

# Fostering Dispositions and Engaging Computing Educators

## Special Session

Mihaela Sabin  
University of New  
Hampshire  
mihaela.sabin@unh.edu

Natalie Kiesler  
DIPF Leibniz Institute for  
Research and  
Information in Education

Amruth N. Kumar  
Ramapo College of  
New Jersey  
amruth@ramapo.edu

Bonnie K. MacKellar  
St. John's University  
mackellb@stjohns.edu

Renée McCauley  
College of Charleston  
mccauleyr@cofc.edu

Rajendra K. Raj  
Rochester Institute of Technology  
rkr@cs.rit.edu

John Impagliazzo  
Hofstra University  
john.impagliazzo@hofstra.edu

## Session Leaders



**Mihaela Sabin**



**Natalie Kiesler**



**Amruth Kumar**



**Bonnie MacKellar**



**Renée McCauley**



**Rajendra Raj**

# Special Session Organization

<b>Segment</b>	<b>Time</b>	<b>Facilitators</b>
Project overview	5 min	Amruth Kumar
Reflection hands-on activity	20 min	Natalie Kiesler Bonnie MacKellar
Vignette hands-on activity	20 min	Amruth Kumar Rajendra K. Raj
Plenary discussion	30 min	Renée McCauley Mihaela Sabin

## Project Overview

- Motivation: Fostering professional dispositions
- Research objectives
  - Reflection Exercises to make own dispositions salient
  - Vignettes to illustrate others' application of dispositions
- ITiCSE WG 2021
  - → Fall 2021 Pilot study
    - → National Science Foundation grant
      - → Present

## Current Status

- Pilot study data → Qualitative evaluation → Behavior statements
  - To avoid idealized responses
  - Focus groups
  - Students
- Data collection: Spring 2022, Fall 2022, Spring 2023
- Dispositions dropped:
  - Professional, Responsible, Passionate
- Vignettes being developed
  - Mini-vignettes

## Reflection Exercise

**Goal:** *Capture behaviors students associate with the application of dispositions in the context of course work via self-reflection.*

### Structure:

- Coupled with course assignments (3-5 per course)
  - Submission after completion of a course assignment
1. Rating question: Rate the extent to which you exhibited specific behaviors associated with the disposition while completing the assignment (e.g., “When I encounter frustrating problems and obstacles on my assignment, I work hard at figuring out a solution” for persistence).
  2. Descriptive question: Describe either an instance of applying the disposition while completing the project or the reasons why they could not apply the disposition.

# Reflection Hands-on Activity

- Reflection activity
  - [bit.ly/dispositions-sigcse23](https://bit.ly/dispositions-sigcse23)
- 1.a [Reflection activity](#)
- 1.b Associating [behaviors with dispositions](#)
- Audience feedback and discussion



# Vignettes

**Goal:** *Illustrate exemplary application of dispositions by others and capture behaviors students associate with dispositions.*

## **Structure:**

- Coupled with course assignments (3-5 per course)
- Submission after completion of a course assignment

## **Components:**

- Scenario (500 words)
- Select disposition, passage in the text: Feedback provided
- Describe an instance from one's project



## Sample Vignettes

- Adaptable - U2 plane, Apollo 13, Miracle on Hudson
- Collaborative - Linux
- Inventive - reCaptcha
- Meticulous - Steve Jobs
- Persistent - Edison Light Bulb
- Self-Directed - Wozniak and the first Apple computer

### Issues:

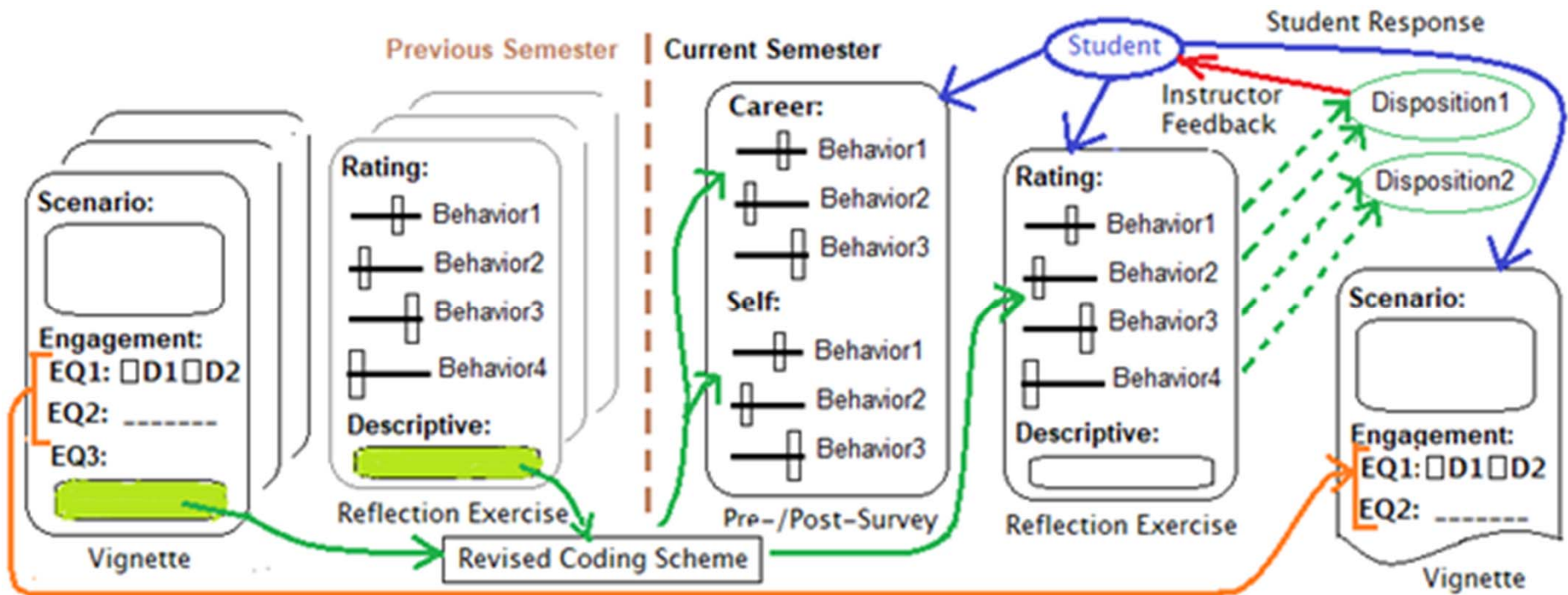
- Overlap among dispositions
- Story of absence of disposition?
- Length of scenario - mini-vignettes

# Vignette Hands-on Activity

- Vignette evaluation activity
  - [bit.ly/dispositions-sigcse23](https://bit.ly/dispositions-sigcse23)
- 2a. [Mini-Vignette](#)
- 2b. [Vignette](#)
- Discussion of the merits and limitations



# Formative Feedback Loop



## Plenary Discussion

1. What is your impression of the importance of fostering dispositions?
2. How do your students value or learn dispositions?
3. Do you have suggestions for better ways to cultivate dispositions in your classroom?
4. Other ideas or questions?

You may also respond to these questions on the [Plenary Discussion Form](#)



# Invitation to get involved in this project

Interested?

<https://bit.ly/dispositions-study>

