Branching Interactive Graphic Stories for Cybersecurity Education

Lori Scarlatos, Stony Brook University
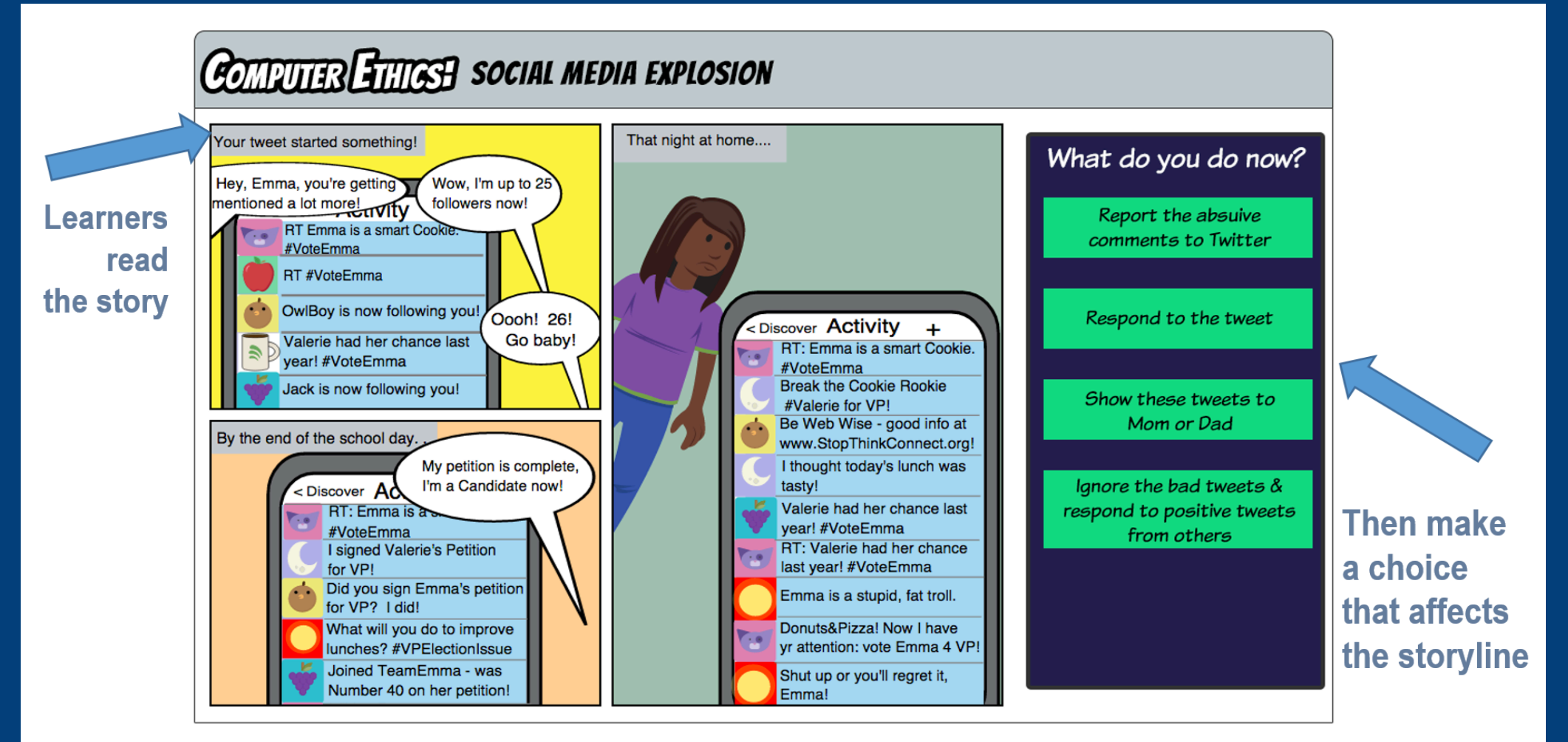Laurin Buchanan, Secure Decisions

Objectives and Significance

We need to train a diverse cohort of young people with strong backgrounds in math and science. Yet students in under-represented groups often drop these subjects in middle school.

Our vision is to bring cybersecurity education to a middle school audience with branching ("choose your own adventure"-style) comic book stories to:

1) Attract a diverse population of students to the field of cybersecurity

2) Teach cybersecurity concepts by giving students an opportunity to try different options in culturally meaningful scenarios; and

3) Assess student understanding of the concepts and their interconnectedness

"Choose Your Own Adventure" (CYOA) stories ask readers to make choices as the protagonist; based on these choices, a story can have many different endings. CYOA comics allow students to make good and bad decisions, and then see the consequences those decisions.

Comic-BEE software streamlines the process of creating educational, branching comic stories.
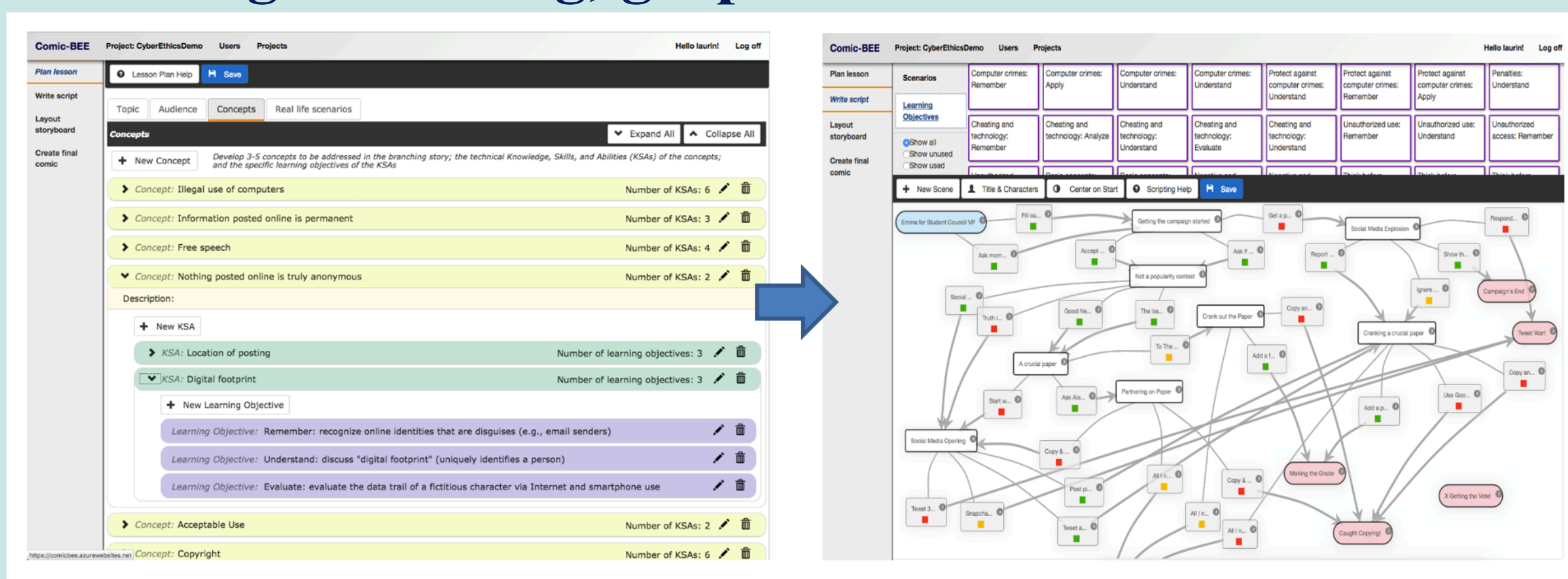
Approach

Learning with Comic-BEE

• Students learn about different cyber career roles by exploring branching comic about a cyber crime investigation created by experts.
• Students explore their understanding of cyber by creating their own comics, guided by trained instructors.

Implementation

• Program offered to middle school students at a community center, as 3-week after-school and summer programs.
• Learning, engagement, and interest in cyber careers will be measured.
• Students will explore cyber role models and research cyber topics online.
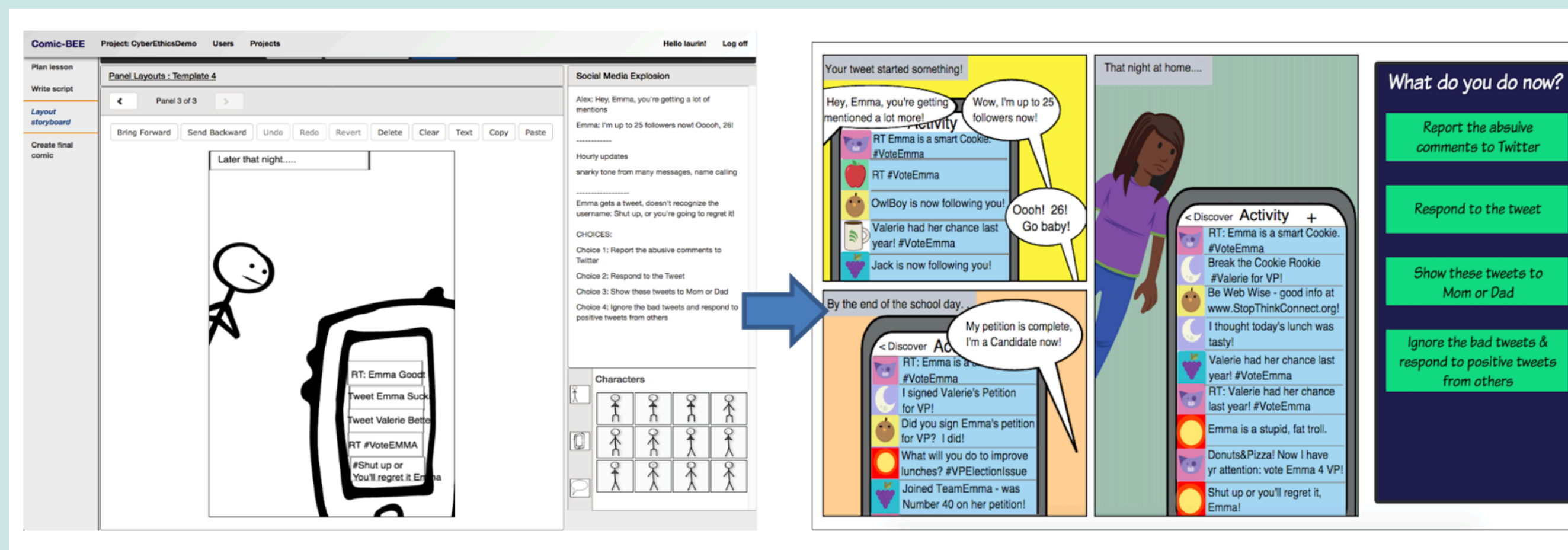
Creating branching, graphic comics with Comic-BEE

Plan Lesson
Instructors help students to brainstorm real-life scenarios related to the learning objectives

Write Script
Pairs of students create scenes with multiple choices and connect them in multiple story lines

Storyboard
Students decide how to depict their scenes using characters, dialog, and text within the panel templates

Final Comic
Students replace stick figures and shapes with final artwork selected from a gallery of characters and objects

Interested in meeting the PIs? Attach post-it note below!

National Science Foundation
WHERE DISCOVERIES BEGIN

Stony Brook University

Developed by: SECURE DECISIONS
A DIVISION OF APPLIED VISIONS, INC.