Improving Cyber Awareness through Community Outreach

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Abstract

St. Cloud State University's CyberCorps program aims to increase cyber awareness through community outreach. The program works to increase awareness through a series of public on and off campus events. It emphasizes user responsibility, internet safety, and personal information protection. This vision is realized through the Community Cyber Security Champions or Cyber Champions. The Cyber Champions lead public speaking events and activities where they discuss cyber security and offer materials and instruction for safe home internet practices. They also work with other interested students from throughout the university to conduct on campus cyber security and awareness activities such as the St. Cloud State University Women in Cyber Security event. The program also emphasizes cyber awareness through the Collegiate Cyber Defense Competition (CCDC). The event brings students together through teambuilding and helps highlight student achievement to the community. The team is comprised CyberCorps Scholars and St. Cloud State University students.

Individual Responsibility

With the constant expansion of the virtual world, more and more people are becoming connected through cyberspace, making the internet and connectedness a part of everyday life. Which also makes Cybersecurity a part of everyone's daily routine. So much so that October has been designated as National Cyber Security Awareness Month since 2004. According to President Obama (2014) "Cyber threats pose one of the gravest national security dangers the United States faces." Cyber security can be defined in many ways, but most definitions include information regarding the protection of your personal computer (PC) from attacks or unauthorized access. One issue that has come to light is that the number of young people connected to the internet is also expanding. Meaning that children and homes are more connected than ever before. As younger and younger consumers become connected the need for education regarding safe online transactions increases.

In 2015 it was estimated that the average time between a network being attacked and the network owner noticing the attack was 205 days (The Cost of Immaturity; Cyber-Security, 2015). According to an article on prnewswire.com approximately 432 million accounts

were hacked in 2014 with 69 percent of those effected admitting they need to take more responsibility to protect their digital footprint (Connected Families and Communities in the Spotlight during National Cyber Security Awareness Month, 2015). Almost every company that has online accounts and presence require some amount of personal data to be accessed. With an average of 205 days between an attack and the attack being found it is clear that individual responsibility for data security is paramount. According to Adee (2015), the model of trusting someone else to hold your data has failed. The fact that hundreds of millions of accounts are being hacked in a year exacerbates the need for protection.

Through community outreach, Cyber Champions are getting involved with families and young adults, but it is important to note that safe cyber practices can be taught at a young age. Barbara Endicott-Popovsky (2009) states that it is critical to establish cyber ethics and include internet safety in the curriculum from kindergarten to twelfth grade. She also states that at home and in the classroom our role is not to be internet police but rather to be enablers of safe online exploration. Matt Donnelly (2015) states that cyber criminals often target those that are technologically unsophisticated. Acknowledging that our online experience is going to continue to expand and that youth today will have greater access then we did at their age will highlight the need for improved personal cyber security practices. The Community Cyber Security Champions program will be effective due to its focus on personal use and safety. It enforces good "Cyber Hygiene" by teaching good practices and personal responsibility. Practices also include techniques to safely and securely make online transactions. The students in the program are passionate about what they do and it shows in their work. The Cyber Champions have developed handouts and tutorials that include step by step instructions on how to install and update anti-virus software on PCs, as well as how to use password managers, anti-malware, and to protect their identities online.

According to Ron Haskins "Personal responsibility is the willingness to both accept the importance of standards that society establishes for individual behavior and to make strenuous personal efforts to live by those standards" (Haskins, 2009). He goes on to say that personal responsibility also means that as an individual you do not look for someone or something to blame when we don't meet the expected standard. At the 2016 CyberCorps Job Fair Senator Mark Warner (D-VA) mentioned that good cyber hygiene is fundamental to cyber security. He spoke that if we can increase cyber awareness and improve our personal responsibility in regards to security practices we can improve cybersecurity from the ground up. St. Cloud State University's CyberCorps Scholars and students from the University Information Technology Security program conduct community outreach sessions in order to increase awareness in the community.

Stop.Think.Connect (n.d) is a global cybersecurity awareness campaign to help people stay safer online. Stop.Think.Connect was created by a group of private companies, non-profits, and government organizations, led by the National Cyber Security Alliance (NCSA) and the Anti Phishing Working Group (APWG). In partnership with STOP.THINK.CONNECT, APWG focuses on united global efforts to respond to cyber crime though data resources, standards and response systems (Unifying the Global Response to Cybercrime, n.d.). These resources are just some of the tools that can be found online to help secure personal digital footprints.

Community Involvement

The community outreach events held by St. Cloud State University CyberCorps scholars and students have included public presentations on home security risks and how to mitigate them, as well as on campus events that offered hands on training and presentations. The Cyber Champions have created and distributed handouts and software that include step by step instructions on how to install and update anti-virus software on PCs. As well as how to use password managers, anti-malware, and to protect their identities online. As the CyberCorps program grows they will aim to expand their community outreach efforts beyond the local community. By increasing awareness and interest in Information Technology Security in the local community we expect more secondary order of effects. One such effect could be high school students supporting these programs who in turn get their parents to support these programs. Then as more parents support our program they will invite their friends and coworkers and so on. We will continue to enforce these effects through continual community outreach events.

The idea of community outreach is reinforced by the effective communication of word of mouth. Word of mouth communication plays an important role in shaping attitudes and behaviors within a community (Johnson-Brown, Reingen, 1987). St. Cloud State University and the St. Cloud community has a very diverse population. This leads to extensive networks that are based on cultural backgrounds and socioeconomic lines. Johnson-Brown and Reingen also explain that word of mouth is so powerful in social networks due to what is described as "over the clothesline" and "across backyard fences" communication. Groeger and Buttle (2014) state that word of mouth marketing is an effective marketing campaign and provide evidence as to how social media and word of mouth increase the range and impact of marketing messages. The Cyber Champions campaign for cyber awareness begins with word of mouth and face to face communication. As the program expands and garners more positive attention new marketing campaigns can begin.

Another avenue in which the Community Cyber Security Champions improve awareness is through the Collegiate Cyber Defense Competition also known as CCDC. CCDC is based on operating as an IT department in a company and protecting information assets from hackers looking to disrupt their systems. All Cyber Champions are members of the team and they also have students from other information assurance majors at St. Cloud State University who try out and practice with the team. According to the National Collegiate Cyber Defense Competition website the CCDC competition is designed to provide a means of evaluation of university programs. They also provide an environment for students to apply their unique skills and garner interest among students and institutions in the cyber defense field. Some of the best and brightest from across the country compete. Some of the largest names in the industry sponsor the events such as Raytheon, The Department of Homeland Security, The National Security Agency, and social media giant Facebook to name a few from 2015 (National Collegiate Cyber Defense Competition, n.d.). Through publicity of our participation the Cyber Champions intend to bring community awareness of St. Cloud State University programs.

Conclusion

The need for increased awareness and personal cyber safety practices is clear. With the expansion of the internet and the increased vulnerabilities that accompany that growth, it has been shown that improved personal cyber security practices will improve overall cyber security. St. Cloud State University and its Community Cyber Security Champions will be an effective tool to increase awareness through community outreach. By reaching out to the local community and students the Cyber Champions will start a word of mouth campaign. This campaign will be and has been effective within the college and surrounding community. The students in the program are passionate about what they do and it shows in their work. The strong work ethic displayed by the students involved enforces the importance of its message. All their accomplishments will help the word of mouth campaign by introducing new subject matter regularly. Finally, the Cyber Champions effectively communicate their message by leading by example and winning the Minnesota State Collegiate Cyber Defense Competition in 2016.

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