived well-prepared and participated actively in all of the applied learning sessions. ■



Faculty from Danang University of Science and Technology work on a policy brief together during one of the workshop breakout sessions.

Oracle Academy offers Java training for faculty in Vietnam

By Cristal Ngo



Oracle Academy instructor Jian Li facilitated the course, which attracted 21 professors from six institutes. The training introduced faculty to project-based learning techniques in teaching foundational Java courses.

From July 24-28, 2017, BUILD-IT and Oracle Academy jointly organized a five-day intensive train-the-trainer course in Java Foundations for BUILD-IT academic partners. The training was led by Oracle Academy instructor Jian Li and drew 21 professors from six institutes and introduced faculty to project-based learning techniques in teaching foundational Java courses.

At the training, faculty learned how to incorporate both entire Oracle Academy courses and individual lessons into their existing curricula. The participants learned

about the vast resources provided by Oracle Academy, which are designed to be delivered as part of an academic program of study and have specific educational learning objectives mapped to align with relevant global standards and exams.

During the training, practical examples from industry were presented to guide faculty on how they could enrich students' learning through similar pedagogy. At the end of the workshop, numerous faculty expressed their appreciation for the hands-on, in-depth training curriculum.

Ultimately, the training sessions gave faculty the ability to enable students to create and work with projects which challenge them to learn the concepts of Java programming, to design object-oriented applications with Java, and finally, to create Java programs using hands-on, engaging activities.

Additional Oracle Academy train-the-trainer courses were offered in the month of August to additional faculty at universities in Hanoi and Danang. ■



SAVE THE DATE | NOVEMBER 13, 2017

The WiSTEM 2017 Conference will highlight the achievements of Women in STEM and inspire, educate and connect women in the science, technology and engineering community. This year's theme highlights Gender Roles in Education, Leadership and Culture, and will convene both men and women working in STEM for a day of open discussion on the role of women in the high demand professions of engineering, technology and science.

Learn more today at builditvietnam.org/WiSTEM

University prepared to utilize technology in the Vietnamese classroom

By Cristal Ngo

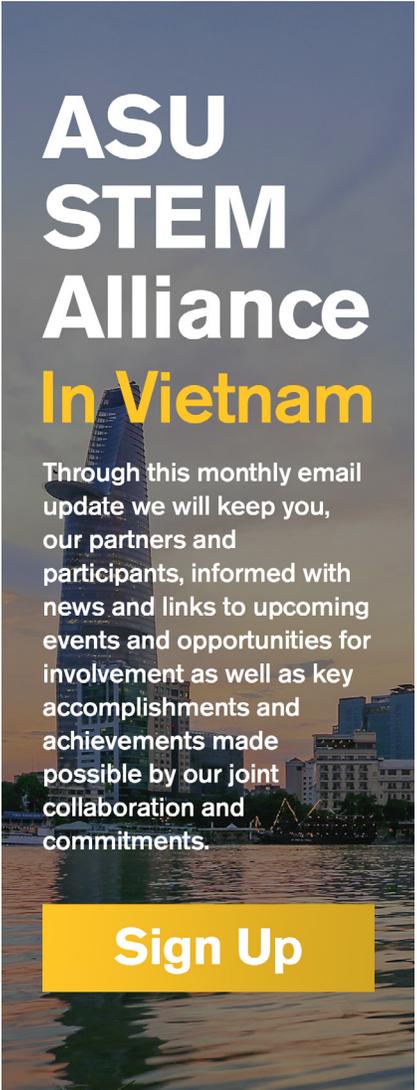
Building University-Industry Learning and Development through Innovation and Technology, or BUILD-IT, a USAID-sponsored ASU initiative to link governments, academia and industry together to create tomorrow's tech-based workforce, recently held a two-day training session for Industrial University of Ho Chi Minh City (IUH) on teaching with learning management systems. The training took place on June 29-30, 2017.

IUH is currently in its first phase of applying information technology in teaching and learning and its learning management system, or LMS for short, is provided and maintained by BUILD-IT partner, Pearson. Thirty-four faculty from IUH's Industrial Chemistry, Environmental and Industrial Electricity departments were selected as the first group to receive the training.

The training aimed to not only build robust technological LMS skills but also to refine faculty's instructional and curriculum design skills to successfully teach and

engage with LMS. During the training, faculty learned to use basic LMS features to design, organize and present online materials as well as various reporting functions to monitor and support students. More importantly, they learned how LMS can be used to engage students through videos and discussion forums.

This training is a stepping stone in IUH's long-term plan to utilize technology to improve teaching quality and build a more interactive and engaging learning environment. After this training, IUH plans to implement eight courses taught by 18 faculty from two departments in the first semester of the academic year 2017-2018. This will serve as a pilot study before implementing the technology and pedagogy school wide. IUH has scheduled two evaluation meetings with the pioneer batch of faculty in the form of community of practice with ASU instructional designer, Cristal Ngo, to provide timely feedback to the school's implementation plan. ■



ASU STEM Alliance In Vietnam

Through this monthly email update we will keep you, our partners and participants, informed with news and links to upcoming events and opportunities for involvement as well as key accomplishments and achievements made possible by our joint collaboration and commitments.

Sign Up

Engineering social entrepreneurship program introduced to Vietnam

By Hope Parker & Joshua Loughman

Representatives of ASU's premier social entrepreneur program, Engineering Projects in Community Service, recently visited Ho Chi Minh City, Da Nang, and Hanoi to present one-day workshops focused on project-based learning combined with service learning and entrepreneurial mindset.

The award-winning program, known as EPICS for short, tasks student teams to design, build and deploy systems to solve engineering-based problems for charities, schools and other not-for-

profit organizations. Representatives Josh Loughman and Hope Parker taught more than 90 participants about the EPICS curriculum, the difference and similarities between EPICS and project-based learning, options for implementing EPICS at their university, how to best utilize Makerspaces and time to test the process by building a prototype around stakeholder needs.

During the stakeholder design process faculty were asked to design packaging for an emergency kit that could withstand

a hurricane and could be used by youth in an orphanage. Faculty were not given all the criteria upfront and had to ask the stakeholders questions to learn more about the problem and to earn bonus building materials. After much laughter and several iterations, faculty came up with numerous innovative ideas ranging from the simple and clean to the high-tech. It was a great reminder to everyone of the joy and innovation that comes when doing hands-on work for a purpose.

Another major outcome of the visit is



Twelve of the EPICS Workshop participants in Hanoi receive certificates for their successful completion of the workshop. Faculty in the workshops learned options for implementing EPICS at their university and how to utilize the Makerspaces in each of their cities.

the start of a pilot program for Global EPICS. Global EPICS is a framework for expanding EPICS programs around the world and utilizing that expanded network to develop collaborative projects. Danang University of Science and Technology and ASU will field test this concept in the coming year with projects from Vietnam and the United States being solved by teams composed of students from both institutions. The Global EPICS program will expand the capabilities of serving the community, enhance the experience of students from host institutions, and further embed the role that universities have in their local and global communities.

In addition to the workshops and launching Global EPICS, the ASU EPICS team also met with the Ministry of Education and Training's Secondary Education Department, Hanoi People's Committee, the National Institute for

Science and Technology Policy and the Ministry of Science and Technology to discuss integrating STEM education into the K-12 curriculum. In the short term, the ASU K12 Engineering Education and Outreach team will be working with Professors Thu Nguyen from Danang University of Science and Technology and Hoi Nguyen from the University of Danang to provide lessons that can be implemented for K-12 students at Fablab Danang. The team is very excited to work with Thu and Hoi and to see how they can best support them in the amazing work they are doing for the community and K12 students.

The ASU EPICS team is looking forward to seeing faculty in Vietnam include EPICS into their classrooms. Additional materials, including the information presented at the one day introduction workshops, can be found [here](#). More details about the

Makerspaces in Ho Chi Minh City and Danang are referenced below. From the EPICS @ASU team, thank you all for attending!

Ho Chi Minh City

The space at Saigon Hi-Tech Park launched on June 8, 2017. It is now open to faculty, students, and the maker community by appointment. Please contact Hoang The Ban at hoang.theban@shtpic.org for additional information.

Danang Makerspace

The Maker Innovation Space in Danang held its grand opening on August 11, 2017. The space is available for students and faculty from local universities to utilize along with the maker community per request. For more information please contact Hoi Nguyen at ngbahoi@gmail.com.

Both spaces have free access to faculty and students. Students can purchase materials at the space or bring their own. ■



During the stakeholder design process faculty were asked to design packaging for an emergency kit that could withstand a hurricane and could be used by youth in an orphanage.

Women's competition leaves a mark in creativity, engineering and entrepreneurship

By Khandle Hedrick



All of the participants in the WEPICS competition were praised by the judges for the creativity and innovation of their projects and were encouraged to continue to develop their ideas.

The USAID-sponsored development contest, Women Engineering Projects in Community Service, also known as WEPICS, held its final competition on Sunday, June 25, 2017 in Danang, Vietnam. The competition was collaboratively produced by Arizona State University, as a part of the BUILD-IT Alliance, Fablab Danang, University of Danang, Danang University of Science and Technology, Evergreen Labs and Microsoft.

Formally launched in January 2017, WEPICS attracted 133 participants from 46 nationally-registered, female-led teams, including student groups, faculty and start-ups. After a careful review of each team's proposed project, including a semi-final idea presentation round, the top eleven teams were selected to participate in the last round where they each were given 20 minutes to demonstrate their projects before the WEPICS panel of judges. Each team was scored according to originality, creativity, social impact, prototype and community feedback. As the projects were developed for a specific local market, the judges requested that each team place a special emphasis on presenting the technical and economic



The team IS from Ho Chi Minh City University of Technology and Education presented their project, "Transportation monitoring by using image processing technology." The project is armed to create traffic control by warning those headed for traffic so they can choose a more advantageous route in peak hours.

feasibility of their project.

The first place prize was awarded to the Starlight team from the School of Electrical Engineering at Danang University of Science and Technology (DUT) for their project, "Equipment to Support Study for the Blind." This equipment helps the blind to learn writing and math without the assistance of teachers. The prize included \$1,000 in cash and a \$500 business start-up package from Evergreen Labs. The second place prize was awarded to the RSL (Reuse for Sustainable Living) team from the School of Environmental Engineering at DUT for their project, "Reuse of Cotton Waste to Grow Mushrooms

and Microbiological Fertilizer." This team won \$500 in cash and a \$250 business start-up package from Evergreen Labs. The remaining teams were also praised by the judges for the creativity and innovation of their projects and were encouraged to continue to develop their ideas.

WEPICS 2017 has been a driving force in the development of STEM in Vietnam. Its purpose was to generate the best, most practical opportunity for women in STEM to work passionately through research, building network and relationships, implementing projects, and supporting the sustainable development of the local community. What WEPICS also did, was provide the conditions and motivation for Vietnamese women to leave their mark in the STEM fields through creativity and entrepreneurship.

The WEPICS planning committee was overwhelmed by the success of the first WEPICS competition and has begun planning to extend the reach of next year's 2018 competition to additional cities and schools in Vietnam. For more information regarding the BUILD-IT Alliance's activities for Women in STEM in Vietnam, please visit us online at builditvietnam.org/wistem. ■

BUILD-IT WiSTEM highlight: ASU Vietnam country director appointed to prime minister's advisory council

By Khandle Hedrick



Phuong Nguyen, Ph.D., was appointed to serve as an advisor to the prime minister as part of the Vietnam National Council on Education and HR Development. She has been actively promoting STEM education in Vietnam for more than 12 years.

This month, BUILD-IT was honored to interview Phuong Nguyen, who was recently appointed to serve as an advisor on the Vietnam National Council on Education and Human Resources Development. As the former country director for the Vietnam Education Foundation, Nguyen played a key role in the implementation of VEF-sponsored research projects on undergraduate education in computer science, electrical engineering, physics and agricultural sciences in Vietnam. Nguyen earned her doctorate in Higher Education Administration from Texas Tech University in 2005 and currently serves as the Vietnam country director for ASU, leading the university's efforts of promoting STEM education throughout the country.

BUILD-IT: Phuong, can you tell us a little bit about the Vietnam National Council on Education and HR Development?

Phuong: The Council is an advisory body to the Prime Minister with regard to various aspects related to Vietnamese education and HR development for the period of 2016-2021, including evaluation of educational reform, refining and executing education laws and development strategies, HR development strategies and planning. As members we conduct research and advise the prime minister on important policies, measures, and projects to develop education, training, vocational training and HR development for Vietnam.

The Council consists of 26 members, representing the government, industry, and academia. Notably, the Council is chaired by Prime Minister Nguyen Xuan Phuc. ASU and Harvard are the only two

foreign educational institutions having representatives appointed to the Council in this term.

BUILD-IT: What does being recognized and appointed to the National Council mean to you?

Phuong: Being recognized by the National Council is truly both an honor, and at the same time, an important responsibility for me. As country director with ASU, being recognized by the National Council presents many opportunities to ASU as a leading innovator in STEM education, including having access to the Council and its distinctive members, having direct input on recommendations made by the Council, and enhancing the visibility and credibility of the University in Vietnam.

BUILD-IT: Were you expecting such a high recognition?

Phuong: No, I was not expecting anything like this at all. On March 1, I received a phone call from the Minister of Education and Training, Phung Xuan Nha. He informed me that I was invited to serve on the Council and I accepted his invitation with honor. It was a very nice surprise for me.

BUILD-IT: Can you share a little about the work you currently do?

Phuong: Following my 11 years of work with the Vietnam Education Foundation (VEF), I am truly grateful for the wonderful opportunity to serve as country director of the Arizona State University Representative Office in Vietnam. I am very proud to be part of the great local team here in Vietnam. We - a team of 11 excellent professionals - are working closely with our excellent colleagues in Tempe to implement the BUILD-IT

Program in Vietnam, focusing on faculty development; technology solutions; STEM curriculum innovation; and higher education quality, policy, and leadership. I love my work as it is very meaningful for me to be part of the effort to innovate education in Vietnam, and it also presents a great learning opportunity for continuous professional growth and development.

In addition, I do volunteer work in my free time, including teaching Positive Living courses, participating in the "Millions of Acts of Goodness" Project, and the "Millions of Smiles" Project.

BUILD-IT: What is the one thing you have done in life that you are most proud of, be it in your career or otherwise?

Phuong: I have had opportunities to meet and inspire thousands of students in Vietnam to have big dreams and pursue them. It is so rewarding to learn that my work has helped contribute towards making a difference in the lives of many young Vietnamese individuals.

Also, my volunteer work has introduced Positive Living to hundreds of individuals, who develop better self-awareness and self-mastery to live happier lives.

BUILD-IT: Do you have any other aspirations you hope to accomplish in the future?

Phuong: I will further develop my knowledge regarding effective, successful STEM education system models and best practices in the world in order to contribute to the work of the Council in the best way possible. I also aspire to be instrumental in spreading the "Millions of Acts of Goodness" Project and the "Millions of Smiles" Project throughout Vietnam and beyond, making our world a better place to live. ■