Cybersecurity is a STEMB Field …
… and the B Isn't Silent!

By: Dr. Mansur Hasib, CISSP, PMP, CPHIMS
Public Speaker and Cybersecurity Leader

Put together a bunch of passionate academics, government officials, and industry leaders who love to discuss their niche in the vast, exciting, multidisciplinary field of cybersecurity – and sparks are bound to fly! And this is exactly what happened at the National Initiative for Cybersecurity Education (NICE) conference held in Columbia, Maryland, November 5-6, 2014. This was perfect for the hundreds of curious high school and college students who attended this event and shared some good laughs and entertainment with us.

Technology drives the mission of the modern organization. Technology touches every person's work and personal lives. Every person uses data and information on a daily basis. Therefore everyone has a role in cybersecurity. If they use technology and handle data on a daily basis, 100% of the federal workforce have a role in cybersecurity. Once people are properly engaged we have the added benefit of higher productivity and innovation in the organization (see page 53 of the Fall 2014 issue of the United States Cybersecurity Magazine for the Holistic Cybersecurity Model).

I was pleasantly surprised at a session where I learned about Louisiana's Cyber Innovation Center (www.cyberinnovationcenter.org) and its holistic cybersecurity education approach presented by G. B. Cazes, Dr. Chuck Gardner, Emma Jordan and Terrie Johnson. This team understands the human, legal, liberal arts, social and business elements in the field of cybersecurity. They clearly articulated this open and all inclusive viewpoint when engaging their students into the field – all the way from middle school to the university level. Of course their success in getting large numbers of students and teachers engaged got them national attention and a $5 million federal grant to take their model nationwide (see www.nicerc.org). They plan to engage 2 million students and 15,000 teachers by 2020. By embracing students from all academic backgrounds and interests they have achieved a healthy level of gender and racial diversity as well as parity. For example, half of the students engaged in their effort are female -- a proportion rarely seen with pure STEM based educational approaches.

During my most enjoyable session of the second day, four recent college graduates employed at the US Department of Homeland Security discussed their multi-disciplinary journeys into the world of cybersecurity. Panelists Michael Rocha, Princess Young, Scott Wallace, and Danielle Santos articulated their stories with great humor and a high degree of

student audience engagement. Young is a Program Manager and her cybersecurity degree was granted by a business school. Young drew plenty of laughs as she declared that she could pull out her driver's license to prove that her name is truly Princess Young. She even grooved a couple of notes to demonstrate her singing talents. As panel moderator George Heron of LifeJourney (www.lifejourney.us) pointed out, Scott Wallace's radio voice demonstrated that he had alternate career prospects as well if this cybersecurity thing did not continue to feed his passion down the road.

Everyone engaged in the practice of educating the cybersecurity workforce needs to broaden their perspectives. They can certainly concentrate in a niche area if that is their passion. However, if anyone wants to enter the field of cybersecurity and they have curiosity, passion and an eagerness to learn, we have a place for them – regardless of their background or academic area of interest. I have had students from all backgrounds in my graduate level classes on cybersecurity leadership. STEM backgrounds are not required. They just need curiosity and the discipline of reading, attending classes, engaging in discussions and completing the collaborative assignments.

So let's not shut anyone out of this exciting field. I am glad no one shut me out when I entered the field with a Bachelor's degree in Economics and a Master's degree in Political Science at a time when none of this was taught at any school, college, or university anywhere in the world! Cybersecurity was not even a word back then. Many of the current students will find success in a field that does not exist today. We educators need to make sure we keep inspiring students to explore and to have fun. Let fun be their guide in finding their passion. If they do not like STEM that is not a problem – the B in STEMB is not silent. Rather, that prominent B at the end is the most vital aspect of cybersecurity – the leadership and people aspects – without which no cybersecurity strategy can succeed! 🔒

Dr. Mansur Hasib *is the only cybersecurity professional in the world with 12 years experience as Chief Information Officer, a Doctor of Science in Cybersecurity, and the prestigious CISSP, PMP, and CPHIMS certifications. His book Cybersecurity Leadership (2014) shares his leadership model and organizational strategy which he implemented in healthcare, biotechnology, education and energy. His book Impact of Security Culture on Security Compliance in Healthcare (2013) examines cybersecurity in US healthcare. For more information visit: www.cybersecurityleadership.com*