Data Fundamentals for Early Childhood Leaders

Mike Brown and Avisia Whiteman | Early Learning Services | November 4, 2022

Virtual Session Reminders

- Make sure that your audio is muted.
- Use the “chat” function to send comments/questions throughout the presentation.
  - Send to “All Participants” so that we can be most responsive to your questions.
- Please place resource links that are pertinent to the discussion in the chat box so that we can share the information after the session ends.
- This presentation is available upon request.
- Visit the Data Practices page of MNAFEE’s EC Administration website.

Session Notes

- We are focusing more on the world of data in early childhood education rather than the technical components.
- On some slides you may see these icons,  or  , which highlight:

   = a topic/issue where we may want to examine our attitudes/perspectives.

   = a potential strategy or process for data work.
- We encourage you to work to make your world of data fun and collaborative.
- Proceed at your own pace. Data is ongoing work. If something seems very relevant to your work, you may want to dig into the information further.
  - If it is a state requirement, then proceed at our pace! 

Our questions for you….

- What are you looking forward to learning today?
- What questions did you bring to today's presentation?
- Do you have a project you're currently working on where you would like to brainstorm with others?
- Are you facing a challenge in the district where you think you might be able to use data to help turn the tide?
- Were you aware of the Regional Information Management Consultants before today? If so – how did you hear about them?
- Post on IdeaBoardz

Ten Minnesota Commitments to Equity

1. Prioritize equity.
2. Start from within.
3. Measure what matters.
4. Go local.
5. Follow the money.
6. Start early.
7. Monitor implementation of standards.
8. Value people.
9. Improve conditions for learning.
10. Give students and families options.

Agenda and Goals

Agenda:

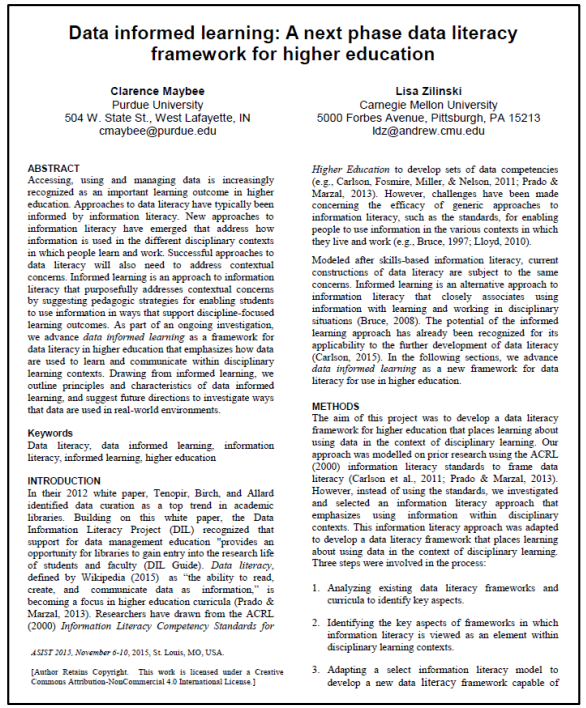
1. Embrace the role of data in our work.
2. Explore ways data helps us understand, plan, and improve.
   - Use tools to help us organize our data efforts.
3. Ensure data is part of everyday, intentional practice.

Goals:

- Gain an understanding of the role of data throughout our work.
- Provoke planning for ways data will help you (and your team) understand and guide the role of data in your work.
- Gain awareness of approaches, concepts, resources, and strategies.

Elements of Data Literacy Models

1. **Awareness**: Understanding data and its role in our world;
2. **Access**: Understanding how to identify and appropriately use data;
3. **Engagement**: Evaluating, analyzing, organizing, and interpreting data;
4. **Management**: Planning and managing data, including organization and analysis, data storage, sharing data, and documentation;
5. **Communication**: Synthesizing, visualizing, and representing data;
6. **Ethical Use**: Identifying diversified data sources, in particular data from human and social activity, considering the risks and issues implicit in the use of such data;
7. **Preservation**: Being aware of long-term practices of storing, using, and reusing data.



Data informed learning: A next phase data literacy framework for higher education

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ABSTRACT
Accessing, using and managing data is increasingly recognized as an important learning outcome in higher education. Approaches to data literacy have typically been informed by information literacy. New approaches to information literacy have emerged that address how information is used in the different disciplinary contexts in which people learn and work. Successful approaches to data literacy will also need to address contextual concerns. Informed learning is an approach to information literacy that purposefully addresses contextual concerns by suggesting pedagogic strategies for enabling students to use information in ways that support discipline-focused learning outcomes. As part of an ongoing investigation, we advance *data informed learning* as a framework for data literacy in higher education that emphasizes how data are used to learn and communicate within disciplinary learning contexts. Drawing from informed learning, we outline principles and characteristics of data informed learning, and suggest future directions to investigate ways that data are used in real-world environments.

Keywords
Data literacy, data informed learning, information literacy, informed learning, higher education

INTRODUCTION
In their 2012 white paper, Tenopir, Birch, and Allard identified data curation as a top trend in academic libraries. Building on this white paper, the Data Information Literacy Project (DIL) recognized that support for data management education "provides an opportunity for libraries to gain entry into the research life of students and faculty (DIL Guide). *Data literacy*, defined by Wikipedia (2015) as "the ability to read, create, and communicate data as information," is becoming a focus in higher education curricula (Prado & Marzal, 2013). Researchers have drawn from the ACRL (2000) *Information Literacy Competency Standards for Higher Education* to develop sets of data competencies (e.g., Carlson, Fosmire, Miller, & Nelson, 2011; Prado & Marzal, 2013). However, challenges have been made concerning the efficacy of generic approaches to information literacy, such as the standards, for enabling people to use information in the various contexts in which they live and work (e.g., Bruce, 1997; Lloyd, 2010).

Modeled after skills-based information literacy, current constructions of data literacy are subject to the same concerns. Informed learning is an alternative approach to information literacy that closely associates using information with learning and working in disciplinary situations (Bruce, 2008). The potential of the informed learning approach has already been recognized for its applicability to the further development of data literacy (Carlson, 2015). In the following sections, we advance *data informed learning* as a new framework for data literacy for use in higher education.

METHODS
The aim of this project was to develop a data literacy framework for higher education that places learning about using data in the context of disciplinary learning. Our approach was modelled on prior research using the ACRL (2000) information literacy standards to frame data literacy (Carlson et al., 2011; Prado & Marzal, 2013). However, instead of using the standards, we investigated and selected an information literacy approach that emphasizes using information within disciplinary contexts. This information literacy approach was adapted to develop a data literacy framework that places learning about using data in the context of disciplinary learning. Three steps were involved in the process:

1. Analyzing existing data literacy frameworks and curricula to identify key aspects.
2. Identifying the key aspects of frameworks in which information literacy is viewed as an element within disciplinary learning contexts.
3. Adapting a select information literacy model to develop a new data literacy framework capable of

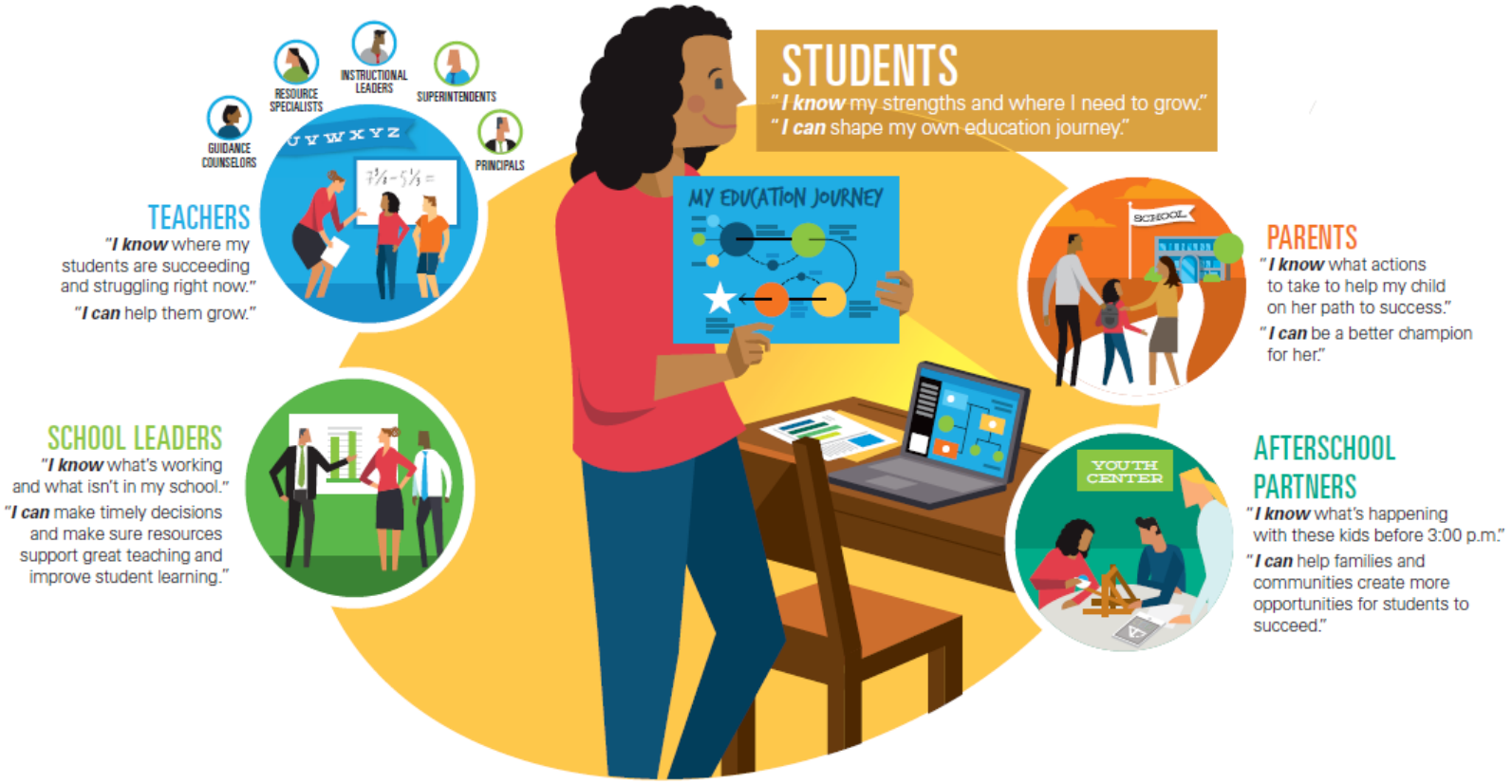
ASIST 2015, November 6-10, 2015, St. Louis, MO, USA.

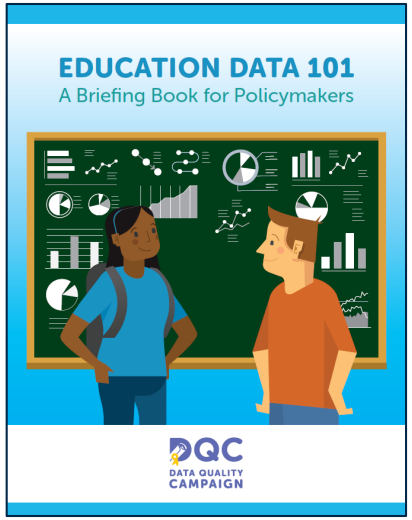
Data Informed Learning

Embracing the Role of Data

1. Acknowledging and valuing data in the world of early education.
    - Developing a shared understanding about data.
    - Acknowledging ways we currently use data.
2. Deepening our engagement with data.
    - Exploring ways data helps in our work.

Acknowledging Data in Our World



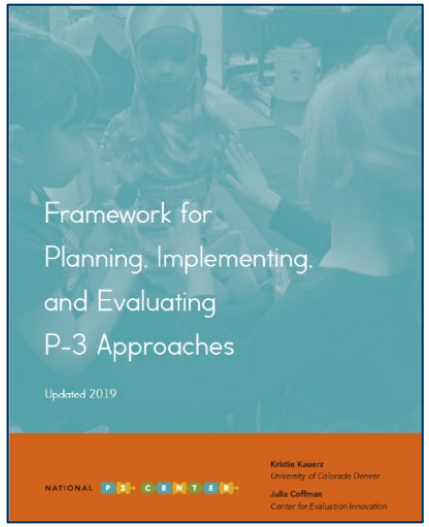


Education Data 101

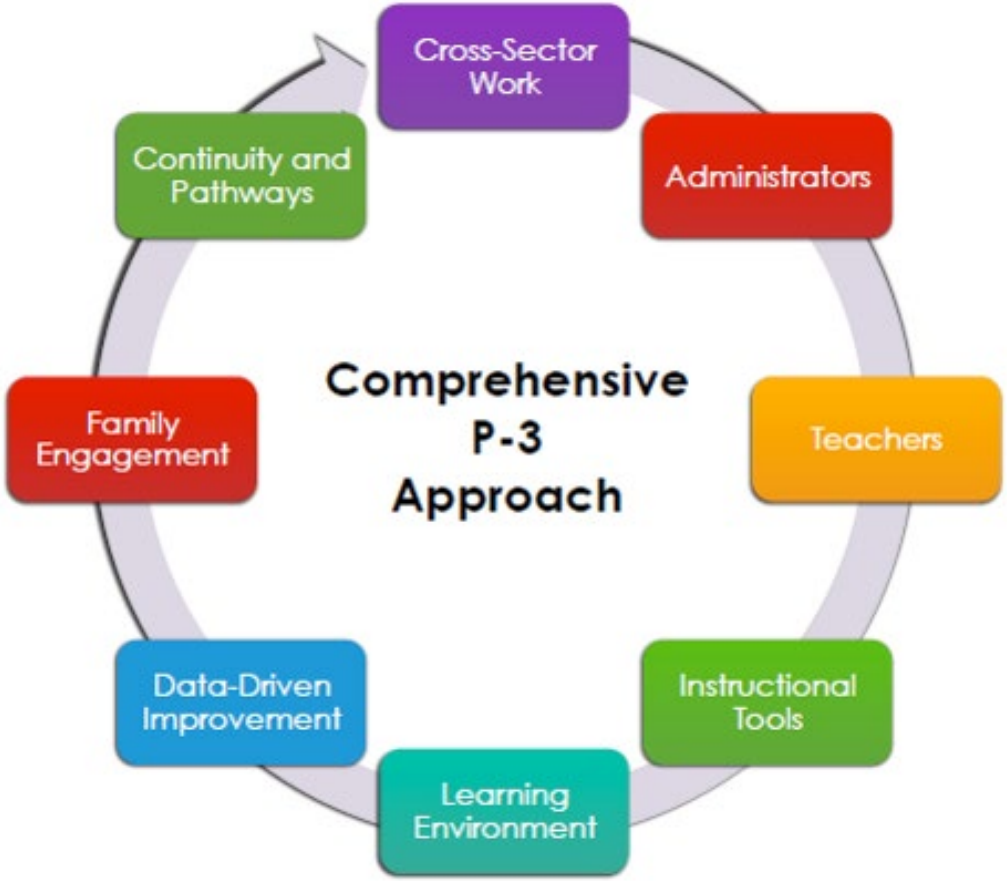
Data in Our World: An Indispensable for Early Education

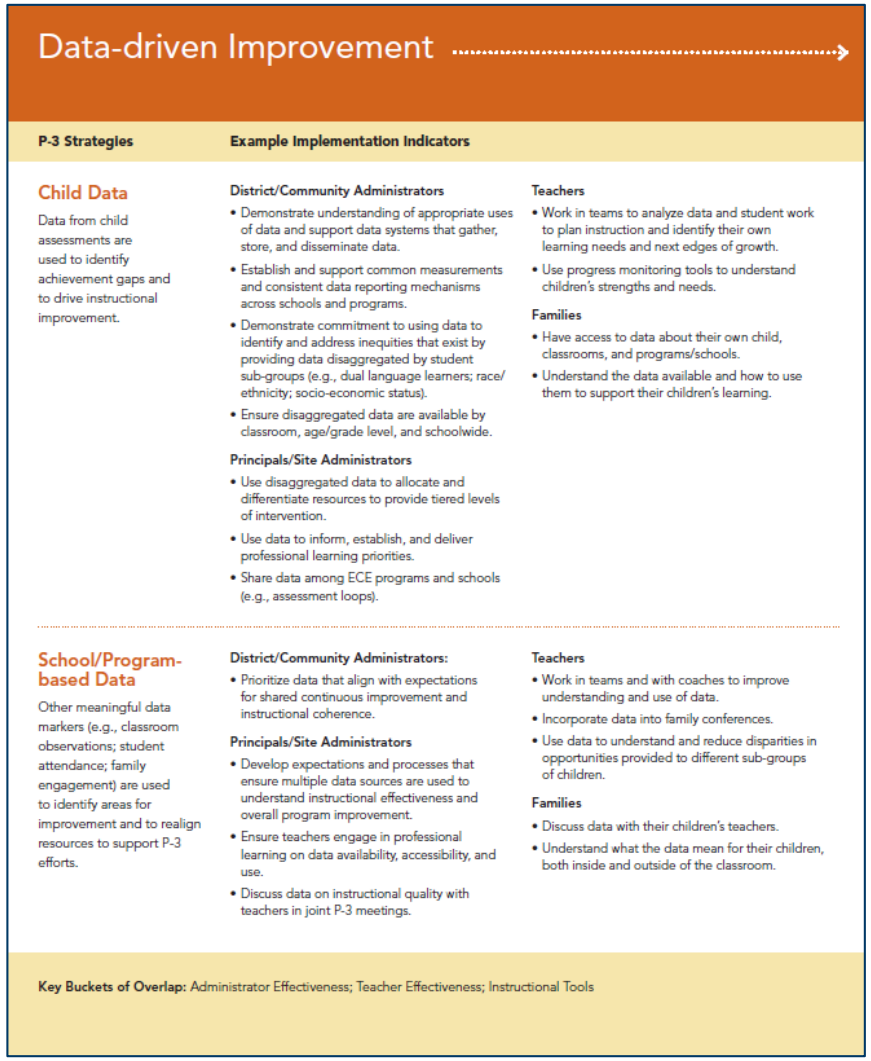
Indispensables for Quality Pre-K

Data in Our World: In Frameworks and Models



[National P3 Center]





Data-driven Improvement

P-3 Strategies	Example Implementation Indicators	
Child Data Data from child assessments are used to identify achievement gaps and to drive instructional improvement.	**District/Community Administrators** • Demonstrate understanding of appropriate uses of data and support data systems that gather, store, and disseminate data. • Establish and support common measurements and consistent data reporting mechanisms across schools and programs. • Demonstrate commitment to using data to identify and address inequities that exist by providing data disaggregated by student sub-groups (e.g., dual language learners; race/ethnicity; socio-economic status). • Ensure disaggregated data are available by classroom, age/grade level, and schoolwide. **Principals/Site Administrators** • Use disaggregated data to allocate and differentiate resources to provide tiered levels of intervention. • Use data to inform, establish, and deliver professional learning priorities. • Share data among ECE programs and schools (e.g., assessment loops).	**Teachers** • Work in teams to analyze data and student work to plan instruction and identify their own learning needs and next edges of growth. • Use progress monitoring tools to understand children's strengths and needs. **Families** • Have access to data about their own child, classrooms, and programs/schools. • Understand the data available and how to use them to support their children's learning.
School/Program-based Data Other meaningful data markers (e.g., classroom observations; student attendance; family engagement) are used to identify areas for improvement and to realign resources to support P-3 efforts.	**District/Community Administrators:** • Prioritize data that align with expectations for shared continuous improvement and instructional coherence. **Principals/Site Administrators** • Develop expectations and processes that ensure multiple data sources are used to understand instructional effectiveness and overall program improvement. • Ensure teachers engage in professional learning on data availability, accessibility, and use. • Discuss data on instructional quality with teachers in joint P-3 meetings.	**Teachers** • Work in teams and with coaches to improve understanding and use of data. • Incorporate data into family conferences. • Use data to understand and reduce disparities in opportunities provided to different sub-groups of children. **Families** • Discuss data with their children's teachers. • Understand what the data mean for their children, both inside and outside of the classroom.

Key Buckets of Overlap: Administrator Effectiveness; Teacher Effectiveness; Instructional Tools

Data in Our World: Seeing the System

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REVIEW ARTICLE Open Access

Big data in education: a state of the art, limitations, and future research directions

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Abstract

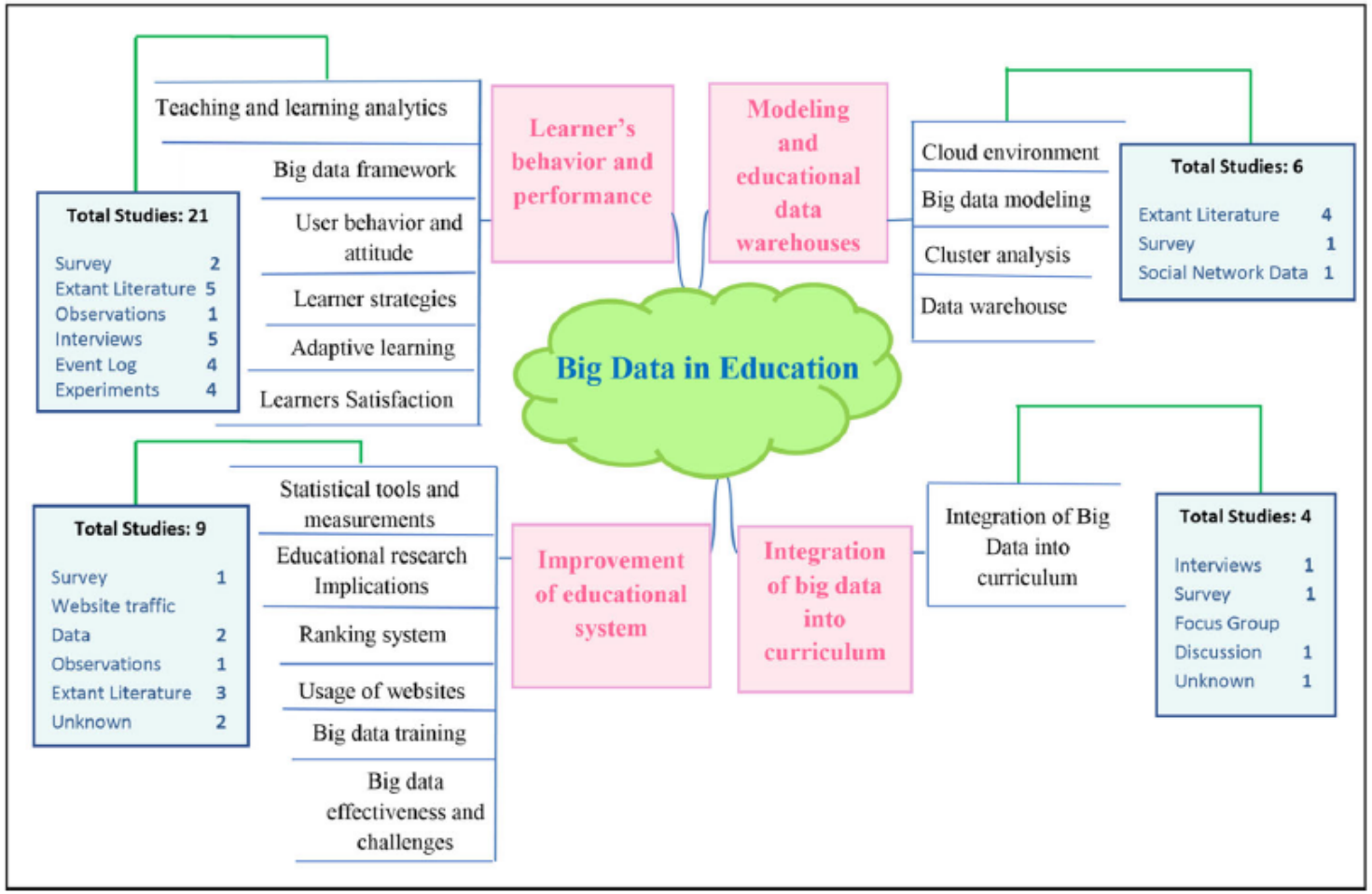
Big data is an essential aspect of innovation which has recently gained major attention from both academics and practitioners. Considering the importance of the education sector, the current tendency is moving towards examining the role of big data in this sector. So far, many studies have been conducted to comprehend the application of big data in different fields for various purposes. However, a comprehensive review is still lacking in big data in education. Thus, this study aims to conduct a systematic review on big data in education in order to explore the trends, classify the research themes, and highlight the limitations and provide possible future directions in the domain. Following a systematic review procedure, 40 primary studies published from 2014 to 2019 were utilized and related information extracted. The findings showed that there is an increase in the number of studies that address big data in education during the last 2 years. It has been found that the current studies covered four main research themes under big data in education, mainly, learner's behavior and performance, modelling and educational data warehouse, improvement in the educational system, and integration of big data into the curriculum. Most of the big data educational researches have focused on learner's behavior and performances. Moreover, this study highlights research limitations and portrays the future directions. This study provides a guideline for future studies and highlights new insights and directions for the successful utilization of big data in education.

Keywords: Data science applications in education, Learning communities, Teaching/learning strategies

Introduction

The world is changing rapidly due to the emergence of innovational technologies (Chae, 2019). Currently, a large number of technological devices are used by individuals (Shorfuzzaman, Hossain, Nazir, Muhammad, & Alamri, 2019). In every single moment, an enormous amount of data is produced through these devices (ur Rehman et al., 2019). In order to cater for this massive data, current technologies and applications are being developed. These technologies and applications are useful for data analysis and storage (Kalaian, Kasim, & Kasim, 2019). Now, big data has become a matter of interest for researchers (Anshari, Alas, & Yunus, 2019). Researchers are trying to define and characterize big data in different ways (Mikalef, Pappas, Krogstie, & Giannakos, 2018).

[Big Data in Education]



Embracing the Role of Data

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    - Exploring ways data helps in our work.

A Broad, Practical View of Data

Data:
Information collected for use.

- Cambridge Dictionary

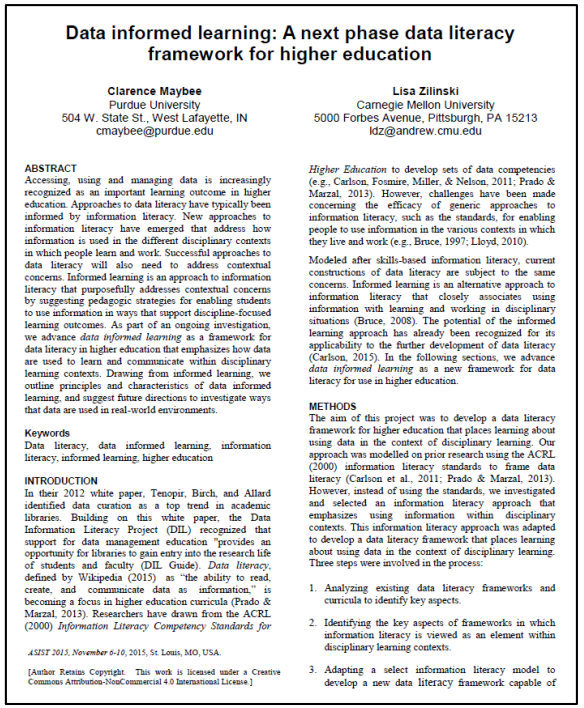
Information:
Knowledge gained through study, communication, research, instruction, etc.; factual data.

- Dictionary.com

Data + Information = Data Informed Learning

- Informed learning emphasizes “learning” as an outcome of engaging with information.
- Authors introduce *data informed learning* as an approach to data literacy that shifts the focus from acquiring generic data-related skills to **learning how to use data in contexts**.

In what ways do you use data in your everyday life?



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Data Informed Learning

Data as Information Collected for Use – *Current Practice*

What are some ways we currently collect and use data?

- To see how registration is going.
- To determine if we have funds to purchase classroom equipment.
- To assess staff compensation.
- To assess and address a problem.
- To assess and/or monitor performance (budgets, classrooms, policies, practices, programs, staff, students, etc.).
- To gather and report required information to MDE, or other organizations (based on funding/program requirements).

We are Intentional about How We Use Data

Examples of ways we intentionally use data:

- Decision making
- Ethics, equity
- Monitoring
- Program improvement, enhancements
- Accountability or compliance
- Respond to needs, goals
- Identifying/analyzing problems, needs, etc.
- Collaborative approaches/solutions.

Understanding Your Current State of Data Collection and Use

What data do you and your staff collect?

- Who is collecting data and what is being collected?
- When is data collected? Is it ongoing?
- Why is it collected?

What data does your program collect (and manage/record)?

- Required (participant data, class data, etc.)?
- Home visiting data? School transition data? Behavioral?

How do you use, or plan to use, the data?

- Evaluation (staff, program, goals, initiative, etc.)?
- Planning?
- Compliance or monitoring?

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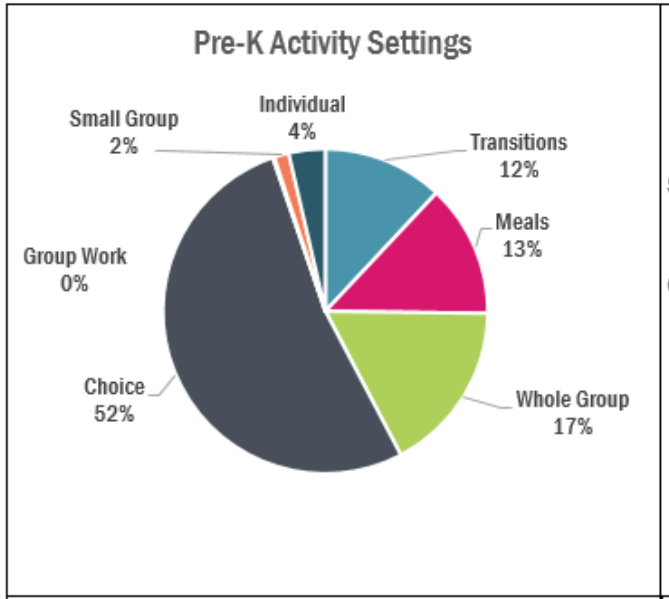
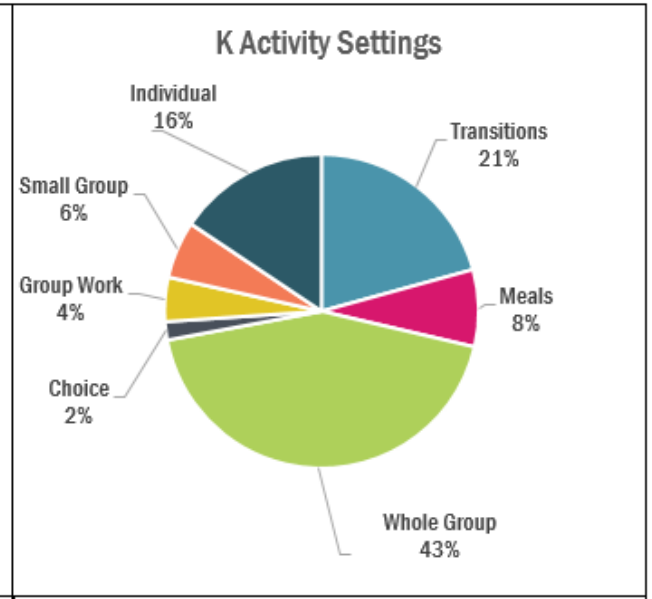
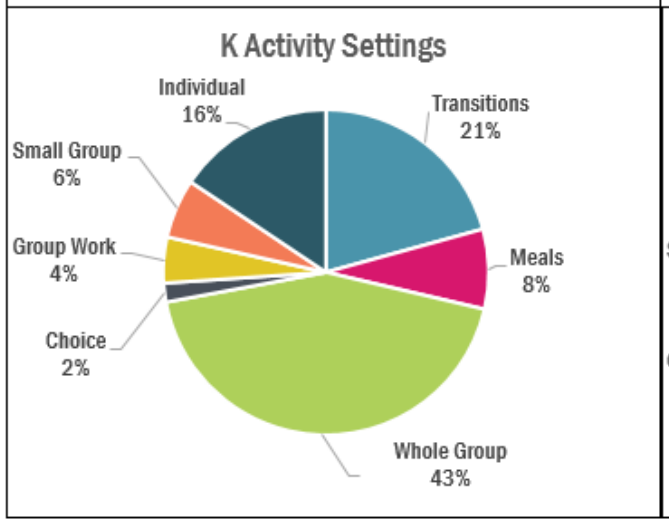
Moving Something from the Unknown to the Known

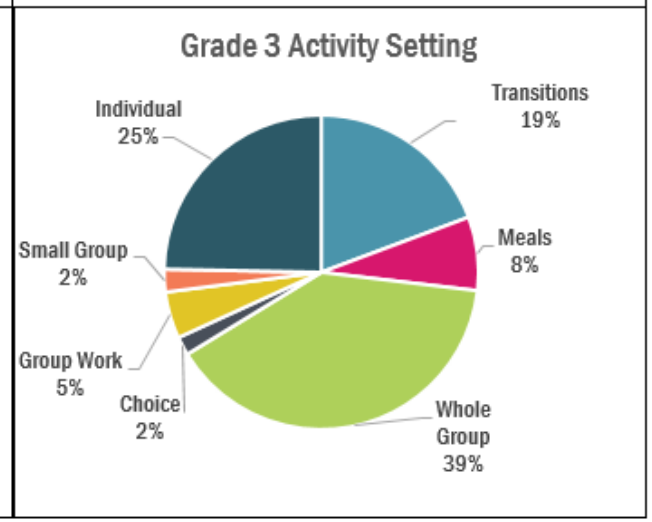
What are some data/information we wish we had?

- For children?
- For parents?
- For classroom teachers?
- For program supervisors/administrators?
- For district and community leaders?
- For state leaders and representatives?









What does the structure of our day look like?

EduSnap quantifies how children experience their classrooms.

Employing 25 codes, EduSnap provides an in-depth look at how children experience activity settings (e.g. *Whole Group, Small Group, Transitions*), content areas (e.g. *Literacy, Science, Math*), student learning approaches (e.g. *Collaboration, Metacognition*), and teaching approaches (e.g. *Didactic, Scaffolds*).

**The charts on the left are from Adam Holland's presentation at a P3 Principal Leadership Series session.*

How Children Experience Activity Settings - EduSnap

Identifying Various Layers/Purposes/Roles of Data

Why do we monitor registration?

- To determine if a class will run.

What are some additional reasons to monitor/analyze registration?

- To help make staffing decisions.
- To see who is registering for what.
- To identify gaps in registration.
- To bring awareness to a need for further exploration/analysis.

One Data Requirement, Multi-Purposed (*example*)

0-4 Census Data Reporting

Requirement: Districts are required to submit the number of children ages 0-4 as of September 1, of each year, who are residing in their district as of October 1. Reporting deadline is 11/30.

Meet state requirement

Exceed state requirement

Approach: Use kindergarten averaging method. Submit numbers.
Purpose: funding requirement.

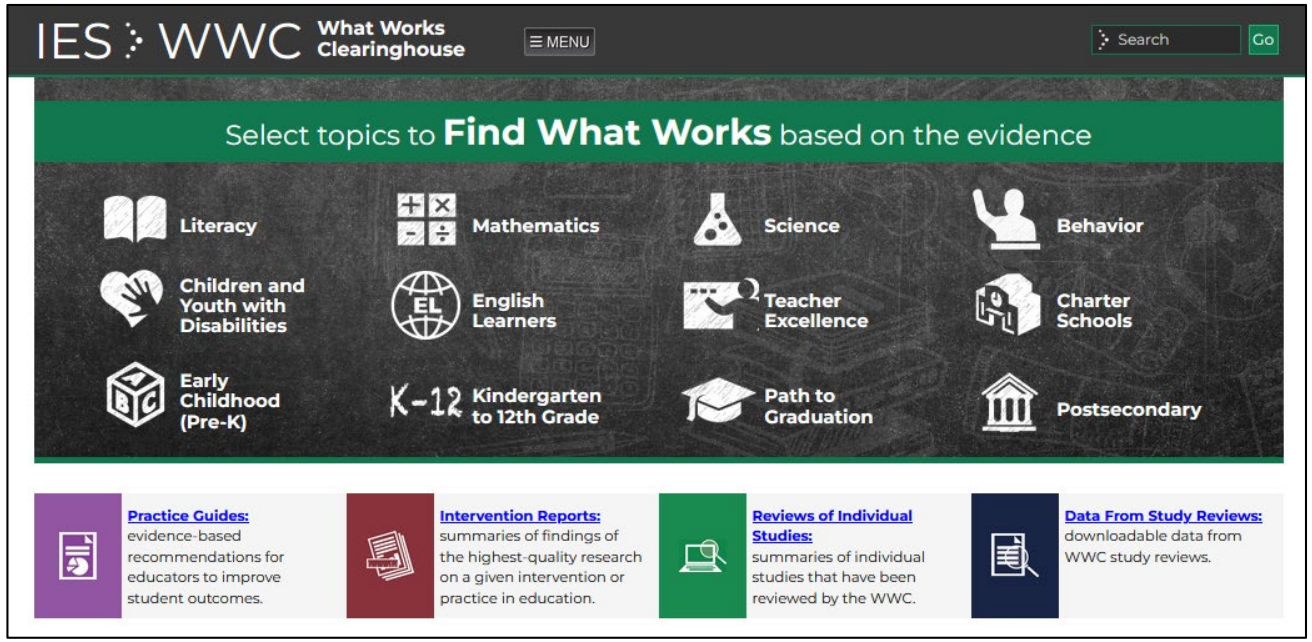
Approach: Maintain comprehensive 0-4 database.
Purpose: funding requirement and to support program operations and performance.

Being Intentional and Strategic – Clear Priorities

What and how do we prioritize?

- How is data connected to our values and goals?
  - Closing achievement gaps, equity, kindergarten success, family engagement, etc.?
  - Strategic plans, mission statements, yearly goals, World's Best Workforce, etc.
- What data is required (district, funding source, state, etc.)?
  - ECFE needs assessment, MCCC, 0-4 Census, Screening, VPK, funds from a grant, etc.
- How does data benefit students/participants?
- How do we balance depth and breadth of data?

Gathering and Collecting Data – Clear Processes



What Works Clearinghouse

How do you decide what data to collect?

- Is it data you are generating, accessing, adapting, etc.?

How do you determine what type of data is best suited for your needs?

- Building, assessing, informing, monitoring, problem-solving, accountability, performance, efficiency, effectiveness, etc.

How do you determine the quality of the data?

- What are reliable sources?

Who are the data experts throughout your system?

- Build the system. What can others do for you?

We Collect a Variety of Data from Various Sources

Examples of Data Types and Sources

Student Non-Academic/ Demographic Data

- Ed-Fi and MARSS entry data .
- Enrollment trends.
- Transportation.
- Attendance.
- Food security.
- Housing Security.
- Health Security.
- Program participation

Perception Data

- MDE Family Survey.
- Community Needs Assessment.
- Observations.
- Focus groups.
- Parent-Teacher conference reports.
- Local ECFE class survey

Student Academic Data

- Screening
- VPK/SRP Measuring Impact.
- School Readiness pre and post.
- Formative assessments.
- Work samples.
- MN Common Course Catalog.
- P/T Conference Reports

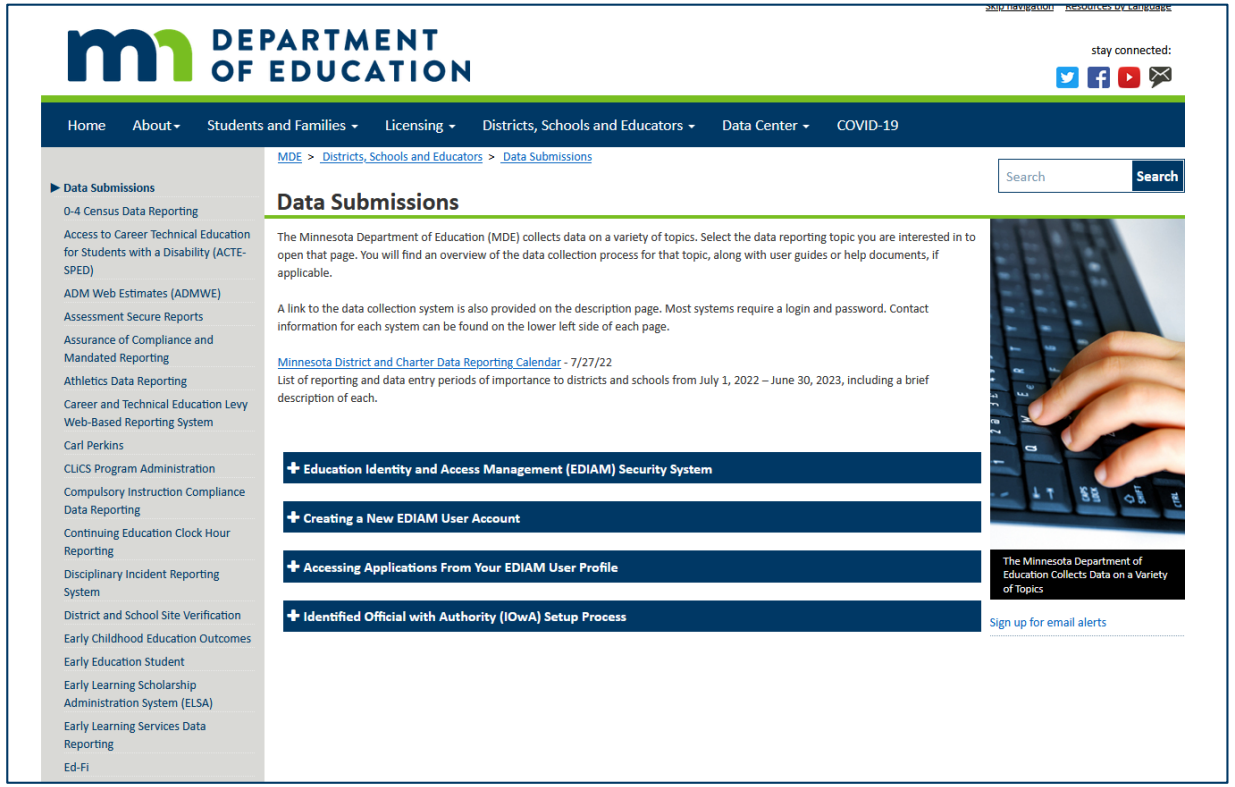
Program, Process, and Policy Data

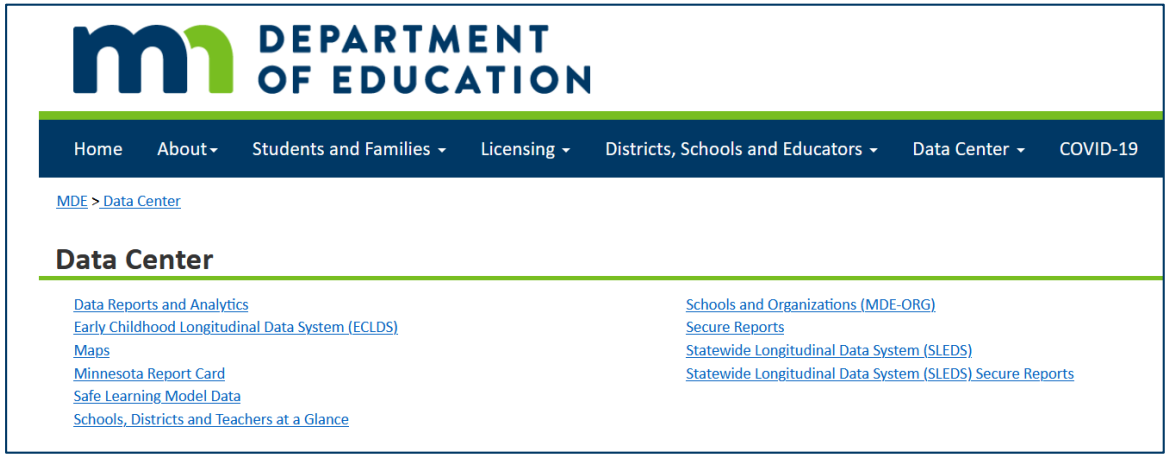
- Community Needs Assessment.
- VPK/SRP Annual Program Survey.
- Program evaluation data.
- Leadership Capacity.
- Mapping/analyzing system continuity.
- Gap analysis.
- Policy impact

Fidelity Data

- Fidelity of implementation (self-assessed using P3 framework).
- Measures of commitment to students, families, staff, school, community and profession.

Data Submissions and Data Reports – State Level





Data Submissions

Reports in the Data Center

Data Reports and Analytics
Early Childhood Longitudinal Data System (ECLDS)
Maps
Minnesota Report Card
Safe Learning Model Data
Schools, Districts and Teachers at a Glance
Schools and Organizations (MDE-ORG)
Secure Reports
Statewide Longitudinal Data System (SLEDS)
Statewide Longitudinal Data System (SLEDS) Secure Reports

State Level Data – example

11/4/2022 10:34

Early Childhood Programming - Statewide Expenditure Percentages

The table below shows statewide expenditures averages. Specifically, it shows statewide averages on how much districts spent (on average over a five year period) on each Object Code as a percentage of total expenditures. For example, consider an ECFE program that spent a total of $100,000 last fiscal year. Of their total expenditures, they spent $40,000 on licensed teachers (Object Code 140); this would represent 40% of their total expenditures.

PURPOSE: The purpose of this table is to help you plan budgets. It may be helpful to consult this table as you look at expenditures in your budgets. How do your percentages compare to statewide averages? If you are above or below statewide averages, what might be the reason? Note, this does not mean your program must have percentages within these ranges. Rather, this is just a tool to help you analyze your budgets. This table can also help you compare percentages among your early childhood programs to ensure you are braiding funds accurately and fairly. For example, if your non-instruction support (Object Code 170) expenditures are a higher percentage in ECFE compared to other programs, how is the extra cost justified? Or, do you need to make changes to ensure costs are coded fairly?

OBJECT DIMENSION	**Minnesota PreK Programs and Funding Sources**							
Always refer to most recent UFARS manual	**ECFE**	**ECS**	**ELS**	**HV**	**SR**	**SR+**	**VPK**	**Notes**
UFARS Program Code	580	583		580	582	584	200	
UFARS Finance Code	325	354	337	328	344	000	000	
Salaries and Wages (100)			338				355	355 is only used with VPK funding if the district has approval for building remodel related to
110 Administration/Supervision	**1.5 to 2%**		**.75 to 1.25%**		**.6 to 1.8%**			ECFE and School Readiness have a 5% limit
120 EC Administration	**7.5 to 10%**		**1 to 2%**		**3.5 to 4.5%**			
140 Licensed Classroom Teacher	**32 to 35%**		**38 to 42%**		**34 to 40%**			ECFE and SR+ require licensed teachers
141 Non-licensed Classroom Personnel	**8 to 11%**		**14 to 16%**		**13 to 15%**			
143 Licensed Instructional Support Personnel	**1 to 2%**		**3 to 5%**		**2%**			
144 Non-Licensed Instructional Support Personnel	**<1%**		**1 to 4%**		**1 to 2%**			
145 Substitute Teacher Salaries	**<.5%**		**<.25%**		**0.50%**			
146 Substitute Non-Licensed	**<.25%**		**<.10%**		**<.25**			

Statewide, what are average expenditures in each program?

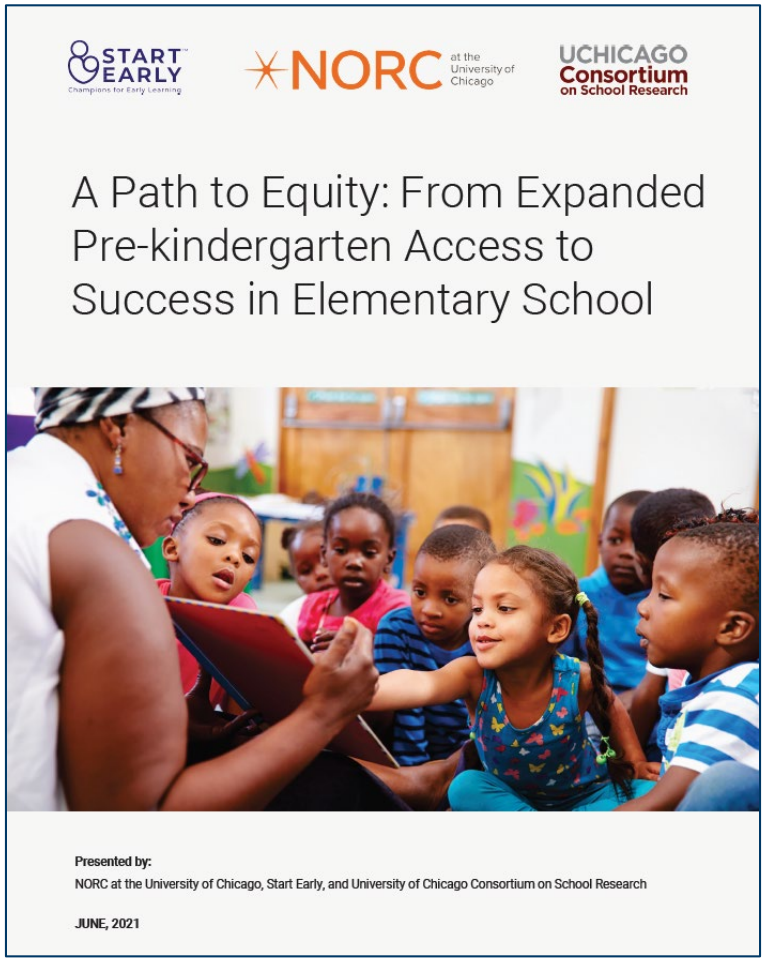
- How could this help with your budgeting process?

Awareness of the Role of Data – Chaining/Connecting

Monitoring registration involves the element of time (which can be a data element), but we want to expand our analysis to learn more.

1. Why does someone register for an ECFE class? Preschool class? Or choose a child care center?
   - What are our program goals? How does this determine the data we seek/use?
2. How do we know if a child will experience a successful/challenging transition to kindergarten?
   - What is the transition to kindergarten? Do we have information/data on transitions? Do we have supports in place for children who may struggle with this transition?

Early Learning is a Path to Equity – CPS Study


START EARLY
Champions for Early Learning

NORC at the University of Chicago

UCHICAGO Consortium on School Research

A Path to Equity: From Expanded Pre-kindergarten Access to Success in Elementary School

Presented by:
NORC at the University of Chicago, Start Early, and University of Chicago Consortium on School Research

JUNE, 2021

In 2013-14, Chicago Public Schools, implemented several changes to the policies governing its pre-kindergarten application and enrollment process. Two policy changes that were central to the school district's strategy focused on increasing access to full-day pre-k for high-priority student groups:

- Increasing the overall number of full-day pre-k classrooms within school buildings, and
- Intentionally placing those full-day pre-k classrooms in neighborhoods with a large proportion of age-eligible, high-priority children and historically low rates of enrollment in CPS pre-k.

A Path to Equity – CPS Study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UCHICAGO Consortium on School Research

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JUNE, 2021

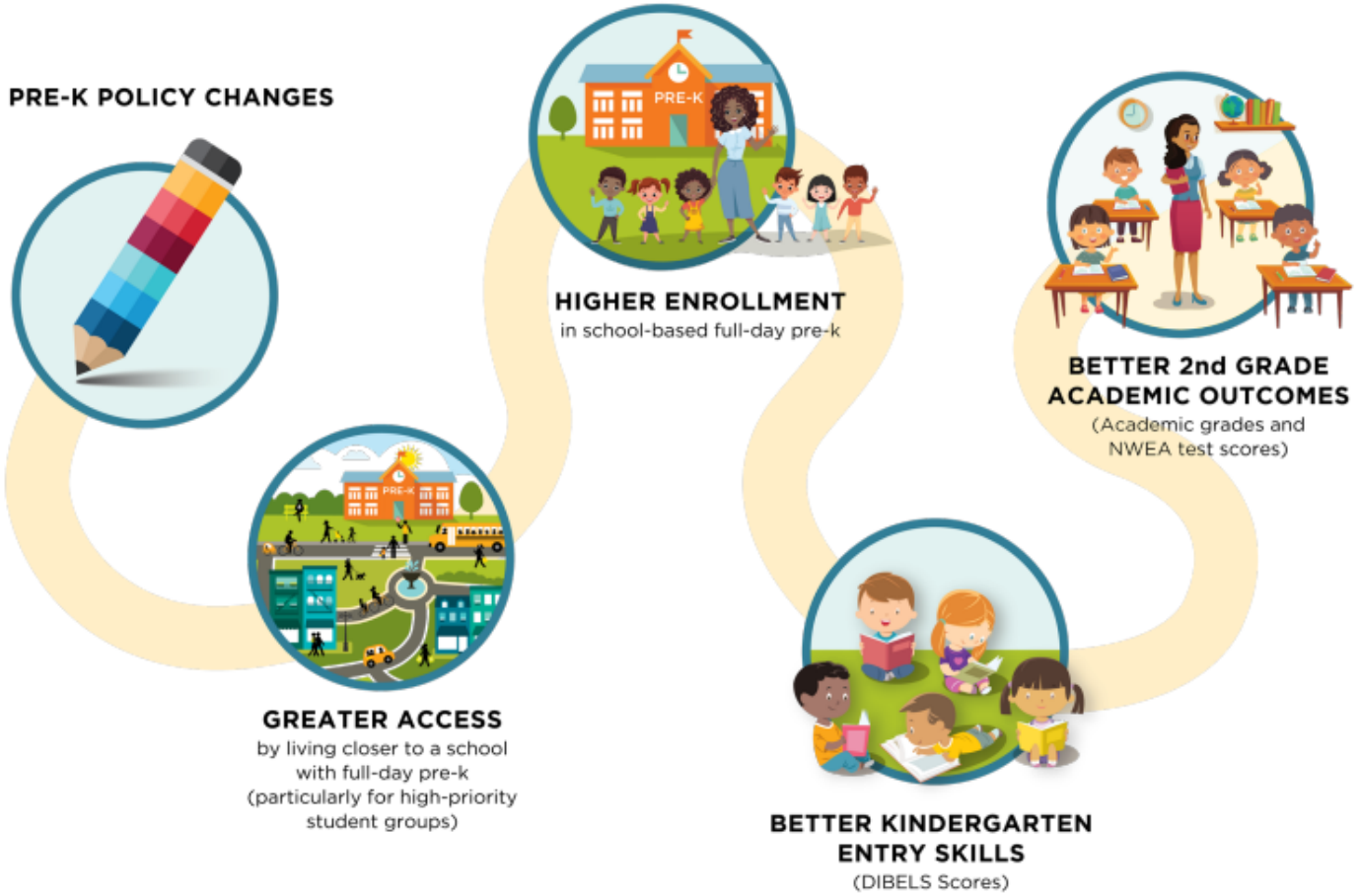
A Path to Equity

Does the geographic placement of full-day pre-k classrooms within a school district matter?

"Geographic placement of full-day pre-k matters not only for more equitable pre-k access and enrollment, but also for academic outcomes in early elementary school."

A Path to Equity – CPS Study

Figure 2. Policy changes were associated with better 2nd grade academic outcomes *through* greater access to and enrollment in full-day pre-k and subsequently better kindergarten entry skills.



A Path to Equity – CPS Study

IMPLICATIONS:

- **Prioritize policies and funding** that provide more full-day pre-k classrooms close to where historically underserved students live.
- Implement targeted strategies to **improve families' awareness of pre-k options and motivation to enroll their child in pre-k** to help ensure that more high-priority students are able to benefit from the pre-k opportunities available to them.
- **Monitor patterns in data and engage in research partnerships** to continuously examine changes in pre-k access and enrollment and in elementary school outcomes for different student groups. Focus on changes that occur as new policies are being implemented in order to assess whether they are achieving intended goals.
- **Consider other key policies beyond access to pre-k,** such as those that support preschool-to-3rd grade instructional alignment, restorative or inclusive school discipline policies, and reduction of poverty and violence, in efforts to address the inequities in students' early academic achievement.

Key Points from Part I

Embracing the Role of Data

- Creating a shared understanding about data and its role.
- Valuing and prioritizing data.
- Deepening our engagement with data.
  - Making connections

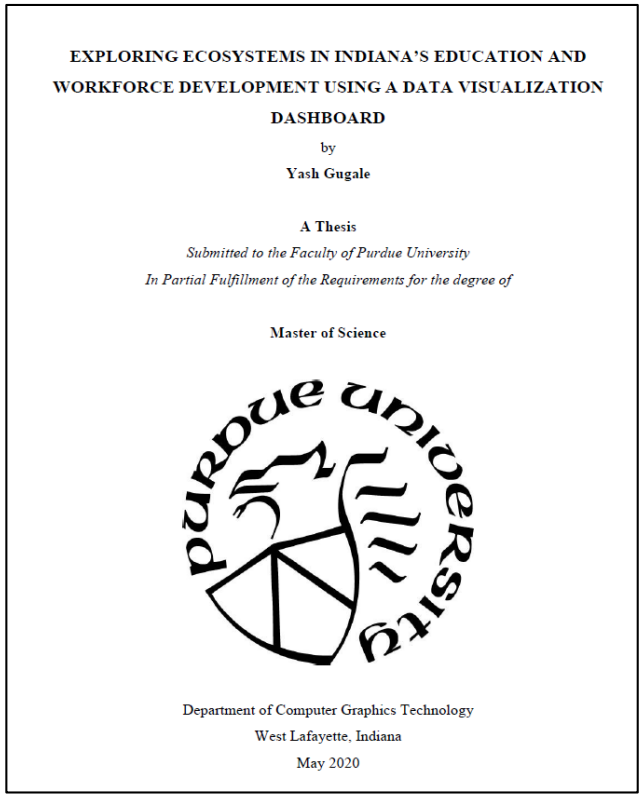
Embedding Data in Practice

1. Use the ecosystem to help organize our data explorations.
   - Seeing connections
2. Mapping and back-mapping as a foundational tool.
   - Enhancing your understanding of data systems.
3. Research to Practice: Ecosystem as a framework.

Data in Our World: Seeing Connections

Exploring Ecosystems in Indiana

The focus of this study was to be able to **see the ecosystem** (relationships and dependencies) that exists in large datasets, and to enable the users to make sense of and navigate through these large datasets.



EXPLORING ECOSYSTEMS IN INDIANA'S EDUCATION AND WORKFORCE DEVELOPMENT USING A DATA VISUALIZATION DASHBOARD

by

Yash Gugale

A Thesis

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Master of Science

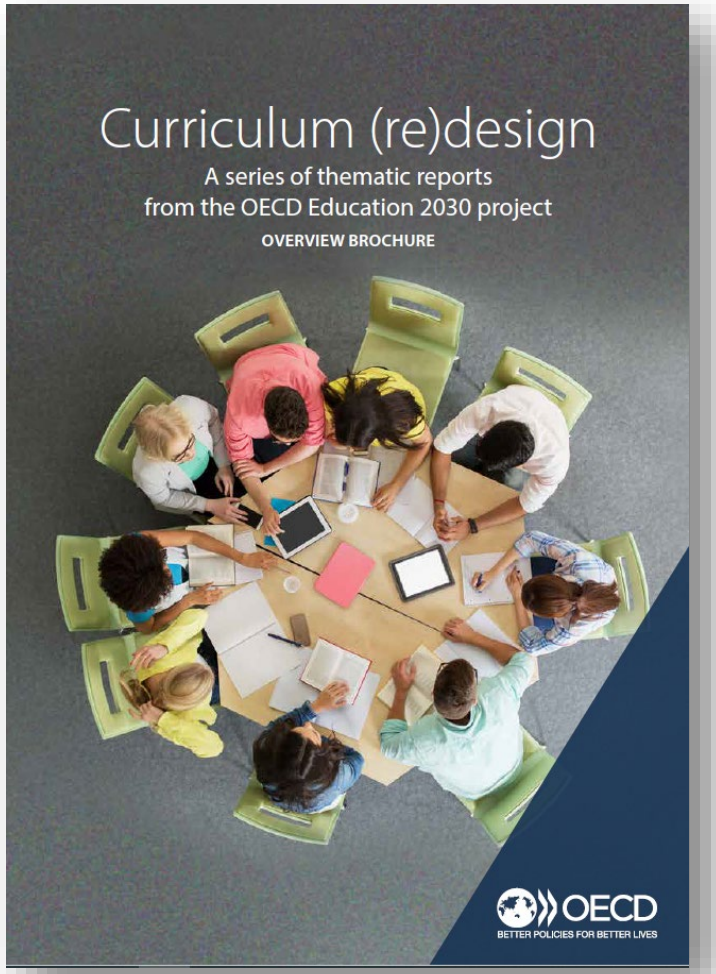
Department of Computer Graphics Technology

West Lafayette, Indiana

May 2020

Exploring Ecosystems in Indiana

Curriculum (re)design – Example of Organizing Information



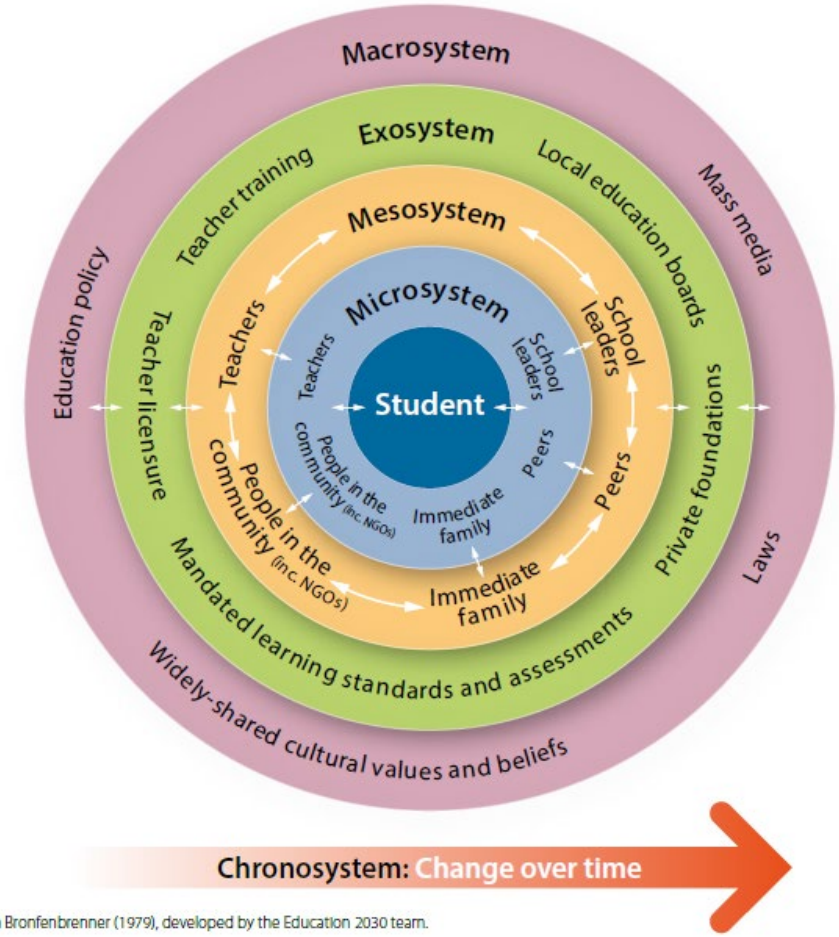
What kinds of knowledge, skills, attitudes and values are necessary to understand, engage with and shape a changing world towards a better future in 2030?

How can policies and practices be transformed effectively to support young people's learning and well-being in the context of changing societies and economies?

Curriculum (re)design, OECD

Using the Ecosystem Approach as a Guide

Figure 4. **The Education 2030 ecosystem approach – multiple nested systems**



Source: Adapted from Bronfenbrenner (1979), developed by the Education 2030 team.

The OECD Education 2030 ecosystem approach to curriculum analysis reflects the scope and complexity of systems that interact, build upon and influence one another, which have an impact on an individual's development through life. The model recognizes the **interactions between system levels, the students and their environments, and how these affect student learning**. At the broadest macro-level, cultural and societal beliefs about the purpose of education are overarching influences that have an impact on curriculum design, implementation and student learning.

Learning Ecosystem

What Is a Learning Ecosystem?

December 11, 2019 **21 CLEO**

An ecosystem for understanding learning. The idea of the ecosystem has been taken up within the social sciences and learning as a way to understand how the many pieces of the human experience fit together.

More recently, the term learning ecosystem has been used as a way to describe how different components interact within a learning environment.

EdTech Center, World Education

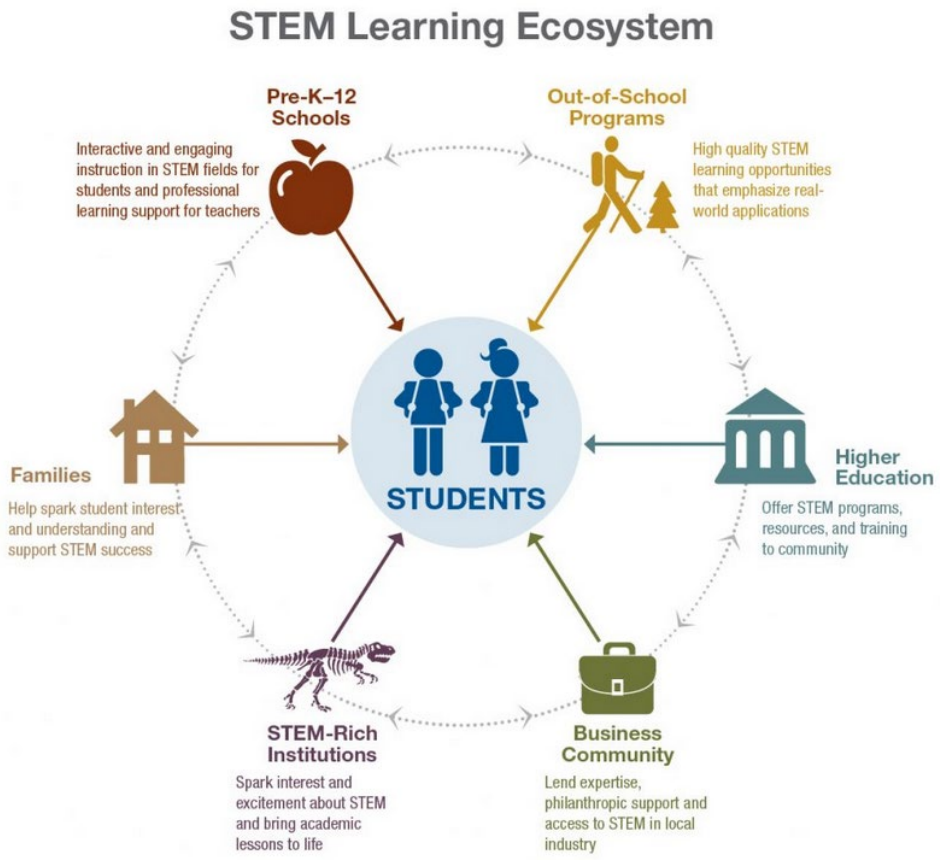
Examples of Living Components in a Learning Ecosystem

- Teachers
- Learners
- Employers and supervisors
- Human resource specialists
- Workforce professionals
- Co-workers
- Friends and family

Examples of Non-Living Components in a Learning Ecosystem

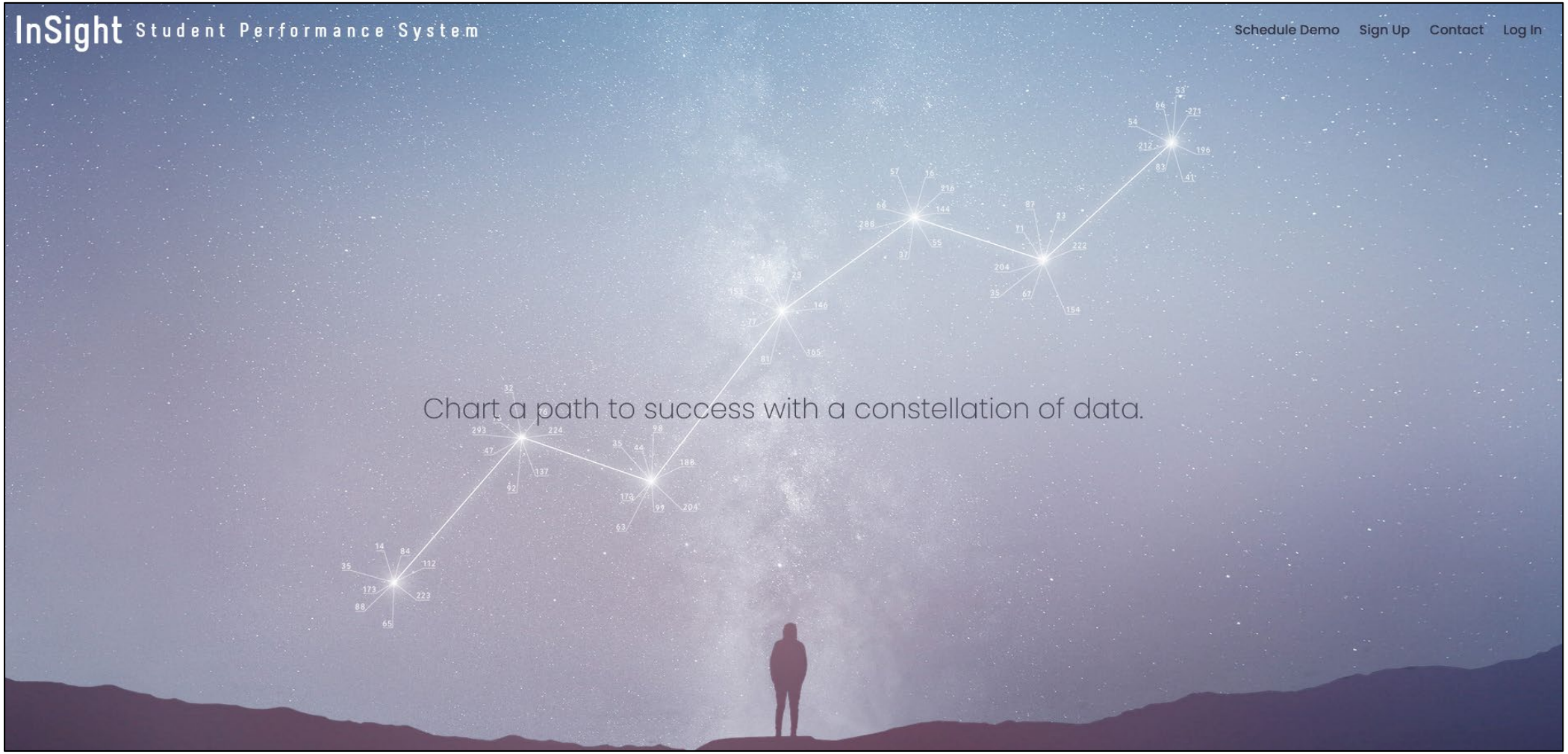
- Curriculum or content
- Learning resources
- Digital learning tools
- The internet
- Access to the internet
- Policy
- Devices such as computer, tablet, or smartphone
- Accessible space

STEM Learning Ecosystem



[Office of Elementary and Secondary Education]

Finding Ways to Connect and Make Meaning



Embedding Data in Practice

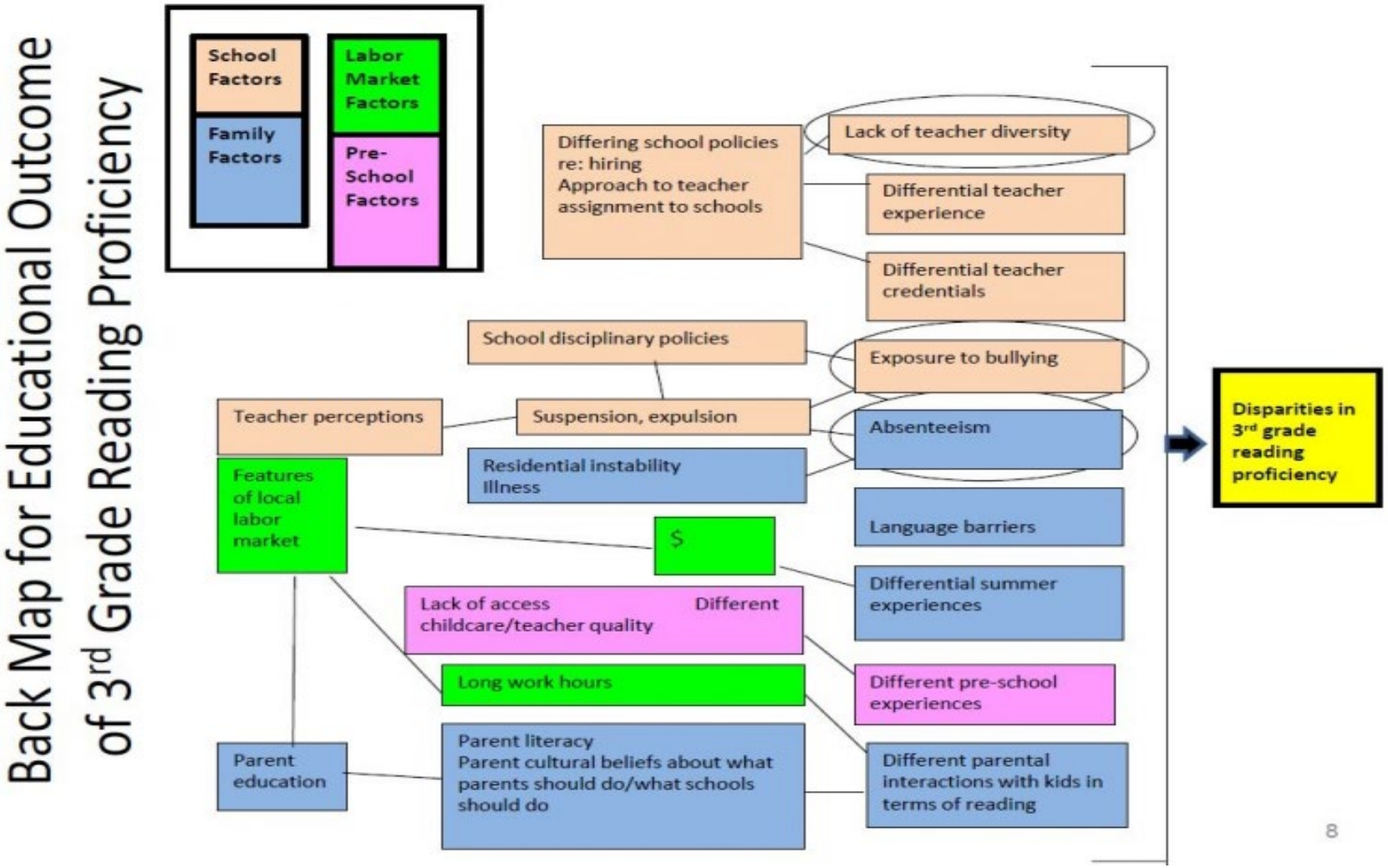
1. Use the ecosystem to help organize our data explorations.
2. Mapping and back-mapping as a foundational tool.
   - Enhancing your understanding of data systems.
3. Research to Practice: Ecosystem as a framework.

Mapping and backmapping as a tool

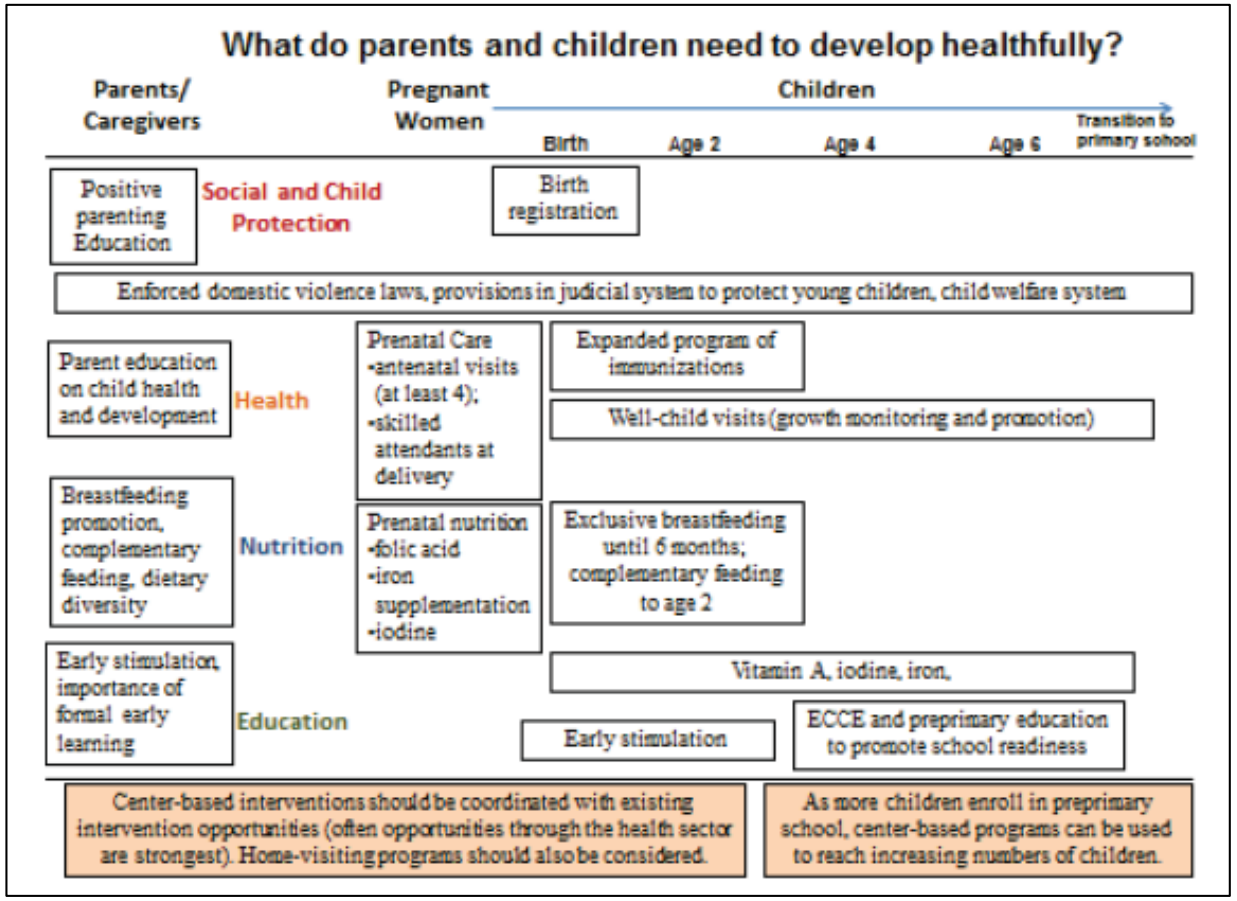
- Backmapping, Backward Design, and Understanding by Design are similar.
- Traditionally, we use forward design:
  - How to teach the content (consider learning activities) → assessments developed around learning activity → draw connections to the learning goals of course.
  - Start with learning goals
- Root Cause Analysis: Root cause analysis (RCA) is the process of discovering the root causes of problems in order to identify appropriate solutions. RCA assumes that it is much more effective to systematically prevent and solve for underlying issues rather than just treating ad hoc symptoms and putting out fires.

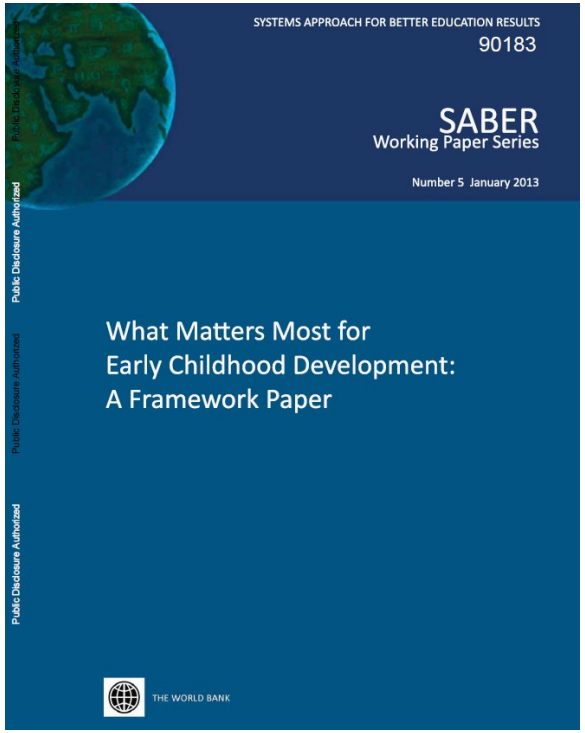
  - from Tableau

Prioritizing – Backmapping using District Goal



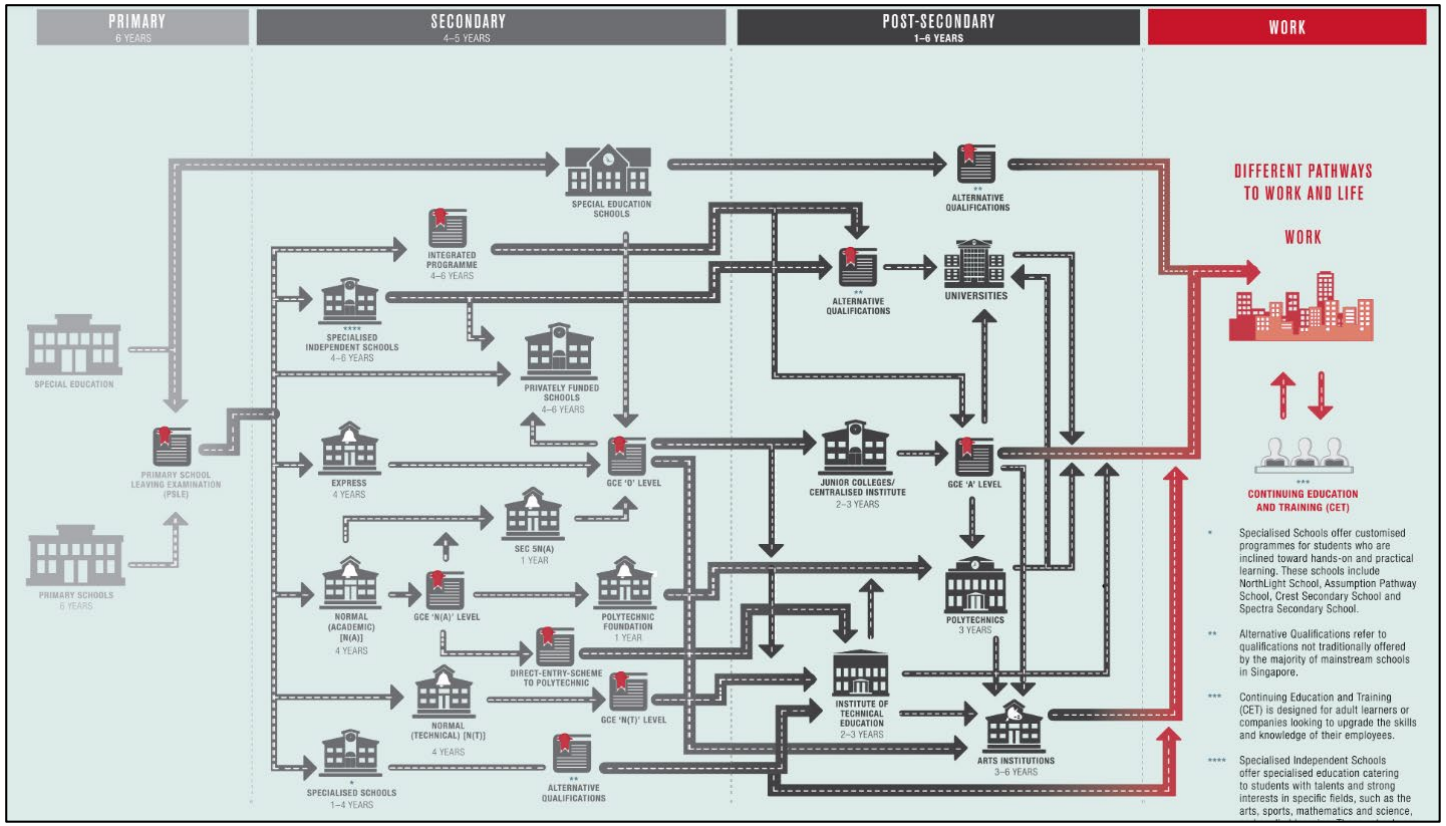
Systems Approach for Better Education Results (SABER)



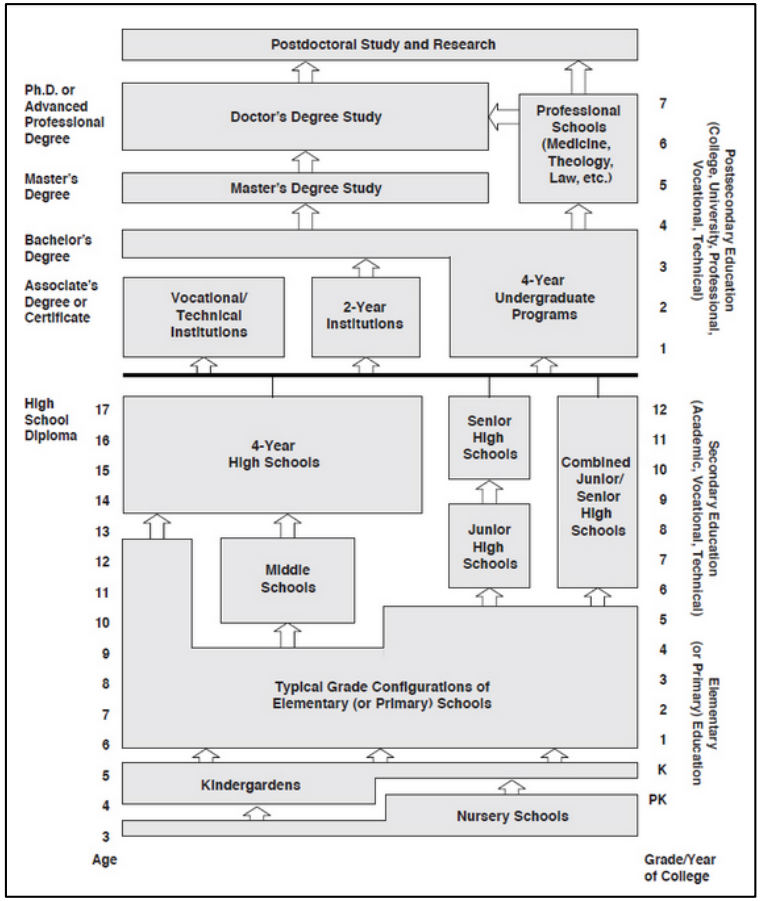


What Matters Most for Early Childhood Development: A Framework Paper, The World Bank, Systems Approach for Better Education Results (SABER)

Mapping Examples – *"A picture is worth…"*

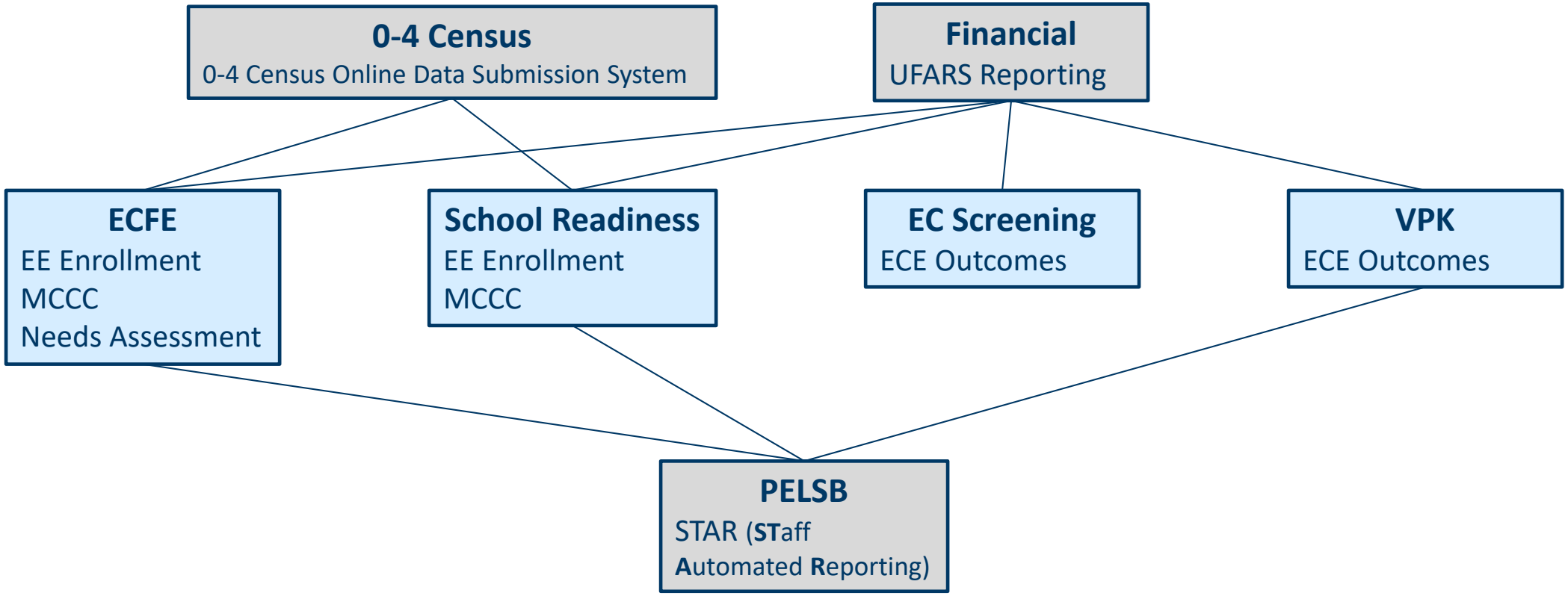


Investing in Our People - Singapore

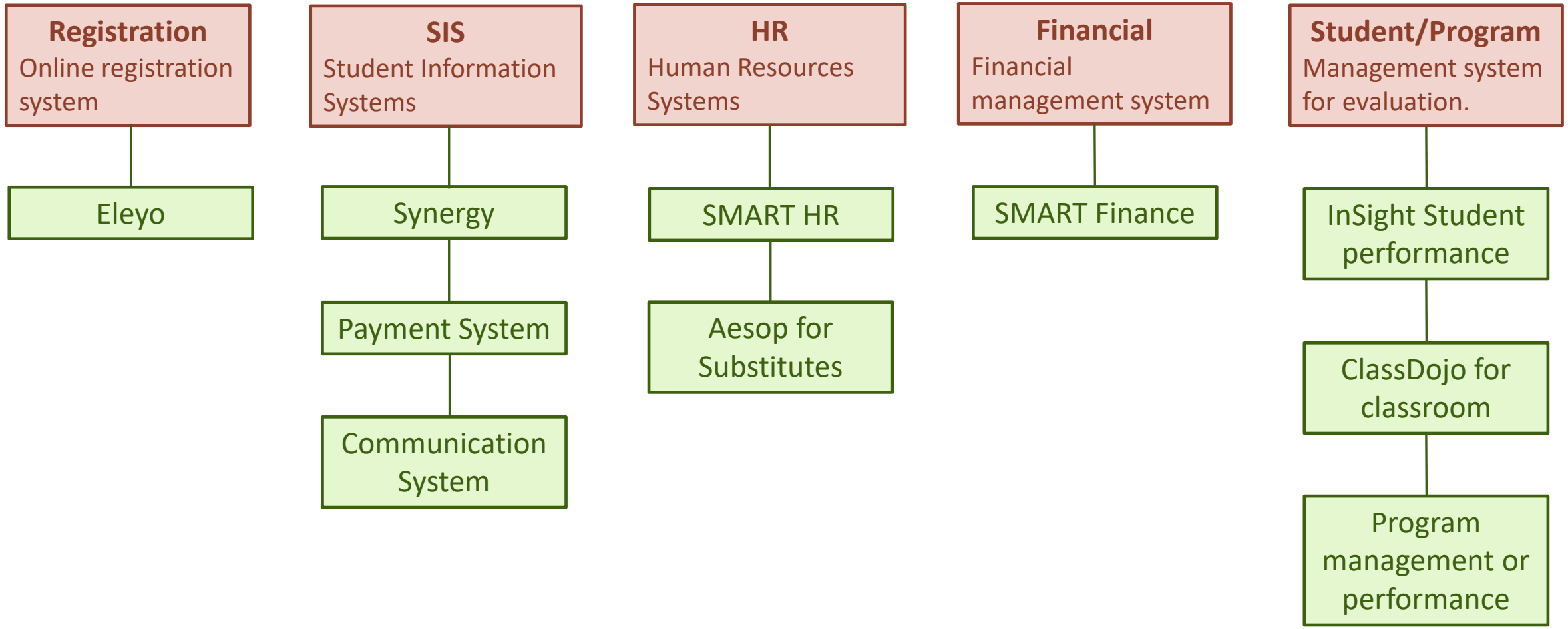


U.S. Education System – Basic Structure

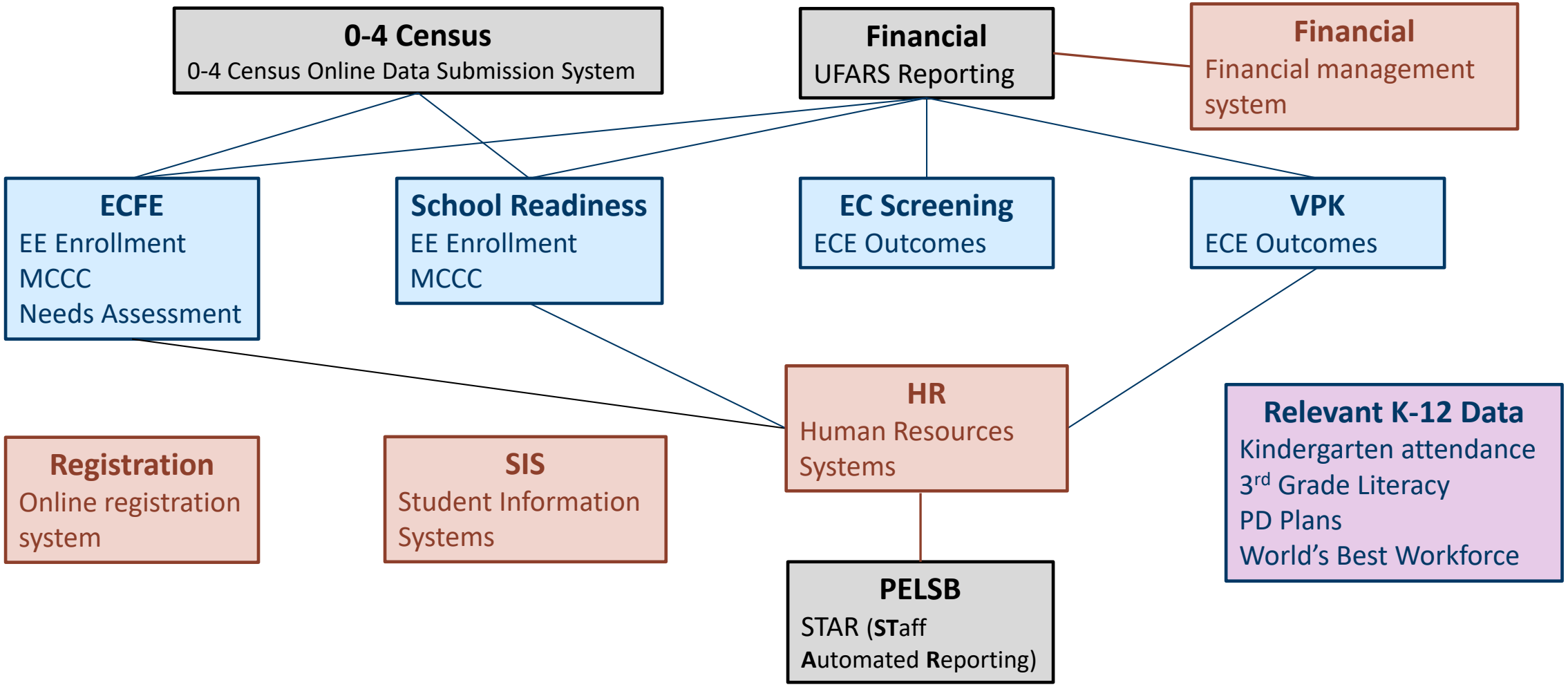
Mapping State Reporting (*examples*)

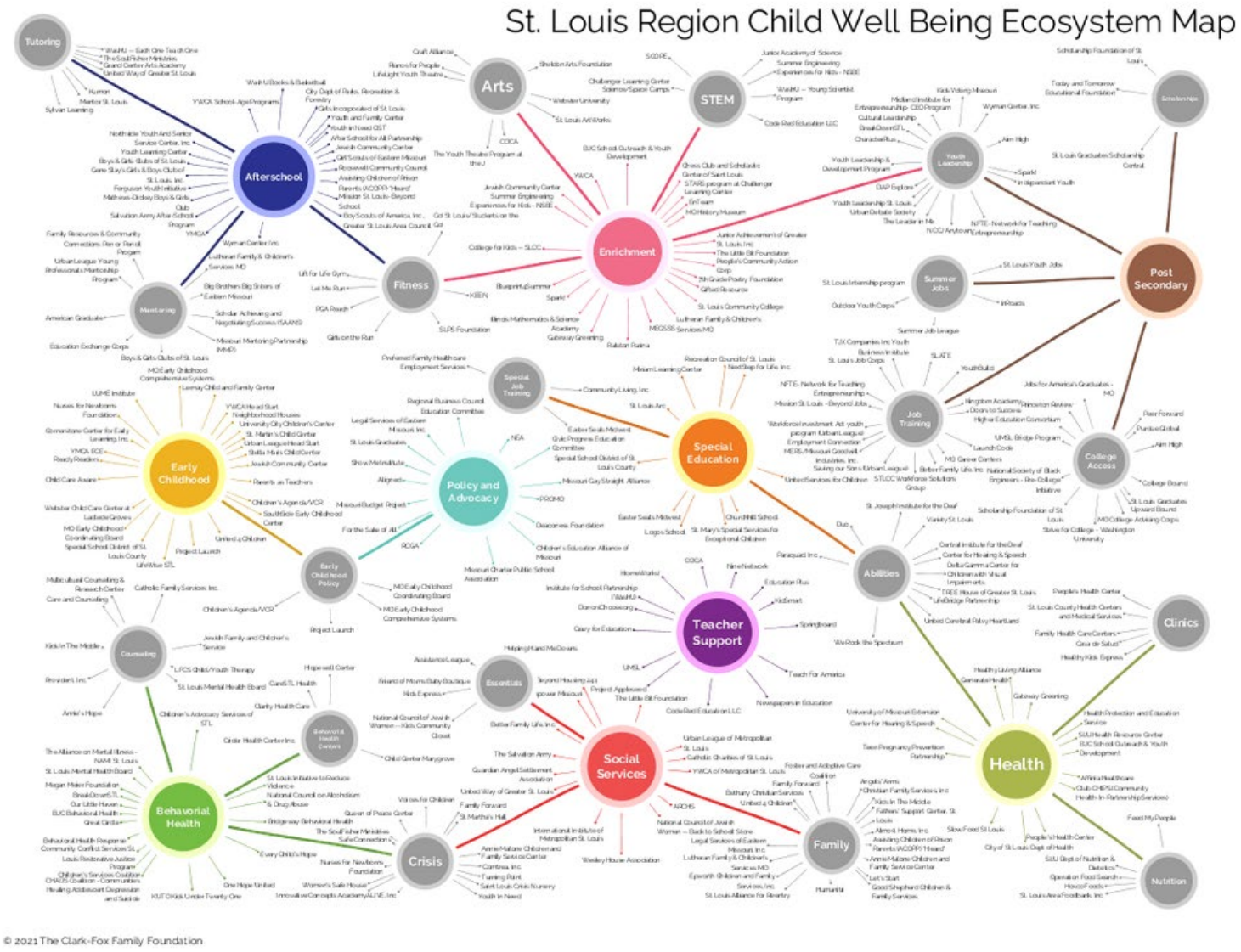


How is Data Managed in My Organization? *Example*



Managing Data – State Reporting (*example continued*)





Clark-Fox Family Foundation

St. Louis Ecosystem Map

Embedding Data in Practice

1. Use the ecosystem to help organize our data explorations.
2. Mapping and back-mapping as a foundational tool.
   - Enhancing your understanding of data systems.
3. Research to Practice: Ecosystem as a framework.

Chronic Absenteeism and Ecosystem

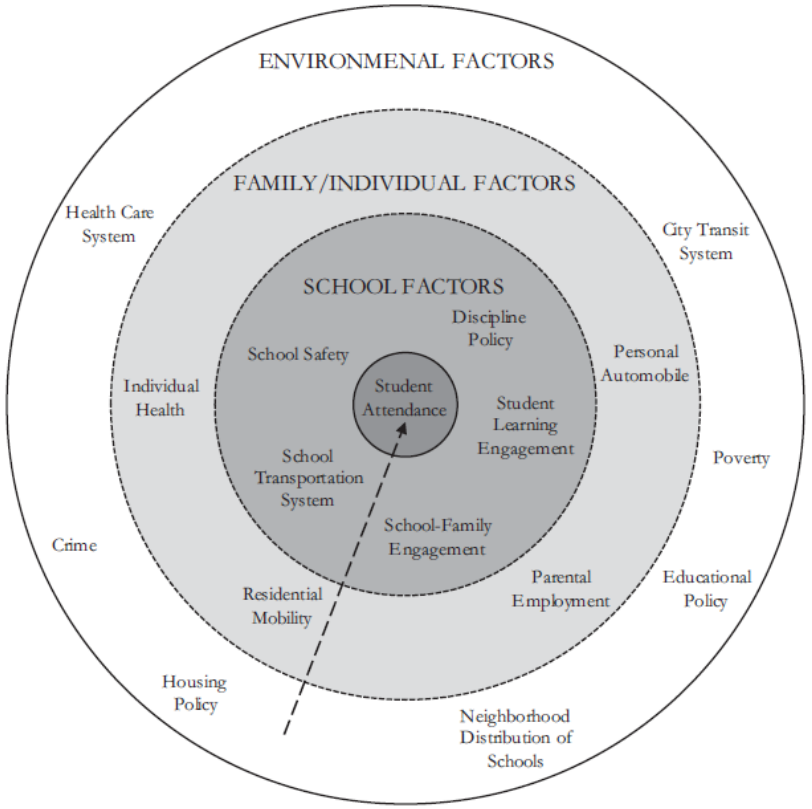


Figure 1. Conceptual Framework of Factors Influencing Chronic Absenteeism. This Figure Depicts The Direct and Indirect Relationships Between Examples of Environmental, Family/Individual, And School Factors That May Affect The Likelihood of a Student Attending School on a Regular Basis.

JOURNAL OF EDUCATION FOR STUDENTS PLACED AT RISK (JESPAR)
2018, VOL. 23, NOS. 1–2, 153–169
https://doi.org/10.1080/10824669.2018.1434656

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School Organizational Effectiveness and Chronic Absenteeism: Implications for Accountability

Sarah Winchell Lenhoff and Ben Pogodzinski

Wayne State University, College of Education

ABSTRACT
Chronic absenteeism in K-12 schools is strongly associated with critical educational outcomes such as student achievement and graduation. Yet, the causes of chronic absenteeism are complex, with environmental, family/individual, and school factors all affecting the likelihood of a student attending school regularly. This exploratory study examines whether school organizational effectiveness has the potential to moderate external influences on chronic absenteeism. Using school-level scores from the 5Essentials surveys, we find that, in traditional public schools, schools that are organized for effectiveness have lower rates of chronic absenteeism, while controlling for student demographics and grade level. In particular, schools with higher scores for "involved families" have lower chronic absenteeism. While charter schools in Detroit have significantly lower rates of chronic absenteeism than traditional public schools, we did not find an association between organizational effectiveness and chronic absenteeism in charter schools. This suggests that student sorting by school type may produce variation in chronic absenteeism rates that is not moderated by school actions. These findings have important implications for practice and policy, as educators seek to reduce chronic absenteeism in response to pressures from high-stakes accountability systems.

A growing national interest in chronic absenteeism was solidified in federal law with the 2015 Every Student Succeeds Act (ESSA), which required that states report on chronic absenteeism and allowed states to use it as a non-academic indicator of school quality in their school accountability systems. Nearly all U.S. states have proposed using chronic absenteeism as a supplementary measure of school success in their new accountability plans (Jordan & Miller, 2017). Chronic absenteeism, defined by Attendance Works as missing 10% or more days of school for any reason ("Chronic absence," 2017), is a potentially useful measure of school performance, as it has a documented relationship with student achievement and can be improved with school-based decisions. However, to the extent that chronic absenteeism is related to factors outside of schools' control, accountability systems may inappropriately assign schools scores, sanctions, and resources that do not improve student outcomes. In addition, if certain types of schools have significantly different chronic absenteeism rates, despite similar student populations and school-based characteristics, accountability systems based on that measure may become delegitimized, as has occurred to test-based accountability systems under No Child Left

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The research presented here uses data supplied by Excellent Schools Detroit. We gratefully acknowledge the receipt of these data, and we wish to thank Walter Cook for his assistance. We also wish to thank Stacy Ehrlich and an anonymous reviewer for their helpful comments. Finally, we wish to thank the leadership of Detroit Public Schools Community District for their support of our research-practice partnership and encouragement of this study. Responsibility for any and all errors rests solely with the authors.

[Organizational Effectiveness and Chronic Absenteeism]

Bullying Prevention as an Example

Dorothy L. Espelage

Ecological Theory: Preventing Youth Bullying, Aggression, and Victimization

Bronfenbrenner's (1977) classic ecological theory is used as a framework to review the documented risk and protective factors associated with involvement in school-related bullying during childhood and adolescence. Microsystems such as peers (socialization during adolescence), family (violence, lack of parental monitoring), community (exposure to violence), and schools (teacher attitudes, climate) contribute to the rates of bullying perpetrated or experienced by youth. The interaction between components of the microsystem is referred to as the mesosystem, and offers insight into how contexts can exacerbate or buffer experiences for youth who are involved in bullying (e.g., family support can buffer impact of peer victimization). Recommendations are provided for teachers and other adults who work with youth.

In his classic 1977 *American Psychologist* essay, Bronfenbrenner (1977) introduced the ecology of human development model in an attempt to push the field of developmental science forward. He articulated the importance of conducting experimental studies in naturally occurring environments (e.g., schools) alongside controlled laboratory experiments. Over the years, Bronfenbrenner and colleagues offered several reformulations of the ecology model, including the bioecological model (Bronfenbrenner & Morris, 1998) and the introduction of chaos theory into this model (Bronfenbrenner & Evans, 2000). Numerous aggression scholars resonated with this model, recognizing that youth are situated in systems that have direct, indirect, and dynamic influences on development and behavior.

In the area of school bullying and peer victimization, this model has often been called a social-ecological model and focuses on understanding how individual characteristics of children interact with environmental contexts or systems to

Dorothy L. Espelage is the Edward William Gutgsell and Jane Marr Gutgsell Endowed Professor of Education at the University of Illinois, Urbana-Champaign.

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Ecological Theory: Preventing Bullying

Child Adolesc Soc Work J
DOI 10.1007/s10560-015-0432-2

CrossMark

Theoretical Explanations for Bullying in School: How Ecological Processes Propagate Perpetration and Victimization

Caroline B. R. Evans[1] · Paul R. Smokowski[2]

Abstract Bullying is a complex social dynamic that can best be understood by using various theoretical frameworks. The current article uses social capital theory, dominance theory, the theory of humiliation, and organizational culture theory to better understand the motivations behind bullying behavior, bullying's negative effects on victims, and how school culture and climate play a role in the prevalence of bullying. Specifically, the acquisition and maintenance of social capital and the desire for dominance are prime motivating factors for the initiation and continuation of bullying perpetration. The lack of social capital experienced by victims serves to maintain victims in their current role and prevents them from gaining social status. Further, the domination used by bullies to subjugate victims results in intense humiliation that has lasting negative effects on victims, such as anger and depression. The overall culture and climate of the school setting impacts the prevalence and severity of bullying behavior, highlighting the need for whole school bullying interventions. Implications for social work practice are discussed.

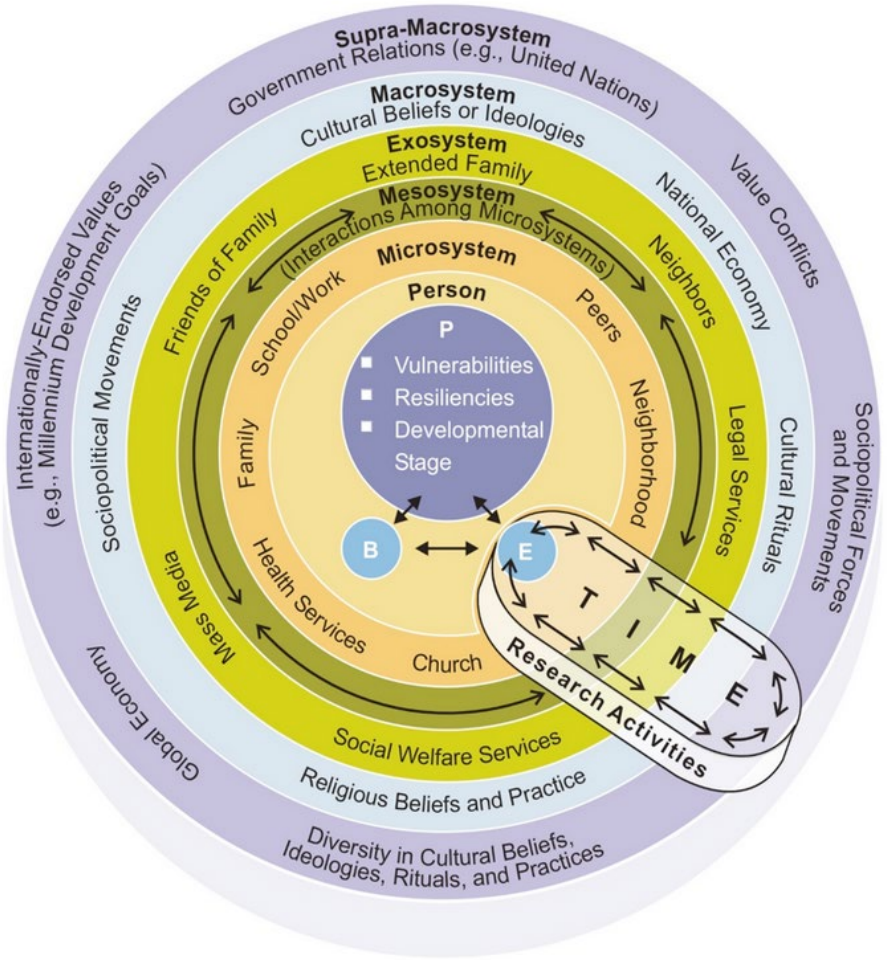
Bullying is one of the most pervasive issues affecting American youth and schools. According to the 2005–2006 national Health Behavior in School-Aged Children (HBSC) Survey, 34.4 % of U.S. students in Grades 6 through 10 reported bullying others in the past 30 days (Ha, 2015). However, rates of verbal bullying perpetration were higher (i.e., 37.4 %), while rates of relational bullying were slightly lower (i.e., 27.2 %; Wang, Iannotti, & Nansel, 2009). About 27.8 % of youth reported bullying victimization (School Crime Supplement; Robers, Kemp, & Truman, 2013), however rates of specific forms of victimization are higher (e.g., 41.0 % reported relational bullying victimization and 36.5 % reported verbal bullying victimization; Wang et al. 2009). Further, bullying is an international problem and in a sample of 202,056 youth from 40 countries, 26.9 % reported involvement in the bullying dynamic (Craig et al., 2009).

Involvement in the bullying dynamic puts youth at risk for a host of negative emotional, behavioral, social, and educational outcomes. As compared with bullies, victims,

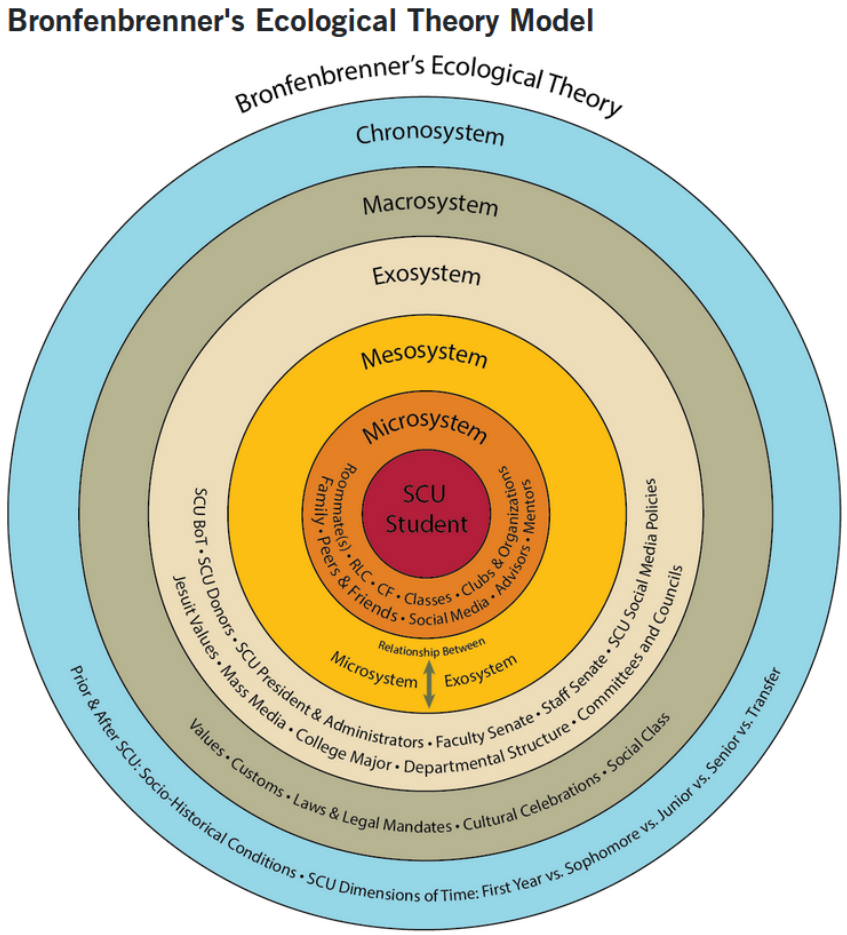
Theoretical Explanation for Bullying

To impact bullying behavior, the entire school organization—students, teachers, staff, administrators, parents, and the community—must be committed to the anti-bullying mission. Further, the school organization must be committed to changing the existing organizational culture of a school in order to achieve the anti-bullying mission.

P3 is Systems Work – We Must Change Our Approach



Ecological Systems Model



Santa Clara University's Application of Ecological Model

Key Points from Part II

Embedding Data in Practice

- Use the ecosystem to help organize our data explorations.
- Rely on mapping and other strategies to continually increase your understanding of data systems.
  - This helps you be more intentional about data (efficiency, enhancements, utility, etc.).
- Use these strategies not only for organizing and managing your data, but also for data use.

Embedding Data in Practice

1. Making your data speak, conveying information.
   - Achieving clarity throughout (goals, approach, strategies, tools, reporting, etc.)
2. Ethical responsibilities and preserving data.
3. Equity

Be Clear about Your Approach – Communicate to Audience

The Six Core Principles of Improvement

1. Make the work problem-specific and user-centered.

It starts with a single question: "What specifically is the problem we are trying to solve?" It enlivens a co-development orientation: engage key participants early and often.

2. Variation in performance is the core problem to address.

The critical issue is not what works, but rather what works, for whom and under what set of conditions. Aim to advance efficacy reliably at scale.

3. See the system that produces the current outcomes.

It is hard to improve what you do not fully understand. Go and see how local conditions shape work processes. Make your hypotheses for change public and clear.

4. We cannot improve at scale what we cannot measure.

Embed measures of key outcomes and processes to track if change is an improvement. We intervene in complex organizations. Anticipate unintended consequences and measure these too.

5. Anchor practice improvement in disciplined inquiry.

Engage rapid cycles of Plan, Do, Study, Act (PDSA) to learn fast, fail fast, and improve quickly. That failures may occur is not the problem; that we fail to learn from them is.

6. Accelerate improvements through networked communities.

Embrace the wisdom of crowds. We can accomplish more together than even the best of us can accomplish alone.

Carnegie Foundation
for the Advancement of Teaching

Six Core Principles

Building a Library of Tools, Strategies, and Resources

DEPARTMENT OF EDUCATION

QUICK GUIDE: ECFE PROGRAM REQUIREMENTS

Assessing Your Early Childhood Family Education (ECFE) Program

The purpose of Early Childhood Family Education is to provide parenting education to support children's learning and development. The goal of this quick guide is to provide a brief overview of ECFE program requirements to help ECFE administrators ensure their program is in alignment with Minnesota statutes.

ECFE Program Requirements
ECFE programs are for children in the period of life from birth to kindergarten, for the parents and other relatives of these children, and for expectant parents. If funds are insufficient to provide programs for all children, ECFE should emphasize programming for children from birth to age three and encourage families to involve four- and five-year-old children in School Readiness programs, and other public and nonpublic early learning programs.

The table below contains program requirements listed in Minnesota Statutes, section 124D.13, subdivision 2. Administrators who supervise ECFE programs should be knowledgeable about all ECFE requirements contained in Minnesota law. It is important to note that the program requirements apply to your program as a whole, rather than to each class or service your program provides. For example, many programs provide parenting education classes just for adults (with this type of programming, they are not required to provide structured learning activities requiring interaction between children and their parents/relatives).

ECFE Program Requirements in Minnesota Statutes, section 124D.13, subdivision 2		
Does your ECFE program provide:		
1. Programming/services to educate parents and other relatives about the physical, cognitive, social, and emotional development of children and to enhance the skills of parents and other relatives in providing for their children's learning and development?	Y	N
2. Structured learning activities requiring interaction between children and their parents or relatives?	Y	N
3. Structured learning activities for children that promote children's development and positive interaction with peers, which are held while parents or relatives attend parent education classes?	Y	N
4. Information on related community resources?	Y	N
5. Information, materials, and activities that support the safety of children, including prevention of child abuse and neglect?	Y	N
6. A community needs assessment that identifies new and underserved populations, identifies child and family risk factors, particularly those that impact children's learning and development, and assesses family and parenting education needs in the community?	Y	N
7. Programming and services that are tailored to the needs of families and parents prioritized in the community needs assessment?	Y	N
8. Information about and, if needed, assist in making arrangements for an early childhood health and developmental screening when the child nears the third birthday?	Y	N
9. Learning experiences for children, parents, and other relatives that promote children's early literacy and, where practicable, their native language skills and activities for children that require substantial involvement of the children's parents or other relatives?	Y	N

November, 2019

Other ECFE Program Requirements
The table below contains additional program requirements that ECFE administrators should know. Again, administrators who supervise ECFE programs should be knowledgeable about all of the ECFE requirements contained in Minnesota law.

ECFE Program Requirements in Minnesota Statutes, section 124D.13		
Does your ECFE program provide or ensure that:		
1. Parenting/family education is an integral part of every early childhood family education program (e.g., classes, services, home visiting, etc.)?	Y	N
2. It encourages parents to be aware of practices that may affect equitable development of children? (Note: the Early Childhood Indicators of Progress are an essential resource)	Y	N
3. Home visiting revenue (as part of the ECFE program) is used to provide a parenting education component that is designed to reach isolated or at-risk families?	Y	N
4. It meets the Home Visiting program requirements listed in ECFE statutes (subdivision 4)? Among others, this includes encouraging families to make a transition from home visits to site-based parenting programs.	Y	N
5. It has a reasonable sliding fee scale and waives the fees for participants unable to pay?	Y	N
6. It describes strategies to coordinate and maximize public and private community resources and reduce duplication of services?	Y	N
7. It has an advisory council comprised of parents participating in the program, who represent the demographics of the community? (Note: The district must ensure, to the extent possible, that the council includes representation of families who are racially, culturally, linguistically, and economically diverse.)	Y	N
8. The advisory council reports to the school board and the community education advisory council? (Note: for some districts, an alternative council may be the best option – see subdivision 10).	Y	N
9. It employs appropriately licensed teachers?	Y	N
10. It is supervised by a licensed early childhood teacher or a licensed parent educator?	Y	N

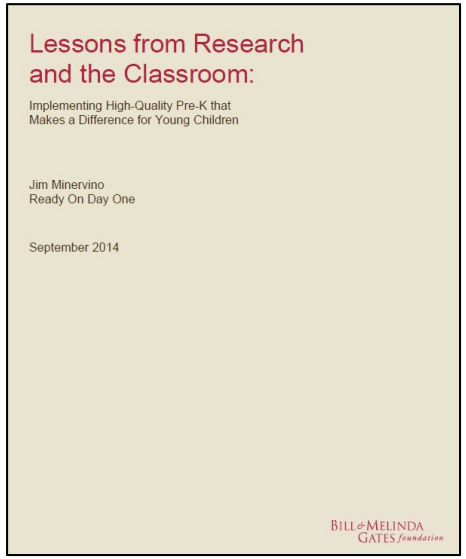
ECFE Options and Suggestions
The ECFE statutes also contain suggestions and options for programming and services. The table below lists a few for your review. Consult the statutes for further information.

ECFE Program in Minnesota Statutes, section 124D.13		
Does your ECFE program provide:		
1. Parents of English learners with translated oral and written information to monitor the program's impact on their children's English language development, to know whether their children are progressing in their English and native language proficiency, and to actively engage with and support their children in developing their English and native language proficiency?	Y	N
2. Coordinated Adult Basic Education (ABE) and ECFE programming (e.g., family literacy)?	Y	N
3. A parenting education transition program? (Note: this is a key component of a PreK-3rd Grade system.) See subdivision 15 for more information on how ECFE funds can be used to provide parenting education up to third grade.	Y	N

November, 2019

How would you approach ECFE program evaluation?

Communicate Goals and Processes


Lessons from Research and the Classroom:

Implementing High-Quality Pre-K that Makes a Difference for Young Children

Jim Minervino
Ready On Day One

September 2014

BILL & MELINDA GATES foundation

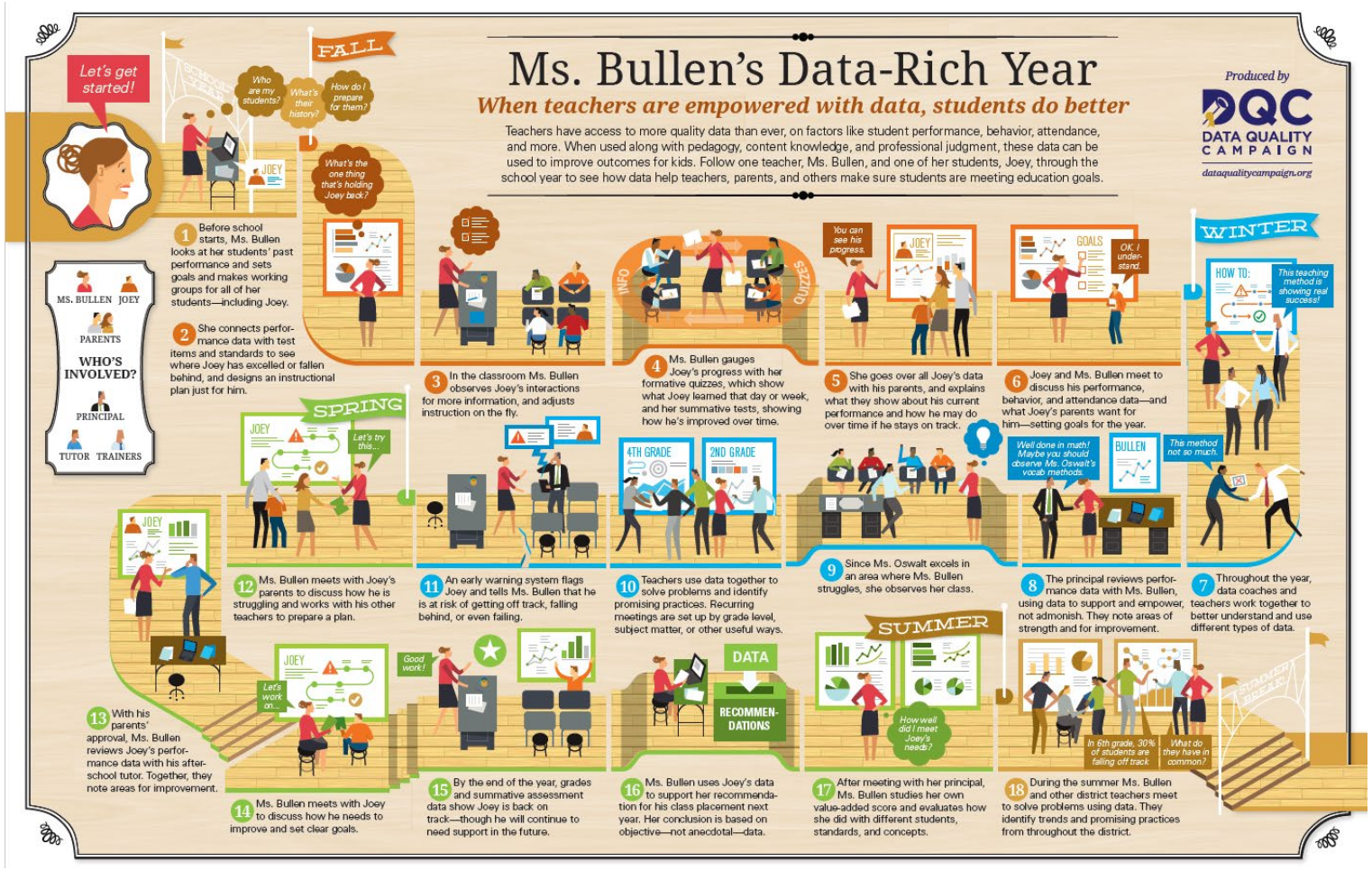
[Implementing High-Quality Pre-K]

15 Essential Elements For High Quality PreK Systems

Enabling Environment		Rigorous, Articulated Early Learning Policies								Strong Program Practices				
Political Will	Strong Leaders	BA + comp	Class size	Two Adults	Hours/ Dosage	EL Standards	Effective Curriculum	Special Ed	DLL support	High Quality Teaching	Professional Development	Child Assessments	Data Driven	Integrated System

"We are enhancing School Readiness program quality by using the 15 Essential Elements as a guide."

See the System - Visualizing Data in the Classroom



[Ms. Bullen's Data-Rich Year]

Reporting Your Data – Local Use

DEPARTMENT OF EDUCATION

2021-22 ECFE Community Needs Assessment

Key Findings from Early Childhood Family Education (ECFE) Programs

Fall 2022

I. Identifying New and Underserved Populations – Key Findings

This data is the first step in comparing who resides in your community with who your program serves. This data can also help you determine if there are new populations in your community. While it is up to districts to determine how to define new and underserved populations (e.g., using a local definition versus a federal definition), most programs have considered new families to be those who are new to the community or those with new children (e.g., newborn, foster child, etc.). For underserved populations, most districts have compared those who participate in ECFE, or are served by ECFE, with the demographics of the community to determine if they are serving a representative sample of the population, and to ensure they are serving families who would most benefit from ECFE. As a next step in analysis, programs should also consult federal definitions of underserved populations to help identify populations in their communities, and to evaluate how their needs are being met (or not being met).

To see the strategies/resources districts used to identify new and underserved populations, refer to the data tables in the addendum.

Results

Since the responses were received in narrative format, coding was performed. All 324 districts responded to this question and 180 responses were analyzed. For the 144 responses not coded, the most common reason was that districts described their processes for identifying new and underserved population rather than their findings. The table below shows the most common responses. Rate is the percentage of times the category element was mentioned by districts in their narrative response to this question.

Table 1: New and Underserved Populations

Category	Rate	Examples
Child Care	9.9%	Child care is a barrier to attending ECFE. Some cite the need for sibling care, including school-age.
Family Variables	23.5%	Family variables, like family structure, tied for the second most commented element. This includes things like single parent families, blended families, grandparents raising children, and foster parents. Also included are variables like health (e.g. physical, mental) and gender (e.g. fathers do not participate at the same rate as mothers). One district mentioned home-schooling families were underserved.
Financial	25.9%	The most common element. Includes income and lack of access to resources.
Geography	8.0%	Includes both isolated families and parts of the school district. Some programs identified areas of the district (e.g. certain neighborhoods, cities, or areas far from a site) that had lower participation rates.

21-22 ECFE Community Needs Assessment 3

Embedding Data in Practice

1. Making your data speak, conveying information.
   - Achieving clarity throughout (goals, approach, strategies, tools, reporting, etc.)
2. Ethical responsibilities and preserving data.
3. Equity

Storing and Preserving Data

What sensitive or private data do you possess?

- Student/participant data
- Financial data (parent)
- Family data
- Data retention policies
  - Information development reason also

Embedding Data in Practice

1. Making your data speak, conveying information.
   - Achieving clarity throughout (goals, approach, strategies, tools, reporting, etc.)
2. Ethical responsibilities and preserving data.
3. Equity

Strategies for Centering Equity

Five Strategies for Centering Equity

1. Ground the work in data and context, and target solutions.
2. Focus on systems change, in addition to programs and services.
3. Shift power within the collaborative.
4. Listen to and act with community.
5. Build equity leadership and accountability.

Centering Equity in Collective Impact

By John Kania, Junious Williams, Paul Schmitz, Sheri Brady, Mark Kramer & Jennifer Splansky Juster

Illustration by Julia Schwarz

A decade of applying the collective impact approach to address social problems has taught us that equity is central to the work.

In 2011, two of us, John Kania and Mark Kramer, published an article in *Stanford Social Innovation Review* entitled "Collective Impact." It quickly became the most downloaded article in the magazine's history. To date, it has garnered more than one million downloads and 2,400 academic citations. More important, it encouraged many thousands of people around the world to apply the collective impact approach to a broad range of social and environmental problems. Independent evaluations have confirmed that the approach can contribute to large-scale impact,[1] and a global field of collective impact practitioners has emerged. Their efforts have immeasurably deepened our understanding of the many factors that can foster or stymie collective impact's success.

In the original article, we defined collective impact as "the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem." We further identified a structured process with five essential conditions that distinguish collective impact from other types of collaboration:

1. ***A common agenda***, shaped by collectively defining the problem and creating a shared vision to solve it;
2. ***Shared measurement***, based on an agreement among all participants to track and share progress in the same way, which allows for continuous learning, improvement, and accountability;
3. ***Mutually reinforcing activities***, integrating the participants' many different activities to maximize the end result;
4. ***Continuous communication***, which helps to build trust and forge new relationships;
5. ***A "backbone" team***, dedicated to aligning and coordinating the work of the group.

We also noted that these core elements would need to be adapted to the specific circumstances of each initiative.

Over subsequent years, many practitioners and collective impact networks[2] have refined and expanded on these five original conditions in helpful ways.[3] In 2016, together with the Collective Impact Forum—an initiative of FSG and the Aspen Institute Forum for Community Solutions to support practitioners of collective impact—we published eight additional principles of practice for implementing collective impact, which, importantly, included engaging community members and placing a priority on equity.

Reflecting on the past 10 years, we have observed through our own personal and professional journeys and the experience of others that the single greatest reason why collective impact efforts fall short is a failure to center equity. Thus, we believe that we must redefine collective impact to include centering equity as a prerequisite. In this vein, we propose a revised definition of the concept: *Collective impact is a network of community members, organizations, and institutions that advance equity by learning together, aligning, and integrating their actions to achieve population and systems-level change.* To center equity, collective impact efforts must commit to a set of actions that we will explore in this article.

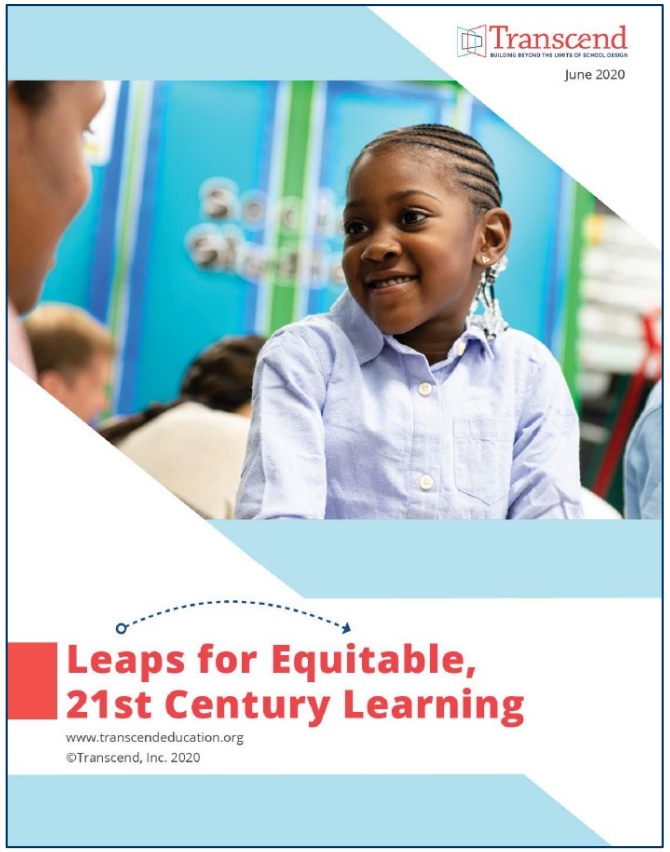
What Is Equity?

In committing to centering equity, we first confront the problem of inconsistent understandings of what equity means. Among many alternative definitions, each with its own virtues, the one we have found most helpful comes from the research and advocacy organization Urban Strategies Council: *Equity is fairness and justice achieved through systematically assessing disparities in opportuni-*

Centering Equity

Establishing an Equity Lens

Equity Systems Indicators



Leaps for Equitable Learning

Discussion Our questions for you….

- What are you looking forward to learning today?
- What questions did you bring to today's presentation?
- Do you have a project you're currently working on where you would like to brainstorm with others?
- Are you facing a challenge in the district where you think you might be able to use data to help turn the tide?
- Were you aware of the Regional Information Management Consultants before today? If so – how did you hear about them?

Thank you!

Mike Brown

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Avisia Whiteman

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