

# Researching Collaboratively: Teachers, Teams, and Technology

**Joy Robinson, PhD**

Assistant Professor  
Department of English  
University of Alabama in Huntsville

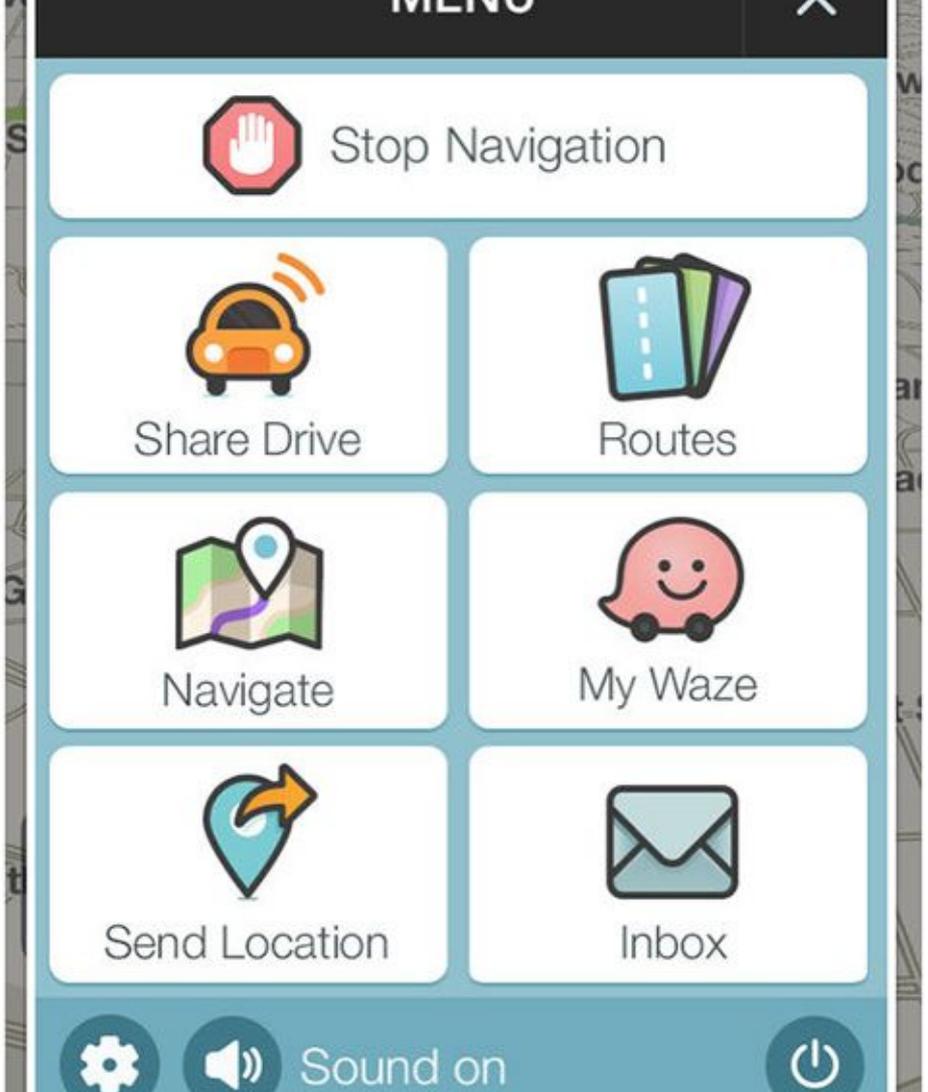
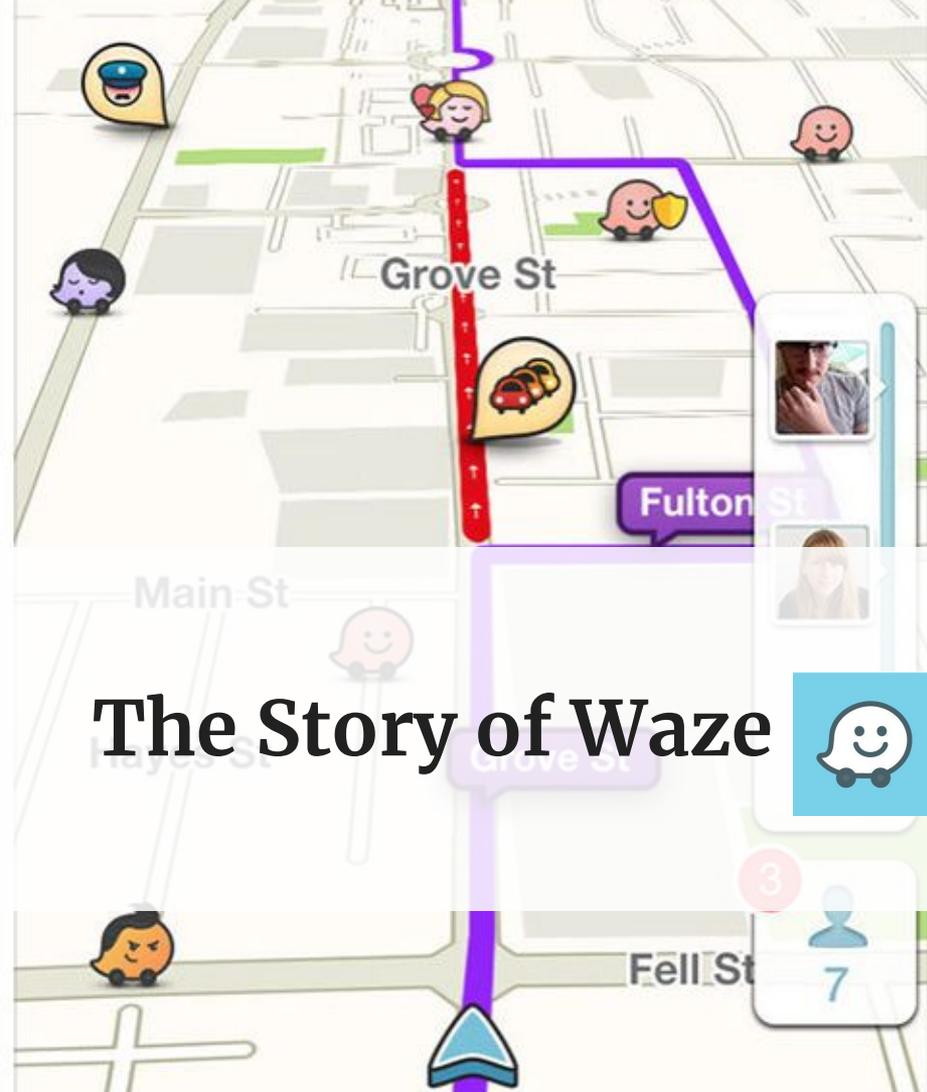
Visit me: [joyrobinson.com](http://joyrobinson.com)

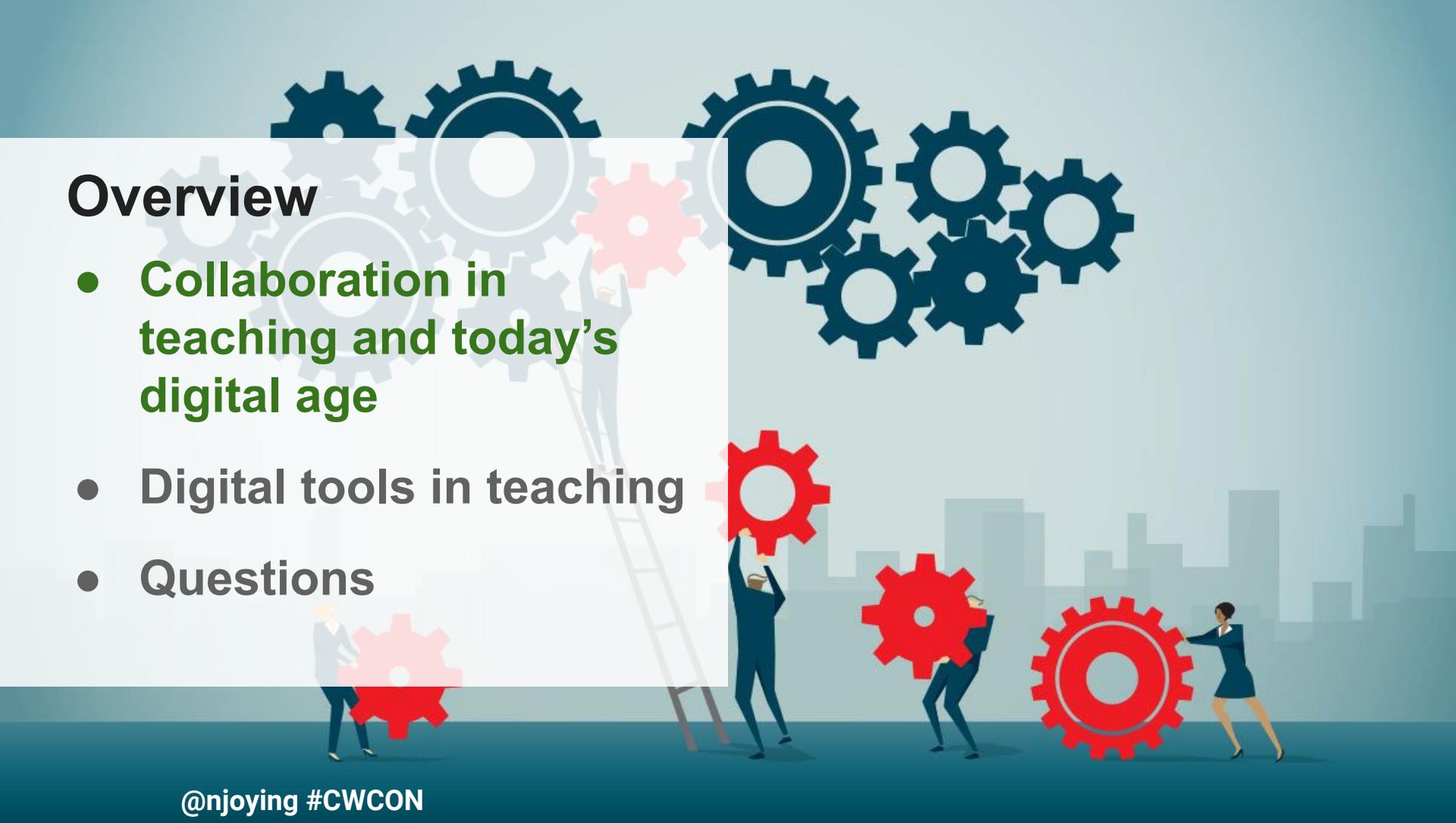
Tweet me: @njoying #CWCON

Emailme: [joy.robinson@uah.edu](mailto:joy.robinson@uah.edu)



# The Story of Waze



The background features a light blue gradient with a city skyline silhouette at the bottom. Several gears of various sizes and colors (dark blue, light blue, and red) are scattered across the scene. In the foreground, four stylized human figures in business attire are interacting with the gears: one is on a ladder reaching for a gear, another is holding a gear up, a third is pushing a gear, and a fourth is pushing a large gear. A semi-transparent white box on the left contains the text.

## Overview

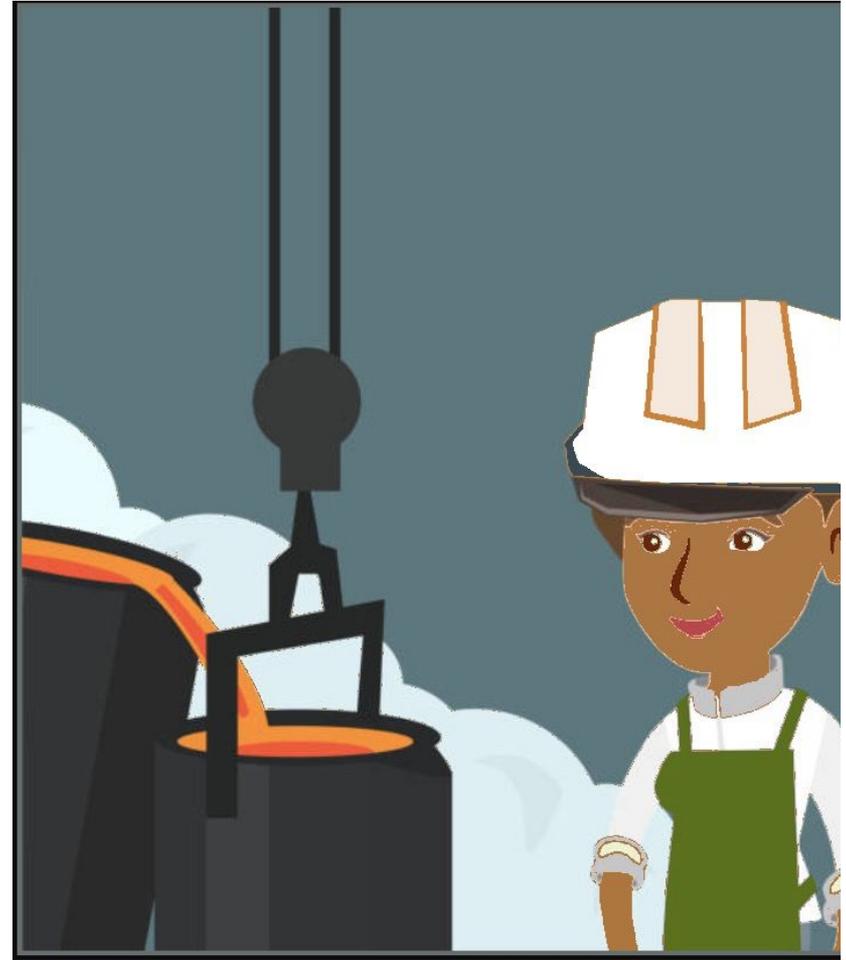
- **Collaboration in teaching and today's digital age**
- **Digital tools in teaching**
- **Questions**

# My non-traditional trajectory - communicator & tinkerer

**BS** Biomedical Engineering (RPI)

**MS** Metallurgical and Mtls. Engineering (IIT)

- Engineer in the steel industry
- Tech specialist running an external help desk for IIT
- Director of the Digital Media Center at IIT



# Tech History

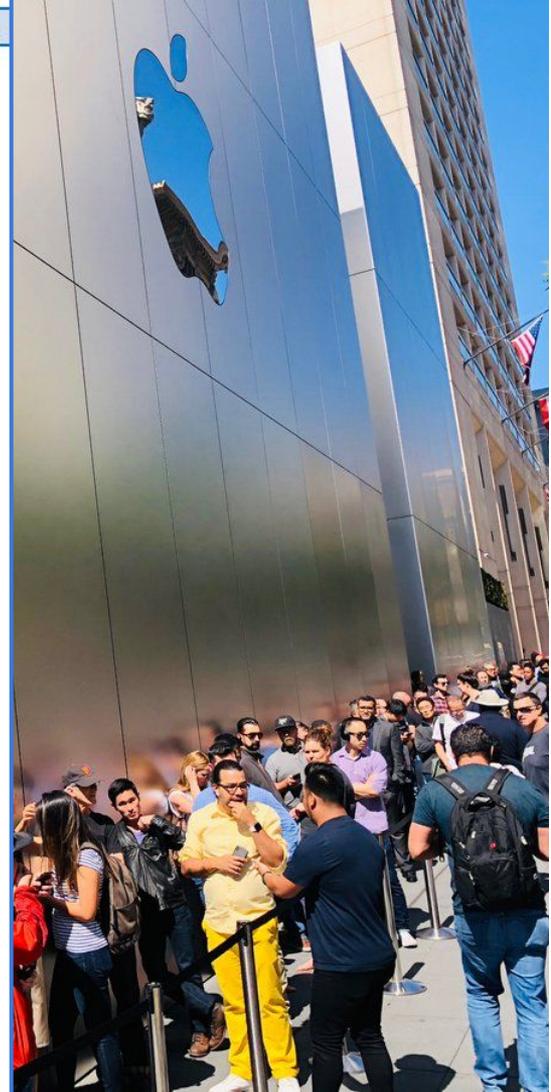
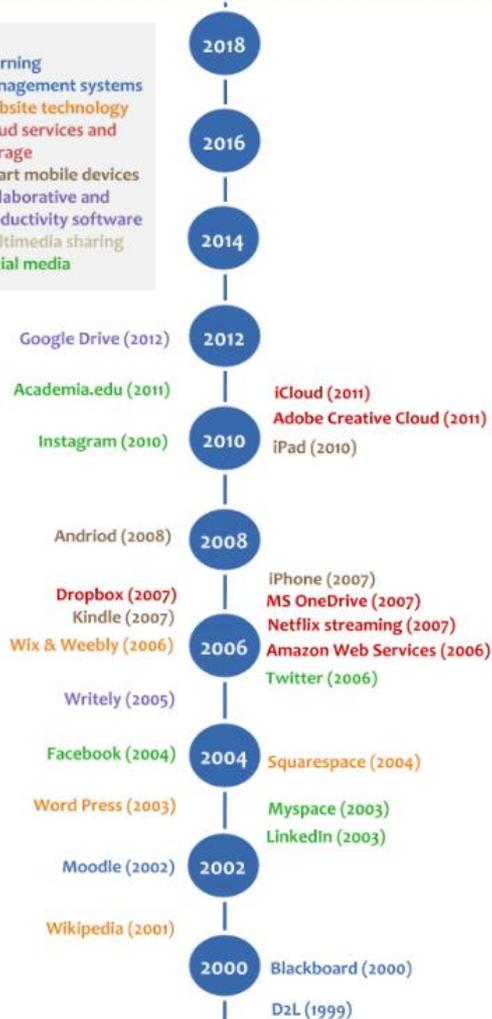
Software innovation:  
**Web2.0**

Hardware milestone:  
**Apple's iDay**

## Technology Innovation Since the Millennium

### Key:

- Learning management systems
- Website technology
- Cloud services and storage
- Smart mobile devices
- Collaborative and productivity software
- Multimedia sharing
- Social media



Technology tools help us to  
connect, share, collaborate, and  
organize.

(Shirky, 2008)

Technology tools help us to connect, share, collaborate, organize, and learn.

# My Questions



Just how did writing and communication teachers who were not at Georgia Tech teach with digital technology?

What did other scholars do and use in the classroom and how do they define digital pedagogy?

What were the limitations of these digital ideas? How did teachers deal with these limitations?

# How are digital resources used by teachers?

---

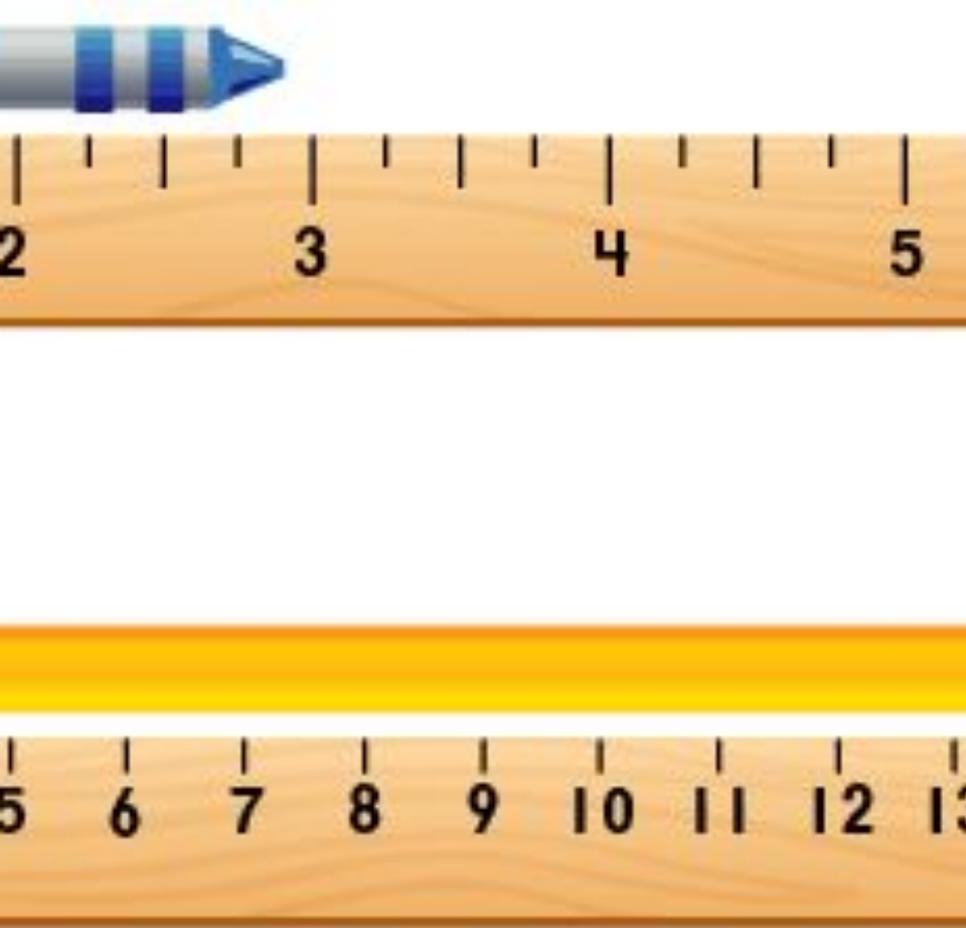
**State of the Field: Teaching with Digital Tools in Writing and Communication.** Robinson, J., Dusenberry, L., Hutter, L., Lawrence, L., Frazee, A., and Burnett, R. (forthcoming – 2019). *Computers and Composition*.



**1. Teaching is  
mystery...**

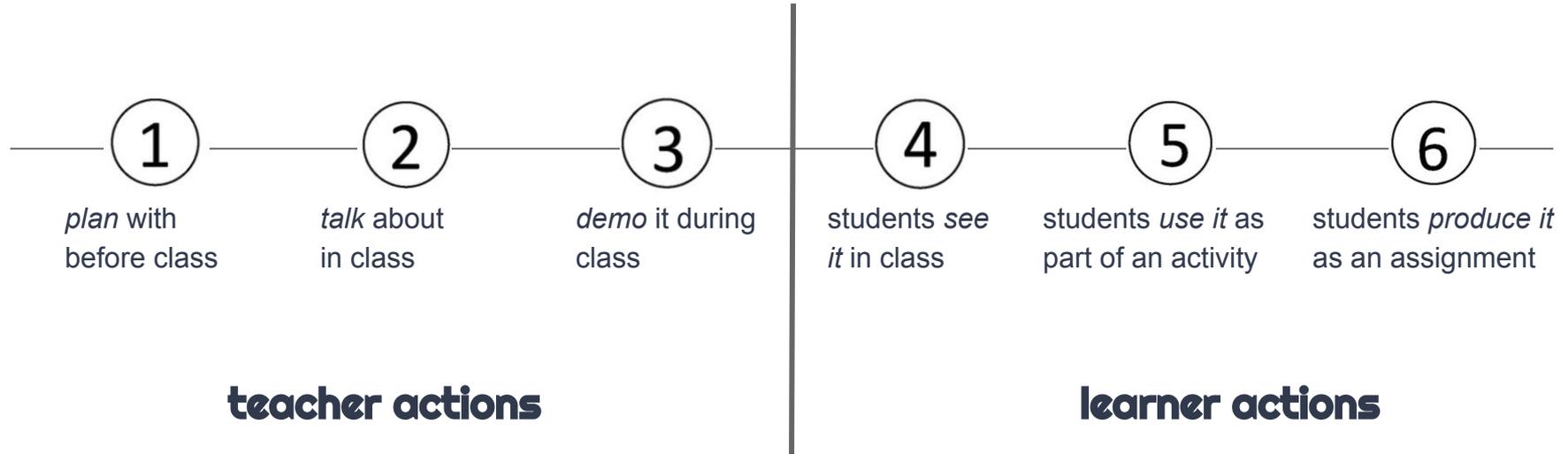
# 14 teacher tasks

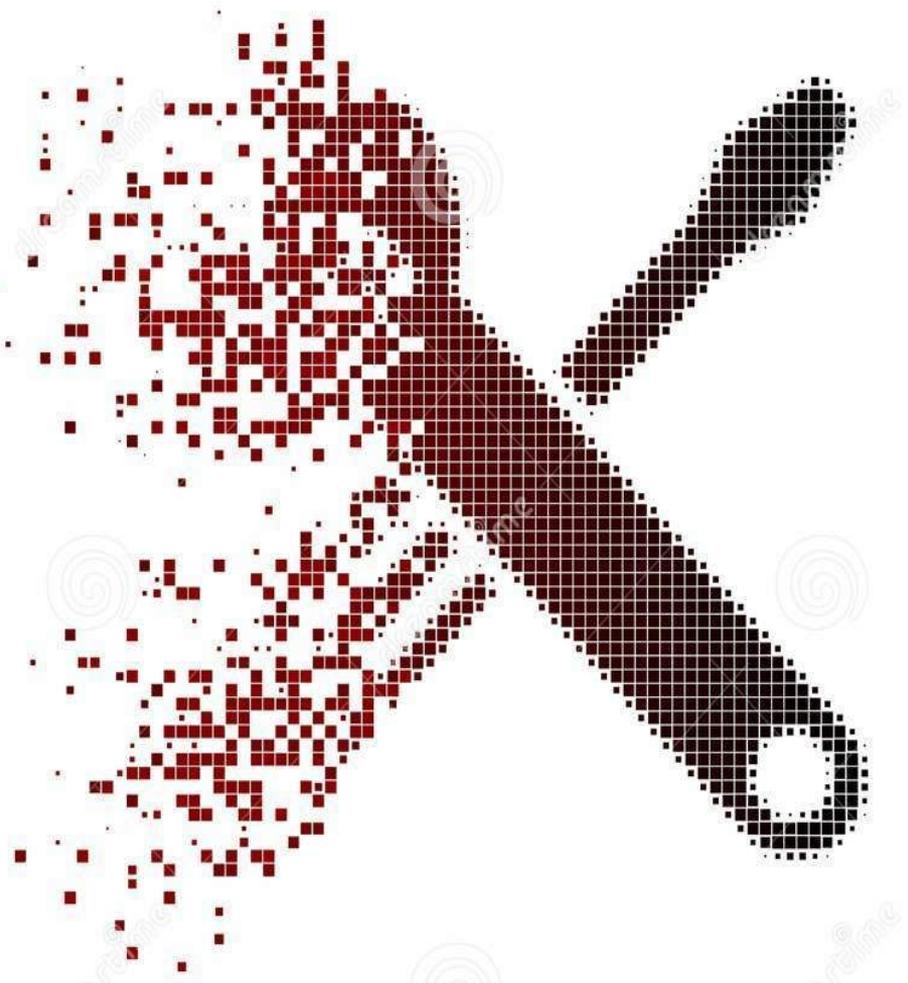
1. Planning class lectures
2. Giving class lectures
3. Planning in-class activities
4. Facilitating in-class activities
5. Planning course assignments
6. Distributing course assignments
7. Collecting completed assignments
8. Tracking student progress
9. Distributing course materials
10. Distributing assignment grades
11. Giving your feedback on student work
12. Distributing your feedback on student work
13. Facilitating peer review
14. Facilitating in-class discussion



**2. How do we describe or measure the extent to which we deploy digital resources?**

# How do you use email in your teaching?





### 3. Digital tools come and go









## Article that spurred this research:

Anderson, D., Atkins, A., Ball, C. E., Millar, K. H., Selfe, C., & Selfe, R. (2006). Integrating Multimodality into Composition Curricula: Survey Methodology and Results

# Resource and tool categories

- Presentation software (Prezi, Keynote, PowerPoint)
- Desktop publishing apps (InDesign, Quark)
- Productivity applications (Word, Excel)
- Course management software/system
- Collaborative softwares (Dropbox, Google docs)
- Visual resources (images, editing software)
- Email
- Forums and online class discussions
- Websites
- Collaborative software (Google docs, Piazza)
- Digital video ( YouTube, DVDs)
- Online digitized documents
- Blogs
- Audio resources (podcasts, audio clips, editing)
- News or other media outlets (e.g., Reddit, Digg)
- Social media (Facebook, Linked-in, Pinterest)
- E-textbooks, E-journals, or digital course packs
- Wikis
- Twitter
- Simulations or animations
- Chat (Snapchat, AIM)
- Video games

---

# New ways to conceptualize questions

---

■ 

---

Systematic way to describe the **tasks** we perform in teaching

■ 

---

The **extent** to which we use resources in the classroom for teaching and learning

■ 

---

Categories for the digital **resources** used to perform our teaching

---

# What did we find?

**RQ:** How are digital resources used by teachers in the writing and communication classroom?

---

■ 

---

1: Familiarity plays an important part in resource choice

■ 

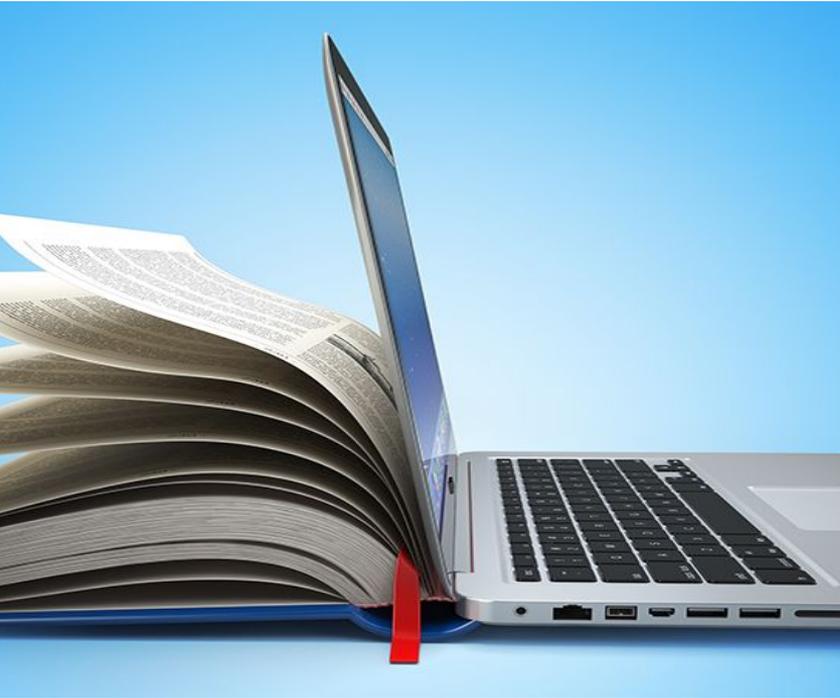
---

2: Familiarity constrains innovation

■ 

---

3: Teachers spend time to teach themselves



# Teachers of Writing and Communication

**Collaborate infrequently in  
Research**

# Era of Collaboration

“[W]hereby human beings pool their experience, knowledge and social skills with the objective of producing new knowledge.”

(Bozeman & Boardman, 2014)

## Publication co-authoring

- Web of Science–indexed articles over 75%
- JSTOR articles (75 disciplines) over 60%

## Computers and writing fields

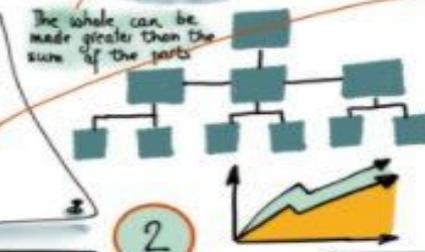
- Techcomm (in English departments) over 39% (Lam, 2015).
- Techcomm (in Sci/Eng departments) over 85% (Lam, 2015).
- Rhetcomp (Computers and Composition journal - only) 39%.

# What GOOGLE learnt about TEAMS - PROJECT ARISTOTLE

- 2 YEARS
- 180 TEAMS
- 200+ interviews
- 250 team attributes
- Julia Rozovsky → 5 attributes

**1** Dependability

Team members get things done on time and meet expectations



Model The way

**3** Meaning

The work has personal significance to each team member.

Encourage the heart



**2** Structure and Clarity

High performing teams have clear goals and have well-defined roles within the group

Inspire a shared vision

**4** Impact

The group believes their work is purposeful and positively impacts the greater good

Enable others to act

**5** Psychological Safety

This one stood out from the rest! It is safe for individuals to take risks & voice their opinions

Challenge the Process

## Psychological Safety

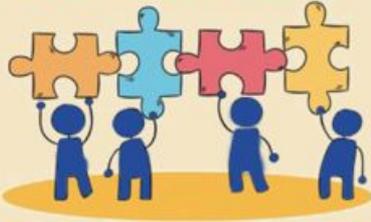
**“a team climate characterized by interpersonal trust and mutual respect in which people are comfortable being themselves”  
(Edmondson, 1999, p. 354)**

# Managing the Team not Just the Project

## Using a Training Intervention to Increase Psychological Safety

By J. Robinson and L. Dusenberry

### CONCLUSIONS



**FURTHER LONGITUDINAL RESEARCH NEEDED WITH TEAM-SPECIFIC TRAINING AND MORE TEAMS WITH LOW PS.**

#### 1 TARGETED TRAINING MIGHT INCREASE PS

While our training was not significant, the data suggests that targeted training interventions might help newly formed teams. We posit that training that reflects actual team tasks might increase effectiveness. We are pursuing this avenue in future research.

#### 2 TEAM DURATION AND DESIGN MATTER

Regardless of training, PS increased over time, suggesting that duration had larger impact. Our short term teams had significantly better PS, cohesion, and satisfaction than the long term teams, which may also be due to design factors like team size, task, and instructor.

#### 3 PS MIGHT HAVE A THRESHOLD

How much PS does a team need to function? Nearly all our teams reported mid-levels of PS or above, which may alter whether training influences PS development. We are designing future studies to address the range of PS needed for functioning teams.

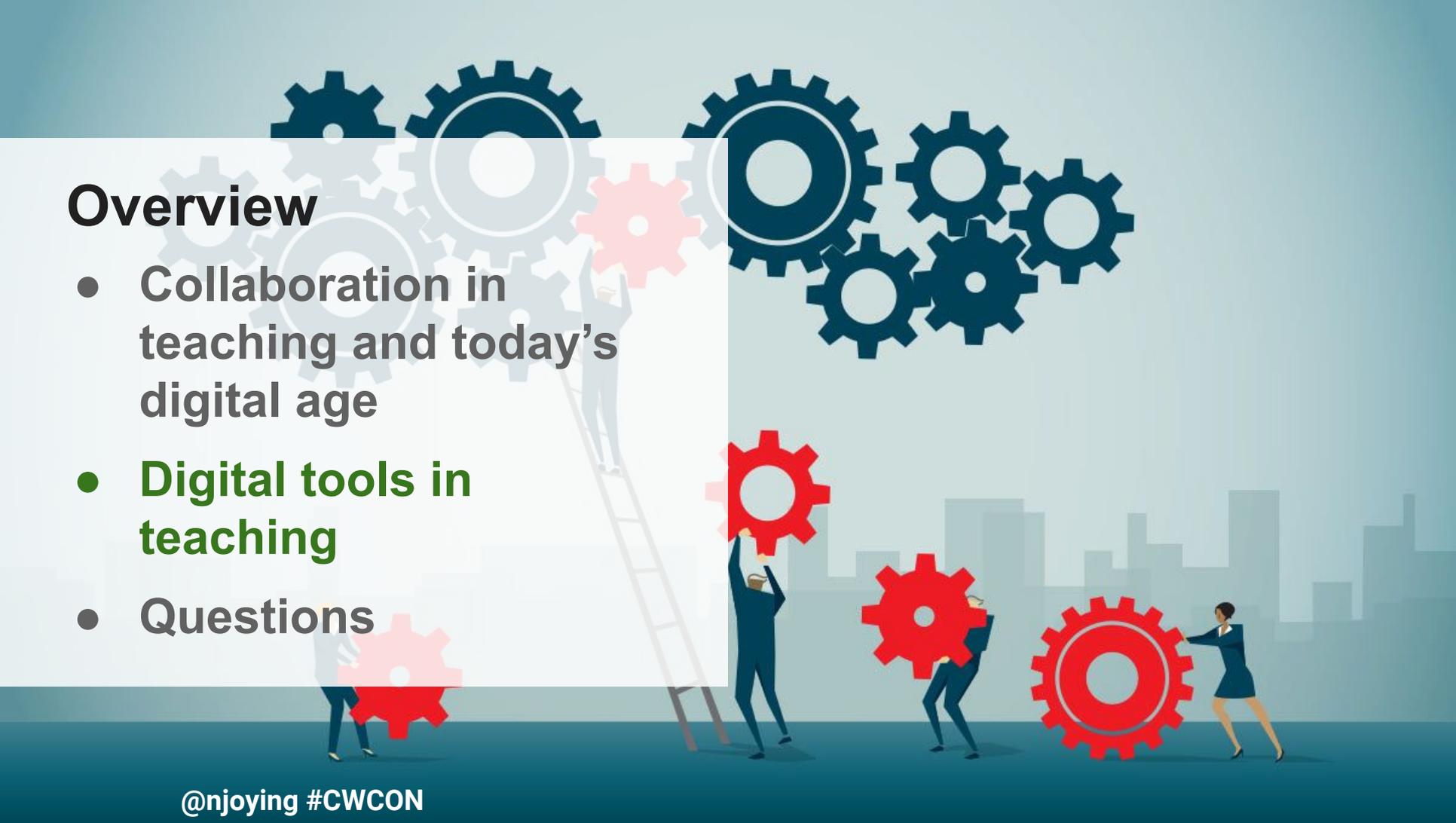
# More collaboration needed in the Writing and Communication fields

---

We know how to collaborate to learn things.

We need to use that same ingenuity to collaborate around researching and writing.

---

An illustration depicting a collaborative effort in a digital age. In the foreground, four stylized human figures in business attire are working with large red gears. One figure on the left is climbing a ladder to reach a gear. Another figure in the center is holding a gear up. A third figure is pushing a gear, and a fourth figure on the right is also pushing a gear. The background features a city skyline silhouette and several dark blue gears of various sizes floating in the air. A semi-transparent white box on the left contains the text.

## Overview

- Collaboration in teaching and today's digital age
- **Digital tools in teaching**
- Questions

What is digital pedagogy?

What role does digital play in our pedagogical approach?

Digital pedagogy =  
Assignments

Digital tools =

- Facilitation mechanisms
- Highly adaptable
- Content shapers

Most teachers will not have a plan for how to systematically integrate digital tools or **COMPUTERS/TECHNOLOGY** in their teaching.

Digitally-focused pedagogical plan (DPP)



UX helps to create something useful and usable and perhaps delightful for the user.



# UX-ING THE PROBLEM

- 1. Discover:** Try to understand the problem and the people
- 2. Decide:** Select methods to address the issue
- 3. Make:** Create a testable solution
- 4. Validate:** Test



# UX-ING THE PROBLEM

## 1. Discover:

We need to have a  
Digitally-focused  
Pedagogy Plan (DPP).

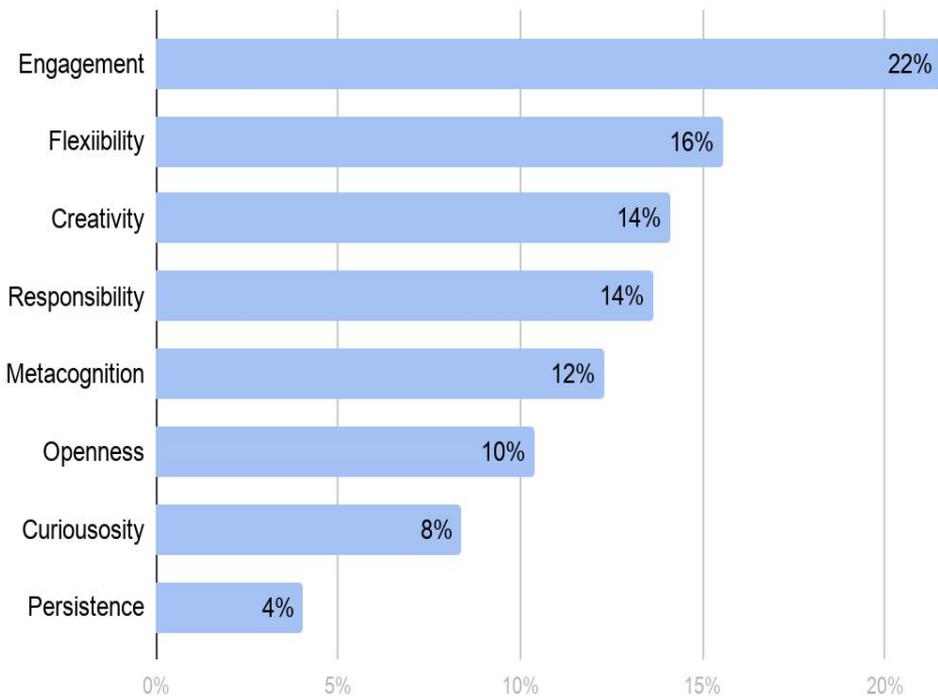


# UX-ING THE PROBLEM

## 2.Decide:

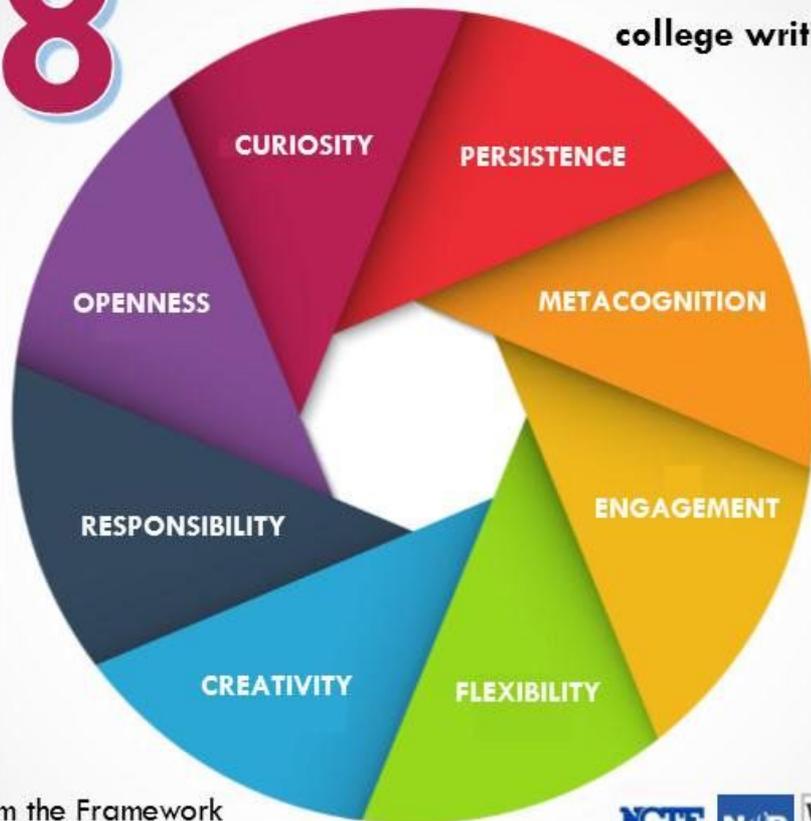
Select methods to address the issue

## Habits of Mind Priority



# 8

## habits of mind essential for success in college writing



From the Framework for Success in Postsecondary Writing

**FLEXIBILITY:** the ability to adapt to situations, expectations, or demands.



# HoM: Flexibility

How do I instill flexibility in my students?

## 2. Decide = TASK:

Collecting completed assignments

## 3. Make:

- Talk about flexibility
- Include different tasks
- Require a variety of formats

**FLEXIBILITY:** the ability to adapt to situations, expectations, or demands.



# HoM: Flexibility

How do I instill flexibility in my students?

## 4.Evaluate: Survey

Do you feel like you are more or less **flexible** after taking this course?

How likely is it that you would recommend my class to another student?

Subsequent semester:  
**NEW task:** Facilitating  
in-class activities

# Your DPP: In recap

1. **Discover** : We need a DPP
2. **Decide**: Selecting one of the HoM
3. **Make**: Select a task for a time period (semester/quarter)
4. **Evaluate**: Short Survey

## **DPP Awesomeness! You can expect...**

- Talking points about your class to your students
- Improved student outcomes
- Data to support for annual review

# HOW DOES ALL THIS IMPACT HOW WE COLLABORATE?

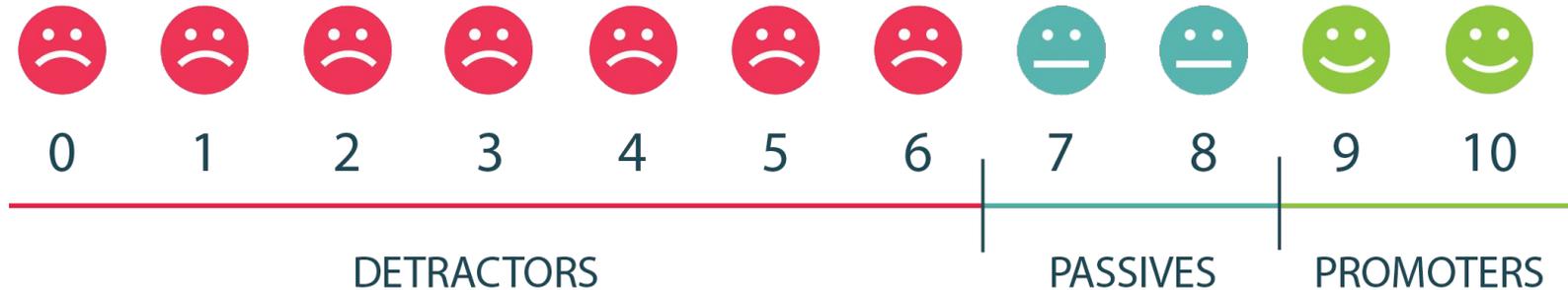
A field-wide look at these digital pedagogy.

1. What HoM was your focus?
2. What teaching task was your focus?
3. How did your students rate your effort?  
(*use NPS*)

# Net Promoter Score (NPS<sup>®</sup>)

USERS are asked to rate their answers on a 0-10 scale, which is divided up into three categories: “Detractors,” “Passives,” and “Promoters.”

**How likely is it that you would recommend my class to another student?**



Net Promoter Score:  $(\text{Number of Promoters} - \text{Number of Detractors}) / (\text{Number of Respondents}) \times 100$   
NPS is a benchmarkable number you can use, year after year

Setting DPPs means  
making wise and  
informed choices

---

**Digital Ethics**

Pay attention to how our  
data is being used: Read  
the EULAS and check out  
developer websites

---



# One Smart Refrigerator

## HBO's Silicon Valley

# **Experimental Moments**

- various trysts with technology -  
trying to see what fits our needs  
and leaving behind those that don't.

(Lisa Dusenberry, 2018)

## Wrap up

- 
- Technology evolution as tech grow exponentially
  - Too much familiarity stifles creativity
  - Use a DPP
  - Leverage our agency

Technology is not a substitute for nor should it supplant our interaction with other humans

---

Technology tools help us to connect, share, collaborate, organize and learn.

# Researching Collaboratively: Teachers, Teams, and Technology

- Collaboration in teaching and today's digital age
- Digital tools in teaching
- **Questions**

