

Preparing Elementary Pre-Service Teachers to Integrate Computing Across the Curriculum

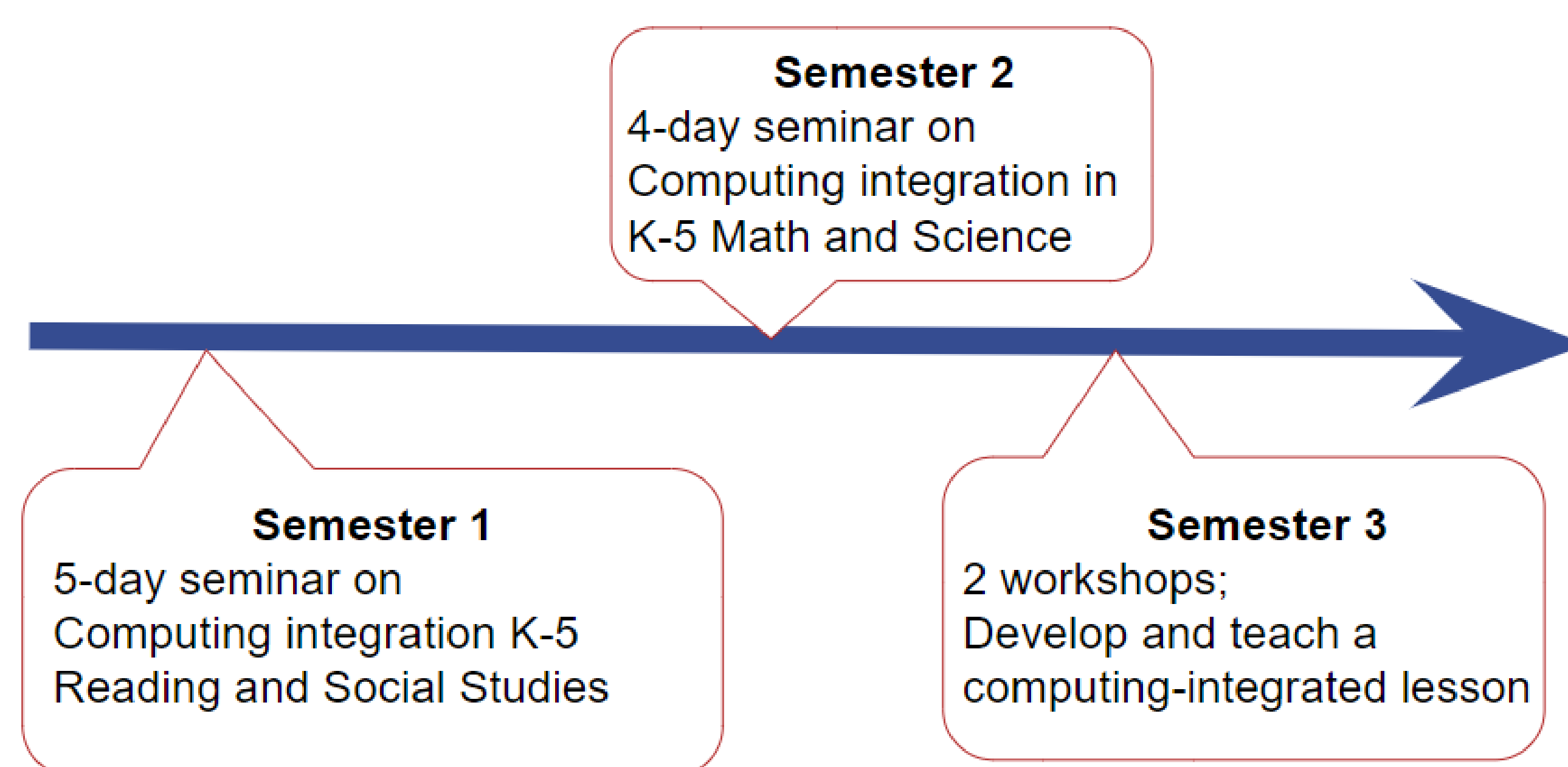
Shenghua Zha, Na Gong, Lauren Brannan, Kelly Byrd, Karen Morrison, Todd Johnson, Jennifer Simpson, Chaz McGhee

Introduction

Project Goal:

To develop, implement, and assess a three-part training framework that prepares elementary pre-service teachers (PSTs) to integrate computing into K-5 subject content.

Figure 1. Program Structure

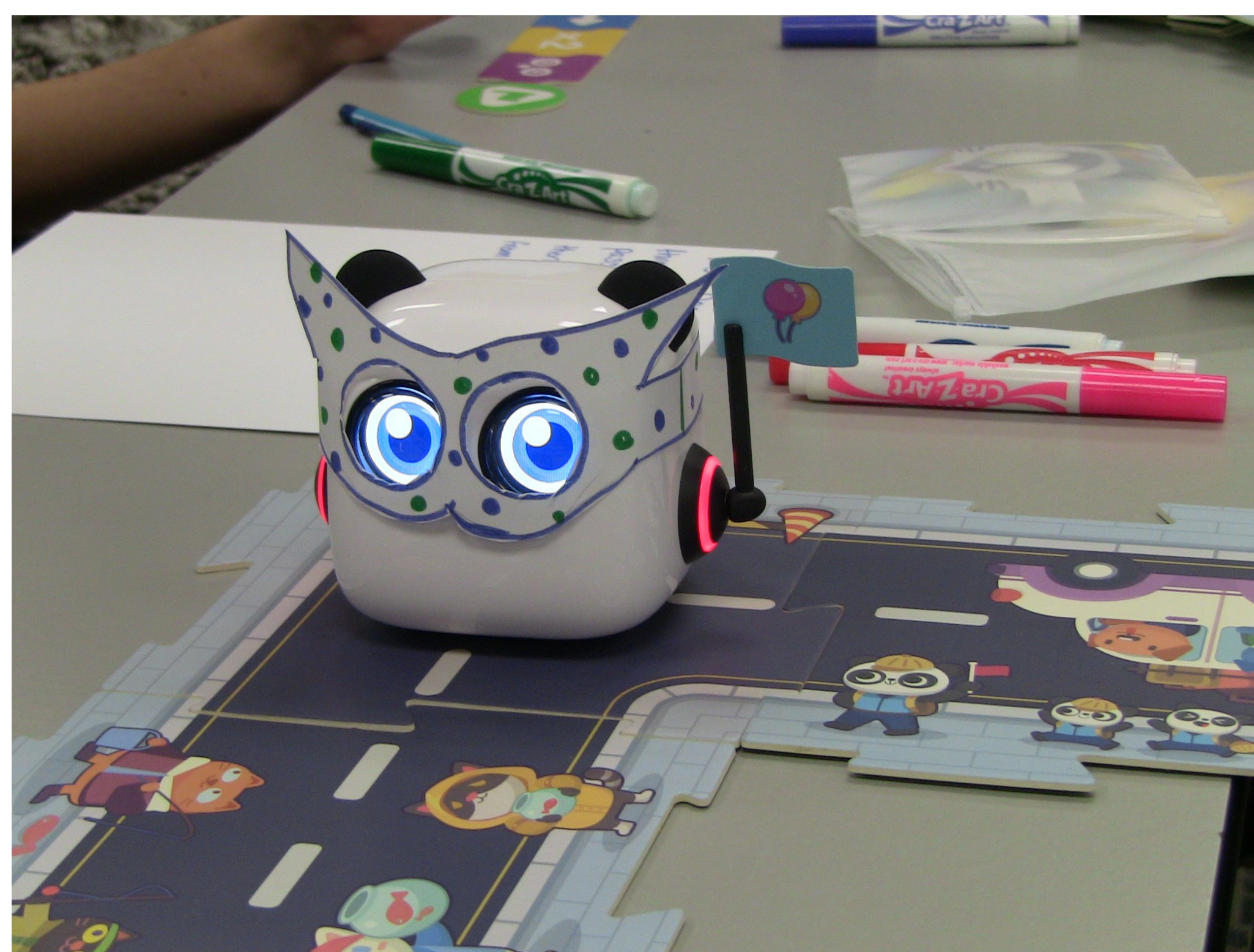


Structure of Seminars/Semester:

- Learn and practice computing technology
- Review relevant Course of Study standards
- Experience computing-integrated lessons as elementary students
- Reflection
- Develop computing-integrated lesson plans

Participants:

Undergraduate pre-service teachers majoring in elementary education at the University of South Alabama



Acknowledgement

This project is sponsored by the National Science Foundation DUE 2121417.

Cohort Accomplishments

They participated in:

- Robotics and coding workshops
- Immersive computing-integrated lessons
- Guest speaker sessions
- Discussions on redesign for students with special needs
- Generation of 40 creative lesson ideas/semester
- Development of 9 group lesson plans and conducted mini-teaching demonstrations on those lessons each semester

Use Cohort 1 as an example, in Semester 3, they taught 24 lessons with an average class size of 5-25:

- 1 Kindergarten Science class in 1 school
- 4 First-Grade Science classes in 4 schools
- 3 Second-Grade ELA classes in 3 schools
- 4 Second-grade Social Studies classes in 4 schools
- 3 Third-Grade Math classes in 3 schools
- 3 Fourth-Grade ELA classes in 3 schools
- 2 Fourth-Grade Math classes in 2 schools
- 2 Fourth-Grade Social Studies classes in 2 schools
- 2 Fifth-Grade STEM classes in 2 schools



Project site

Feel free to visit our project site at
<https://sites.google.com/southalabama.edu/k6computing>



SCAN ME