

HIGHER ENGINEERING EDUCATION ALLIANCE PROGRAM

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Vietnam's economic future lies in stem careers, online learning and public-private partnerships

By Theresa Grant



ASU staff with USAID Vietnam Social Development Unit Chief Ezra Simon at STEMCON. From Left: Huong Nguyen, Thanh Ta, Marcus Ingle, Thao Tran, David Benson, Phuong Nguyen, Scott Danielson, Kyle Squires, Ezra Simon (USAID), Sasha Stinchfield, Phuong Anh Tran, Octavio Heredia, Cristal Ngo, Jose Quiroga. Photo courtesy of HEEAP.

Academic, industry and government leaders gathered in Hanoi in March to promote STEM careers during the 2017 STEM Conference hosted by Arizona State University's Higher Engineering Education Alliance Program and the Building University-Industry Learning and Development through Innovation and Technology Program known as BUILD-IT.

Advancing the Future of Vietnam: Inspiring Students, Makers, Educators and Entrepreneurs to Innovate was the theme of the two-day event that featured interactive plenary and technical sessions, panel discussions and seminars.

Since its inception in 2010, HEEAP's mission has expanded beyond Vietnam and evolved to encompass science, math, engineering and technology. Accordingly, the fifth annual conference,

originally named the Vietnam Engineering Education Conference, has been renamed STEMCON.

Kyle Squires, dean of ASU's Ira A. Fulton Schools of Engineering, stressed the importance of this expansion during his opening remarks. "I believe engaging globally is critical to create bi-lateral research and teaching partnerships to solve problems, create innovators, and to educate the next generation of scientists and engineers," he said.

GET MARRIED, ALREADY

The panel discussions included high-profile government, industry and education global leaders. The interactive sessions included conversations with audience members and emphasized the importance of private and public sectors working together to implement lasting, effective change.

"University and industry are like darlings – always praising each other," said Nguyen Thanh Nam, former CEO of FPT and founder of online university FUNIX. "But we need to get married already, and be fully committed to helping each other, compensating for each other's weaknesses."

Jeffrey Avina, director of government affairs for Microsoft Asia Pacific, echoed the sentiment in a subsequent discussion. "Public-Private Partnerships that involve universities do things where government and industry fall behind. ASU has been out there creating these partnerships."

THE CRITICAL NEED FOR STEM

Speakers and presenters reiterated the critical need for innovative changes in STEM education in Vietnam throughout the conference.

“Competitive advantages based on natural resources or labor cannot be sustained for long in the current world; the country can only hope to develop by competitive advantages based on STEM, raising intellectual content in national products,” said Tran Van Tung, deputy minister of science and technology. “Only in this way can Vietnam achieve sustainable economic development, bridging the development gaps with other countries.”

Following a presentation about Vietnam 2035: The Sustainable Development of a STEM Value Proposition, Le Dang Doanh, senior appointed member of the United Nations Committee for Policy Development, said that in order for Vietnam to reach the level of an advanced economy with a per capita gross domestic product of \$10,000, “Vietnam needs to conduct fundamental reforms in its institutions, apply meritocracy, restructure its economy and enhance science and technology education.”

ONLINE LEARNING

One of the Southeast Asian higher education reforms highlighted at the conference was the introduction and adaptation of online and non-conventional learning. Learning how to learn online is a growing requirement for the STEM-focused workers of the future.

Robert Connolly, director of Crossroads Management Consulting, addressed challenges at Vietnam National University, Ho Chi Minh City, where he teaches business and finance classes. “Although several Vietnamese universities are using some degree of online learning in their programs,” he explained, “strong resistance to greater use of online courses persists. Increasing the adoption of online learning will require a change of perception by faculty, administrators, students and the community at large.”

While illustrating the imperative to prepare the workforce of the future, Samuel Harris of Amazon Web Services noted the growing need for cloud computing professionals. Harris presented Amazon’s Global Education Program, AWS Educate, and demonstrated a new tool that provides educators with the resources to accelerate cloud-related learning. “With the increasing demand for cloud employees, AWS Educate provides an academic gateway for the next generation of IT and cloud professionals,” he said.

The new BUILD-IT Higher Education Learning and Innovation Exchange online educational tool also debuted at the conference. HELIX is an innovative, online community through which educators can connect with colleagues to share educational resources and ideas for transforming STEM education – “perhaps paving the way for broader acceptance of online collaboration and learning,” explained Octavio Heredia, ASU’s director of Outreach and Extended Education, who demonstrated the platform and fielded questions from participants.

A key moment in the conference – a video message from Nobel Laureate and Fulton Schools Professor Leland Hartwell, was particularly relevant to the continuing education process.

“What we’re faced with now is the fact that things are changing so fast that an education today won’t be relevant 10 years from now. So how do we train students not in what’s useful today, but what’s useful in the future? We need to train students to be learners. They need to be able to learn throughout their careers,” emphasized Hartwell. “It’s not about what they learn – it’s more about learning how to learn.”

Topica Edtech Group, an online education leader in Vietnam, Singapore and the Philippines, presented tangible examples of how access to continuing online education contributes not only to the success of students, but also to professionals, professors, universities, and corporations.

MAKER AWARDS

STEMCON also honored the winners of two industry-sponsored competitions that took place earlier this year.

The 2017 National Instruments Innovation Design Competition for Young Entrepreneurs in Vietnam began with 29 teams who submitted abstracts. Only 10 teams were chosen to advance to the final round and submit a prototype using the NI-provided software and hardware in the development of their final projects. CASSANDRA, an internet-of-things system for at-home cardiac surveillance, took first place in the NI Innovation Design Competition, winning \$600, a myRIO embedded hardware device that supports designing complex engineering systems, and a trip to Austin, Texas, to present the winning paper at NI Week. Second place, along with \$300 and a myRIO, went home with Glasses for the Blind.



Winners of the 2017 National Instruments Innovation Design Competition for Young Entrepreneurs showcase their winning internet of things home cardiac surveillance system, “CASSANDRA.”

 **Click here
to view more
event photos**

“I was inspired to see innovative ideas with positive social and economic impact,” said Jimmy Hwang, senior marketing manager, Alliance Partner Network, National Instruments, while congratulating all competitors for their efforts.

Intel also sponsored a Robotics Competition for faculty members from HEEAP partner universities. Competitors submitted proposals on how they would use programmable robots to teach engineering. Three faculty members from the Danang University of Science and Technology, the Hanoi University of Science and Technology and the HCMC University of Technology and Education were selected as award recipients, each lecturer receiving an innovation certificate and a set of 20 programmable robots to be used for instruction in their introduction to engineering courses.

HEEAP’s EXPANSION BEYOND VIETNAM

In addition to a wide range of Vietnamese educators and industry representatives, this year’s conference had attendees from Laos, Thailand, Philippines and Malaysia.

“In concert with BUILD-IT, STEMCON represents the next phase of the HEEAP program – expanding the pipeline between qualified students with needed technical skills and industry in Southeast Asia,” said Jeffrey Goss, associate vice provost of Southeast Asia Programs. ■

Robotics workshop kicks off use of distance learning classrooms

By Cristal Ngo



Professor Yinong Chen (back 9th from left) poses with his workshop class at the Ho Chi Minh City University of Technology and Education's Distance Learning Classroom in front of the maze with their Arduino Robots after the final competition.

BUILD-IT hosted its first Train the Trainer Workshop: Introduction to Engineering Using Robotics Experiments, a three-day workshop sponsored by Intel, held December 13-15, 2016. The workshop was planned as part of BUILD-IT's sixth core activity that focuses on project-based curriculum. This faculty-focused, hands-on workshop, created and instructed by ASU's Yinong Chen, was designed to teach professors how to engage and inspire engineering students by using robotics experiments.

The workshop took place in four distance learning classrooms at Danang University of Science and Technology, VNU University of Engineering and Technology, Ho Chi Minh City University of Technology, and Ho Chi Minh City University of Technology and Education; this is the first time all four distance learning classrooms were connected simultaneously to complete one workshop.

The Train the Trainer event was preceded by a Student Robotics Workshop, where 20 university students met at Cao Thang Technical College on December 11 in Ho Chi Minh City to build and test the robots that would be utilized at the four locations. This workshop provided a great opportunity for students to assemble a robot from scratch. Students also had the chance to test the robots by using the ASU VIPLE programming language. Within just two hours after building the robots,

the students were able to learn the visual programming language and practice using it to make the robots move.

Chen was stationed in Ho Chi Minh City and led the student workshop at Cao Thang Technical College as well as the Train the Trainer Workshop from the distance learning classroom at the Ho Chi Minh City University of Technology and Education. Three university professors who had previously completed a similar workshop as part of HEEAP, were trained to facilitate instruction along with Chen at the other three distance learning classrooms. The workshop is an excellent showcase of innovative pedagogy combined with advanced technology to enable a simultaneous four-site workshop on project-based curriculum. One professor stated that being able to see participants from other remote sites through this simultaneous learning experience provided "more motivation to participate in the workshop."

The Train the Trainer Workshop began by highlighting the challenges in traditional approaches to teaching programming to engineering students in which the complexity and abstract features of programming languages discourage students from programming and thinking creatively to solve engineering problems. Faculty were then introduced to a project-based curriculum design approach to empower and engage students as they explore authentic, real-world challenges.

Across all four sites, 103 participants were given hands-on robot programming exercises on both a simulator and real pcDuino robots to experience the impact of the instructional method from the student point of view in a team-based setting.

Even nearing the end of the workshop, faculty remained fully engaged in the learning experience, debugging the programs, testing the robots and refining the algorithms to prepare for the final robot competition. For the final competition, participants were divided into teams of four where their programming languages were tested by how quickly and efficiently their robots could navigate a given maze. Excitement and team spirit filled all four classrooms throughout the competition.

When asked to share their opinions about the workshop, many participants mentioned how excited they were to have the opportunity to use the ASU programming tool with an actual robot. They also stressed how the practical experience of controlling a robot would encourage innovation among students in the classroom. Faculty especially noted the benefits of participating in project-based learning and recognized the ease with which they could apply this instructional approach to their own courses. At the end of the workshop, participants were also provided full teaching materials to be able reproduce the course in their own classrooms and communities. ■

Young southeast asian leaders gather in Vietnam

By Carolyn Starr and Jose Quiroga

Planes carrying young leaders from nine Southeast Asian countries landed in Ho Chi Minh City on November 23, 2016. Without hesitation the 17 participants laughed, hugged, and started conversations as if it hadn't been five months since they last saw each other. They came to Vietnam ready to work, enjoy new cultural experiences, and most importantly, to write grants with the potential to change their communities.

These Young Southeast Asian Leaders Initiative (YSEALI) fellows were all together at ASU in Tempe, Arizona for five weeks in April 2016 as part of a U.S. State Department sponsored program. The Ira A. Fulton Schools of Engineering hosted 22 of these fellows focusing on social entrepreneurship and economic development (SE&ED).

The young leaders were joined in Vietnam by Dr. David Benson, the lead faculty for the SE&ED institute, and Carolyn Starr, Sr. Coordinator for YSEALI. Together, they led the group teaching project collaboration and grant writing for three days. The fellows were challenged to create teams, develop a vision and implementation plan, and then begin writing grants to support programs in their home countries.

As a result of their hard work during this grant writing workshop, one of the teams who submitted a proposal to the YSEALI Seeds for the Future program sponsored by the US Department of State, was selected for funding. The winning team, comprised of two female participants from the Phillipines and Thailand, submitted a project titled "XX+XY" that promotes gender equality by educating youth and advocating for women's rights in underprivileged communities.

Woven between late night brainstorming and early morning breakfast, the students made time for cultural side trips, urban hikes of the city and a visit to the ASU Representative Office located in Ho Chi Minh City. They also ate bun cha, the same dish President Obama enjoyed with food writer Anthony Bourdain in his most recent visit to Vietnam.

When their planes took off on Sunday, the YSEALI fellows had drafted new grants, reconfirmed connections and made plans for their next meet ups - all

with the goal of continuing to create innovative solutions to the world's toughest challenges. ■



The 17 young leaders from YSEALI visited the ASU Representative Office in Vietnam. Here they took the time to smile for photo right outside the office with ASU's YSEALI and Vietnam team.



The YSEALI students were also introduced to Vietnamese food and culture during their visit. Here they are enjoying a traditional Vietnamese feast.

Q&A with new partners: Oracle Academy and Amazon Web Services

By Kathy Wigal

Based on the pillars of institutional policy, quality, curriculum, faculty innovation and technology, Building University-Industry Learning and Development through Innovation and Technology – known as BUILD-IT, leverages deep and diverse government, industry and academic partners that share a goal of tightly linking science, technology, engineering, and math instruction in Vietnamese higher education institutions to the needs and capabilities of industry partners to produce graduates who can lead inclusive, technology-based growth. BUILD-IT has recently welcomed two new partners to the family: Oracle Academy and Amazon Web Services. Both partners share our commitment and will bring innovative curriculum development opportunities directly to the Vietnamese faculty.

Kathy Wigal, BUILD-IT Project Director and Associate Director of Curricular Innovation at ASU, recently discussed the new partnership with Damian Hass, Oracle Academy's Asia Pacific Regional Director and Sam Harris, from Amazon Web Services Business Development for Education, Research and Not-For-Profit.

Q&A with Oracle Academy's Damian Hass

What excites you most about the BUILD-IT project and working with the Vietnamese Universities?

Hass: "Working with the BUILD-IT project has presented Oracle Academy with an opportunity to participate in a long-term project that is at the heart of what the Academy is all about. Oracle Academy's mission is to advance computer science education globally, and drive knowledge, innovation, skills development and diversity in technology fields. Since the early 1990s, Oracle has been providing support for education and today we support nearly 3.1 million students annually in 110 countries and make an annual in-kind investment of nearly \$3.5 billion to help close the technology skills gap and make students college and career ready. BUILD-IT



has provided an opportunity to extend our work in Asia and bring this support for education to Vietnam education institutions."

What does Oracle Academy bring to the BUILD-IT project?

Hass: "Oracle Academy understands and values educators, and is committed to partnering with them to advance computer science as part of our collective educational mission. We believe that we must equip and support teachers with the innovative curriculum, training, workshops and self-study courses, and other information and resources they need to facilitate student learning in and outside the classroom. Our experience in working with education institutions and educators around the world and our understanding of the needs and trends within industry help us to bring useful offerings to our members."

How does this create value for the universities?

Hass: "Oracle Academy programs are global, free, vendor-neutral and completely philanthropic. Through partnerships and direct support, Oracle Academy creates a computer science education pathway from primary schools through to higher education to cultivate critical thinking and core, in-demand skills. What a student studies is important and is the foundation for them finding meaningful employment in their chosen field. We want to help institutions provide their students with the best curriculum and programs possible to enhance the institution's programs and provide their students with the best opportunities."

What do you see as the biggest challenge facing Vietnamese Universities? How can you support the Vietnamese society?

Hass: "The need for computer science skills is pervasive across all industries, not just for technology companies. Employment in these diverse industries will require a diverse and well skilled workforce. Oracle Academy is committed to supporting diversity in technology and increasing the participation of girls and women, and other underrepresented groups, by creating materials and programs that make computer science accessible and engaging for everyone."

How is this a win-win? How does Oracle benefit from this work?

Hass: "Oracle is a major global technology company with products and services across every industry vertical from manufacturing to health, from government to retail, from banking and finance to transport. As such, Oracle understands the needs of these industries and our customers particularly in relation to their demand for a skilled workforce. Helping education institutions create a diverse workforce equipped with these high demand skills ultimately benefits the technology industry as it promotes innovation and expertise."

What has been your experience working in Vietnam and with Vietnamese partners so far?

Hass: "There is tremendous energy associated with the BUILD-IT project

and our interaction with partners to date has reflected this. It is very exciting to be working in Vietnam at this important time to help support the education sector in its key role in building a skilled workforce for its growing economy. We are still at the formative stages and there is much to do to determine how we can support the partners over the coming years."

What will Amazon Web Services offer to educators under the BUILD-IT project?

Harris: "Amazon Web Services, as part of the BUILD-IT program, will offer opportunities for educators and students to leverage cloud computing curriculum. With cloud technology becoming the new normal across many industries including education and a huge skills gap from students leaving institutions without cloud computing skill sets, we intend to work closely with the engineering and

information technology schools at BUILD-IT institutions to disseminate and drive adoption of AWS Educate."

Tell us more about AWS Educate. What is the value for the universities?

Harris: "AWS Educate is a learning platform that gives lecturers and students access to free content on cloud computing learning pathways as well as free use of AWS cloud infrastructure to create projects and get used to cloud technology."

It is sometimes difficult for faculty to integrate new curriculum. How will AWS provide support and training? How will you know the changes are bearing results?

Harris: "As part of BUILD-IT we also offer "train-the-trainer days" for lecturers ready to start teaching AWS curriculum to their students. Additionally, we will contribute to the program by building out the understanding of business intelligence and data warehousing in an education context amongst your institutions for you to track and understand student's behavior and results."

Oracle Academy and Amazon Web Services will both be bringing exciting opportunities to engage lecturers from BUILD-IT partner universities over the coming months as commitment to supporting our universities in implementation. Interested faculty should watch the website for details: <http://www.builditvietnam.org>. ■

National Instruments innovation competition launched in Vietnam again

By Thao Tran

In 2014, National Instruments (NI) partnered with ASU to successfully organize the first NI Innovation Design Competition for Young Entrepreneurs in Vietnam.

This year, the competition was held again with the theme: "Innovate – Create – Design – Build." This is a unique opportunity for STEM students and young engineers, scientists and technologists to nurture their innovative, and entrepreneurial ideas. The winners will have the opportunity to win a cash prize, NI design products and a trip to the NI World Headquarters in Austin, Texas.

The competition was launched on August 15, 2016 and attracted 29 teams who submitted abstracts. The 10 teams chosen to advance to the final round are from Ho Chi Minh City University of Technology, Ho Chi Minh City Industrial University, Ho Chi Minh City International University, Ho Chi Minh City University of Education and Technology, Duy Tan University – Danang.

One of the requirements of the competition is that teams utilize the NI provided software and hardware, LabVIEW and myRIO, in the development of their products. NI LabVIEW is



Students from the first NI Innovation Design Competition in 2014 display their final project onstage at the New World Saigon Hotel.

a proven integrated development environment for interfacing with measurement and control hardware, analyzing data, publishing results, and distributing systems using a graphical programming approach. NI myRIO is an embedded hardware device that introduces students to industry proven technology and allows them to design real, complex engineering systems more quickly and affordably than ever before. Saigon Hi-Tech Park, ASU, NI and Fablab Danang have been supporting all teams in the training and implementation of both LabVIEW and myRIO.

The advancing teams worked on their prototypes and submitted their final projects on February 2, 2017. Though many great projects were submitted, only two teams could be chosen to receive the first and second place prizes. The award ceremony took place March 2, 2017 in Hanoi where the project, "Glasses for the Blind" won second place, and the project, CASSANDRA, a homecare health monitoring system, took home the grand first place prize. ■

HEEAP awards 109 scholarships to technical female students

By Tam Ngo



Intel representative, Huyen Ho (far left), stands with a group of students who have just received the 2016 Intel Technical Female Vocational Scholarship.

In December, HEEAP awarded scholarships to 109 female students from the university and college partners of HEEAP programs. The total value of all scholarships is 708.5 million VND.

The 109 scholarship beneficiaries came from 13 technical colleges and vocational schools, including: Industrial University of Ho Chi Minh City, Ho Chi Minh City Vocational College of Technology, Cao Thang Technical College, Thu Duc College of Technology, Dong An Polytechnic, Ho Chi Minh City Vocational College, Ly Tu Trong Technical College, Ho Chi Minh City Technical and Economic College, Industry and Trade Vocational College, Vietnam Singapore Vocational College, Ho Chi Minh City University of Technology and Education, Can Tho Vocational College, and Ho Chi Minh City Institute of Applied Science and Technology.

The Intel Technical Vocational Female Student Scholarship is an annual HEEAP scholarship program. From 2012 to 2016, the program has offered 545 scholarships

to female students in Ho Chi Minh City and neighboring provinces. With the additional 109 scholarships this year, the total value of the scholarships has surpassed 3.54 billion VND.

An award ceremony was organized on December 16, 2016 with the presence of the U.S. Consul General, Mary Tarnowka; Deputy Director of Ho Chi Minh City's Department of Education and Training, Pham Ngoc Thanh; Chief of Saigon Hi-Tech Park, Le Hoai Quoc; USAID Chief, Stephen Berlinguette; Public Affairs Director of Intel Products Vietnam and Malaysia, Uyen Ho; along with 13 universities and colleges leaders, and 109 female students.

Speaking at the event, Tarnowka said, "I'm pleased to say that Vietnam's high-tech and engineering workforce is more competitive today thanks to HEEAP... In America, women are leaders and innovators. They contribute to society and help others. I hope that [female students here] will all work to build a community of women leaders and educators through

your education and that you encourage and support each other through your studies."

Ho said, "Promoting educational opportunities for young girls and building women's capacity is one of the focus areas of education development and social responsibilities of Intel. This is the fifth consecutive year that Intel offers scholarships to technical female students with the goal to increase the percentage of female students in technical fields in Vietnam, and to create more opportunities for female students to develop their capabilities in the fields that they pursue."

The Intel Technical Vocational Female Student Scholarship program will be continued in 2017, with online applications available in September 2017. Female students from the schools mentioned above can apply online, as well as learn more about the program at: <http://heep.org/scholarship>. ■

Intel celebrates 10th anniversary in Vietnam

By Vietnam News

In December, Intel Products Vietnam celebrated the 10th anniversary since the launch of its business activities in Vietnam. Intel's announcement to invest in Vietnam in 2006 helped put the country on the global map in the IT and electronics industry, attracting industry suppliers and service providers and bolstering both economic and social outcomes.

During the past 10 years, Intel has accelerated the pace of investment in Vietnam through key initiatives such as the development of an electronics cluster and the opening of a chip testing and assembly facility in Sài Gòn Hi-Tech Park in District 9 in Ho Chi Minh City.

Intel, in collaboration with industry partners, helped modernize the top engineering and technical vocational universities in Vietnam through HEEP with an ABET-accredited outcome by 2018. In addition, Intel's K-12 program has effectively trained over 150,000 educators in 28 cities and revolutionized how students learn.

Intel has also engaged the Government of Vietnam on the implementation of policies, such as the E-Customs Systems, which simplifies customs clearance and facilitates more efficient trade.

Intel Products Vietnam has embarked on green initiatives that include investments in the largest operating solar power system in Ho Chi Minh City and Vietnam, which generates more than 321,000 kWh of power, offsetting 221,300 kg of carbon dioxide emissions yearly. Another 16 energy conservation projects were also implemented in 2016, which have achieved a remarkable 4,678,845 kWh in annual savings. ■

Source: <http://vietnamnews.vn/bizhub/347727/intel-celebrates-10th-anniversary-in-vn.html#uiCPDkqCo7C6WEEq.99>



Intel representatives and the ASU team stand together on stage celebrating Intel Product's 10th Anniversary in Vietnam.



Intel's celebrations included a glass sculpture award given to its partners in Vietnam.

Professor implements new learning technique in Vietnamese classroom

By Ly Nguyen

On November 19, 2016, a group of engineering students from Ho Chi Minh University of Technology (HCMUT) engaged in a dynamic classroom approach: Project Based Learning (PBL). By using this learning method, students can acquire deeper knowledge about real-world problems, as well as participate in solving complex questions, real-world problems or challenges. It is a comprehensive perspective focused on teaching by engaging students in the investigation. Within this framework, students pursue solutions to nontrivial problems by asking and refining questions, collecting and analyzing data, making predictions, designing experiments, communicating their ideas to others and drawing conclusions.

Professor Dang Thanh Tin, recently applied the PBL method in his classrooms at HCMUT. In this class, Tin grouped three to four students into a team. The students were given a "driving question" to answer relating to health measurement needs then directed to create develop a sensor based solution using Arduino. Student projects focused on measurement challenges such as heart rate and respiration rate of human subjects. During the course of the project the students were required to create a Work Breakdown Structure (WBS) to divide the project into subtasks with concrete functions. Tin's students also generated Gantt charts to develop timelines for project components and testing. David Benson, HEEAP Academic Director, visited Tin's classroom to observe the final presentations of the student's

deployment processes. He also had the opportunity to see their mid-project presentations for PBL and review their WBS and Gantt Charts.

Impressed to see new learning techniques implemented successfully in the Vietnamese classroom, Benson said, "PBL creates an environment where students are free to explore problems by themselves, without being fed information from a textbook or lecture. The knowledge and engineering skills the students gained through this process stood out in their presentations. I was especially impressed how the students worked as teams to identify different project tasks and requirements and how they used the WBS to plan their approach to building their prototypes." ■

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Welcome new team members

By Khandle Hedrick

Cristal Ngo Minh Ngoc

Cristal Ngo Minh Ngoc is the instructional designer for ASU's Representative Office in Vietnam. Her passion is educational innovation, particularly in teaching and learning pedagogies, which promote personalized, self-motivated and peer-supported learning. Her research interest is in designing, customizing and innovating curriculum to reach a wider range of students. She is also interested in exploring different ways to blend educational technology and online learning with traditional classroom learning to improve educational outcomes.



Prior to joining ASU, Ngo was an assistant professor at Singapore Institute of Technology, where she taught mainly in the area of information technology since 2014. She was also the co-chair of Blended Learning and Technology Enhanced Learning Community of Practice. She was awarded the Singapore Institute of Technology's Advancement in Learning and Teaching grant in 2014.

Ngo also taught at FPT University in Vietnam and as a lecturer at Singapore Institute of Management, where she received their Lecturer of the Year award in 2011 for lecturing and tutoring in the collaborative bachelor program with University of Wollongong, Australia. Ngo received a bachelor's degree in computer engineering and a doctoral degree in software engineering from Nanyang Technological University in Singapore.

Phuong Nguyen

Phuong Nguyen serves as the HEEAP country director in Vietnam. Prior to her appointment with ASU, she was the country director for the Vietnam Education Foundation. She also served as senior officer in the Office of International Relations and Research



Affairs and as a lecturer at the University of Social Sciences and Humanities, Vietnam National University – Ho Chi Minh City.

In 2006, Phuong served as a project consultant for the Vietnam Education Foundation, playing a key role as coordinator and co-author for two Vietnam Education Foundation sponsored research projects on undergraduate education in computer science, electrical engineering, physics and agricultural sciences in Vietnam.

Phuong received her bachelor's degree in English linguistics and literature from the University of Social Sciences and Humanities - Ho Chi Minh City and her bachelor's degree in hotel and tourism management from Hanoi Open University, Ho Chi Minh City campus. She completed her master's degree in comparative linguistics from the University of Social Sciences and Humanities - Ho Chi Minh City.

In 2005, Phuong earned her doctoral degree in higher education administration from Texas Tech University. Besides research in cooperative learning, general education programs and multicultural education, her main research interests include accreditation, institutional effectiveness and quality improvement.

Catalina Monsalve

Catalina Monsalve serves as a senior program coordinator for Global Outreach and Extended Education in the Ira A. Fulton Schools of Engineering at ASU. Monsalve supports HEEAP and other global programs in the department. In addition, she will help increase GOEE's capacity to go after new sponsored projects. Monsalve has been working in higher education for the past 11 years, most recently with the U.S.–Pakistan Centers for Advanced Studies in Energy (USPCAS-E), a USAID-funded project in the Office of Knowledge Enterprise Development at ASU. Catalina earned



her bachelor's degree in business/public policy from the W.P. Carey School of Business with a minor in urban planning. She also holds a certificate of international business relations and is currently pursuing a master's degree in public administration from ASU.

Sasha Stinchfield

Sasha Stinchfield is the Associate Managing Director of Strategic Initiatives/Chief of Staff in the ASU Vietnam Representative Office in Ho Chi Minh City. In this role, Sasha works closely with the ASU Associate Vice Provost for Southeast Asia, ASU Chief Representative of the Representative Office, and ASU Vietnam Project Directors to plan, organize and manage the local operations of the Representative Office and actively participates in both the near- and long-term strategic planning. A primary focus is in the development of new projects and programs that support the Fulton Schools' and ASU's vision for growth in Vietnam and Southeast Asia. Additional responsibilities include acting as Chief of Staff to the HEEAP Director/ASU Associate Vice Provost SE Asia Programs, while implementing ASU's strategy for building and maintaining strategic relationships and business development for both existing and prospective clients within all sectors, audiences and organizations served by the Fulton Schools and broader ASU capabilities.



Previously, Stinchfield was with the ASU International Development Office where she served as proposal development manager, leading the strategic development of new grants, project management, processes innovation and relationship management. She has extensive experience cultivating and consulting on major global funded initiatives, such as with the United States Agency for International Development, World Bank, and other donor organizations. In addition, she has led the project management of global projects in Brazil and South America. She holds an

executive master's degree in sustainability leadership and a bachelor's degree in global studies from ASU.

Phuong Anh Dang

Phuong Anh joined the ASU team as the in-country program manager based in Hanoi, Vietnam. Prior to her appointment at ASU, Phuong Anh was a finance, human resources and administration manager of Vietnam Education Foundation. Before that, she was human resources and administration manager of Oxfam Hong Kong, an international NGO in Vietnam. Phuong Anh possesses comprehensive knowledge and a solid background in human resources, administration, policy development and update, recruitment and orientation, employment contract, payroll, insurance and staff development. Phuong Anh is excited to join ASU and looks forward to contributing toward achieving the mission of ASU.



She has an MBA in human resource management from American Heritage University, a bachelor's degree in economics and trade from National Economics University in Hanoi, and a bachelor's degree in English from Hanoi National University. In her spare time, she enjoys reading, traveling and listening to music. ■



THE INTERNET OF CONNECTING THINGS

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