

# Big Data for Education Justice

A dark blue, solid-colored shape that starts as a thin line at the bottom left and expands diagonally upwards to the right, filling the bottom right portion of the slide.

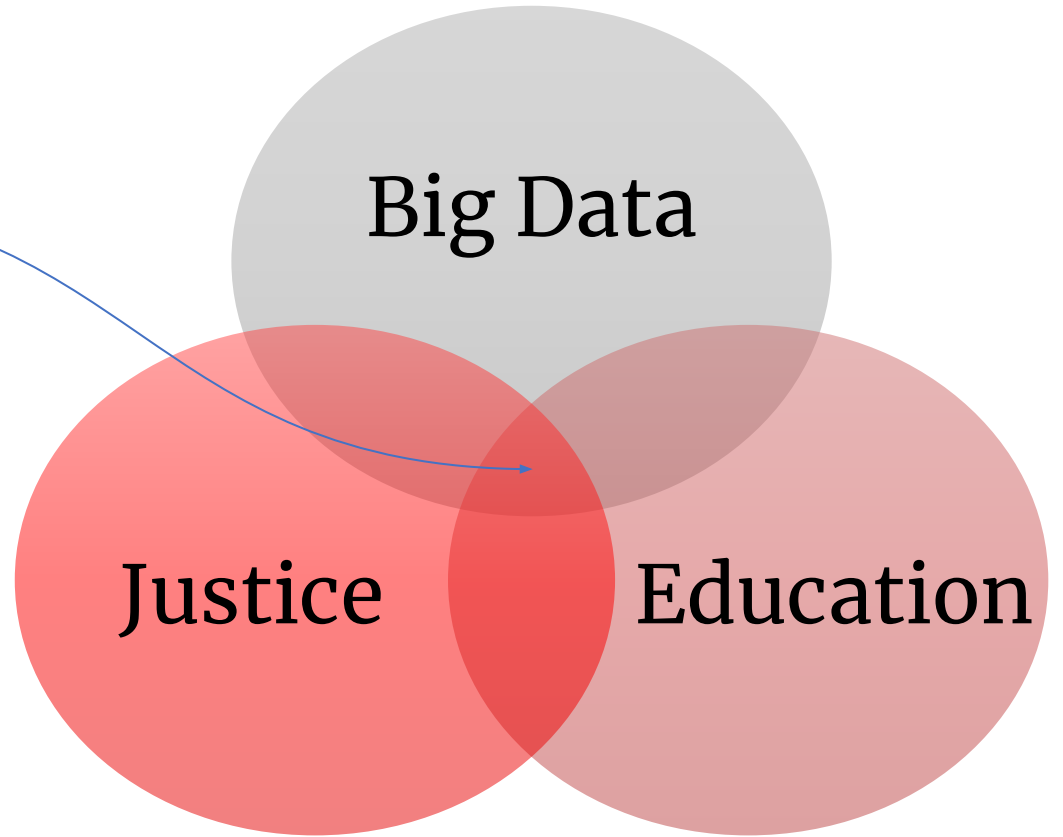
# Overview

- Overview
  - Why?
  - Where We Sit
  - Examples of Big Data In Education
  
- Small group discussion
  - Purpose
  - Instructions
  - Engage
  - Feedback

*{roughly 12 minutes}*

*{roughly 45 minutes}*

This space is where our study lands in terms of existing examples, cautions, and recommendations



Where We Sit

# Why Big Data in Education Matters?

- Big data has been defined and created by institutions that are historically biased
- Big data in education has focused on measuring individuals rather than systemic inequities
- Big data accessible to Black leaders has the potential to be a tool for education equity and justice

The day you plant the seed  
is not the day you eat the  
fruit. - RZA

# Our Questions

- What is big data?
- How has big data in education been used **for** equity and justice?
- How has big data in education been used **against** equity and justice?
- What are the tools that can be used by community organizers, parents and students in using big data to advance equity for Black children?

Resource Data | Meredith Broussard PhD  
New York University



## **Why Poor Schools Can't Win at Standardized Testing**

How can big data in education be used for equity?

**Question:** Could a shortage of textbooks be a reason Philadelphia students fare poorly on standardized tests?

**Finding:**

- The district didn't know what books were missing or the cost of replacing books

**Outcome:**

- School district invested millions of dollars to address this inequity

How can big data in education be used for equity?



### **Question:**

Can we use algorithms to create more equitable student placement in classes?

### **Findings:**

- Algorithmic decision-making was less biased than teachers
- **Leaky pipeline:** Results don't carry over to high school

How can big data in education be used for equity?

**Question:**

Can we accurately predict whether a student is likely to drop of the online class in the near future?

**Finding:**

- High predictive power for students that remained in the class

**Potential:**

- Solving a leaky pipe issue

How can big data in education be used for equity?

## Boston Busing Fiasco

In 2017 Boston Public Schools (BPS) partnered with MIT to build an algorithm that could solve some critical challenges

### Question:

- Can we improve the way in which the BPS busing system operates?

### Issues:

- Parents reaction

How has big data in education be used **against** equity?

# Boston Busing Fiasco

In 2017 Boston Public Schools (BPS) partnered with MIT to build an algorithm that could solve some critical challenges

## Question:

Can we improve the way in which the BPS Busing system operates?

**Mathematical Objectivity**  **Equity**

## Issues:

- Parents reaction

How has big data in education be used **against** equity?

# Our Questions

- What is big data?
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# Small Group Discussion: How *could* big data support education justice for Black children?

What resonated from the presentation?

What ideas sparked for you?

How could big data be used to advance positive outcomes for Black children?

- a. Must use data from this list, or other data we could get/create
- b. Must be in K-12 schools
- c. Must lead to improved outcomes for Black children

End of  
presentation

# Definitions

<u>Term</u>	<u>Definition</u>	<u>Example</u>
Learning Management System	a computer software used to deliver education sources & lesson, and organize learning information (grades, attendance, etc.)	Metaphorically it's the engine in a car. Powers the car, but its usefulness is tied a series of other machines & human beings.
Algorithm	a detailed step-by-step instruction set or formula for solving a problem or completing a task.	A food recipe is a non-math based algorithm