

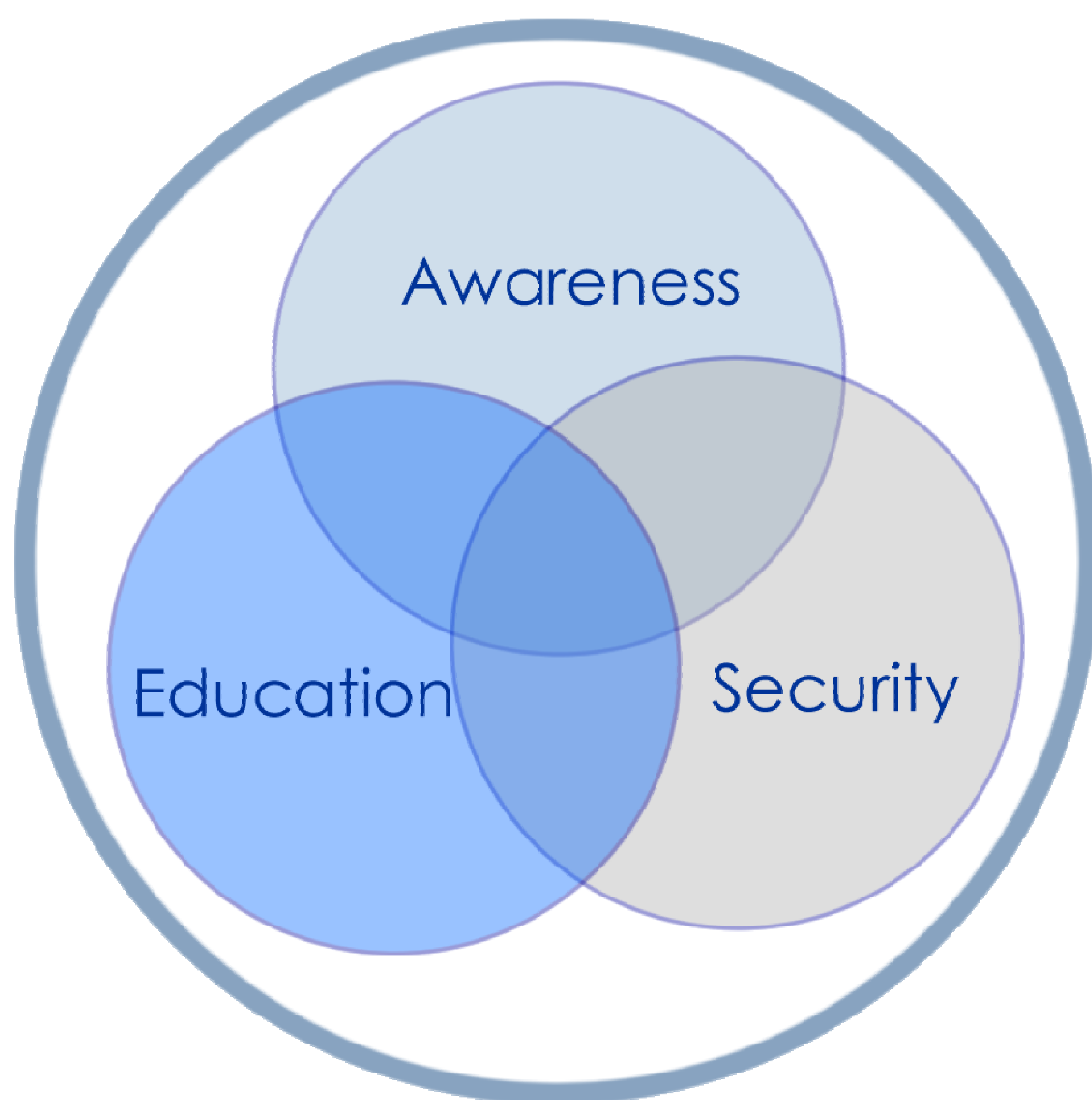
K-12 Outreach Program

Matt Rose

Overview

The CERIAS K-12 Outreach Mission is three fold: To increase the security of K-12 information systems, to integrate information security into the K-12 curriculum, and to raise parent and community awareness of information security issues through K-12 schools.

To date, more than 6000 educators, 20,000 parents, 40 technology coordinators, and 120,000 students have benefited from CERIAS K-12 initiatives. Building upon existing work, the program will continue to grow and fulfill its mission through collaboration with K-12 schools, outreach entities on the Purdue University campus and nationwide, and CERIAS partners.



Goals

Community Awareness: Strengthening the Home Connection

A recent study highlights the knowledge gap between children and their parents when it comes to the Internet: 38% of teenagers indicated that their parents had no rules of any sort governing their use of the computer. Of these same students, 55% have illegally downloaded copyright-protected music, 32% have been harassed online, 56% have been sent inappropriate material while online, and 47% chat regularly with strangers online.

CERIAS has developed a collection of resources to educate parents about information security and privacy basics. Topics such as identity theft, computer security, cyber ethics, cyber crime, and more are discussed in our 15-article newsletter series, our group presentations for parent organizations, and our Indiana Information Security Week Initiative.

Securing K-12 Information Systems: Keeping Information Private and Schools Safe

As schools become more dependent on information technology to facilitate data-driven decision-making and enhance learning and discovery, the security of schools' information systems, the data that resides on those systems, and the safety and privacy of the systems' users is becoming a growing concern. To ensure the security of a school's information, the availability of services critical to learning, and the safety of a school's constituents, CERIAS takes a multi-level approach to solving the information security dilemma. We have developed several innovative approaches to assist these districts in creating a safer computing environment for our children, namely technology coordinator workshops, training for teachers, sample vulnerability assessments, and an innovative service-learning course offered through Purdue University's Computer Technology Program.

Integration of Security into the Curriculum: Keeping Students Safe, Instilling Values, and Enhancing Learning

We have developed a series of teacher workshops, lesson plans, and student activities designed to help teachers integrate information security concepts into the classroom. Aligned with Indiana academic standards, our activities are complete with resource lists, entry competencies, intended learning outcomes, and step-by-step teaching instructions. Topics range from computer security basics and cyber-ethics to topics such as cryptography, signs and symbols, digital forensics, and viruses. We are currently exploring funding opportunities to align existing curriculum with national academic standards and to develop additional activities that use information security topics—such as cryptography, digital forensics, and computer viruses—to address academic standards and achieve higher-order thinking.