Chile: Universal Collection, Open Access, and Innovation in the use of Attendance and Absenteeism Data

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October 5th 2022 | Carolina Soto U. – Mary Catherine Arbour
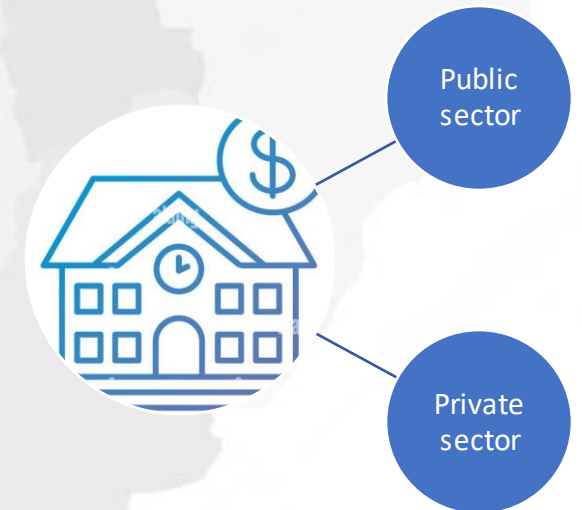
Chilean education system

- Population 17.5 million
- Language of instruction: Spanish
- Compulsory Education: 12 years

- Diagram of Chilean education system

- Mixed financing system

EARLY CHILHOOD
From birth to 6 years

→

ELEMENTARY SCHOOL
From 6 to 14 years

→

HIGH SCHOOL
From 14 to 18 years

→

TERTIARY EDUCATION

Public sector

Private sector

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Chilean education system

- Laws and legislations that consider attendance

1998 law-ranking decree N2

- *Subsidy to schools*

Norm of evaluation and promotion

- *Promotion from one grade to another*

Law on educational quality assurance

- *Assess the quality of the school*

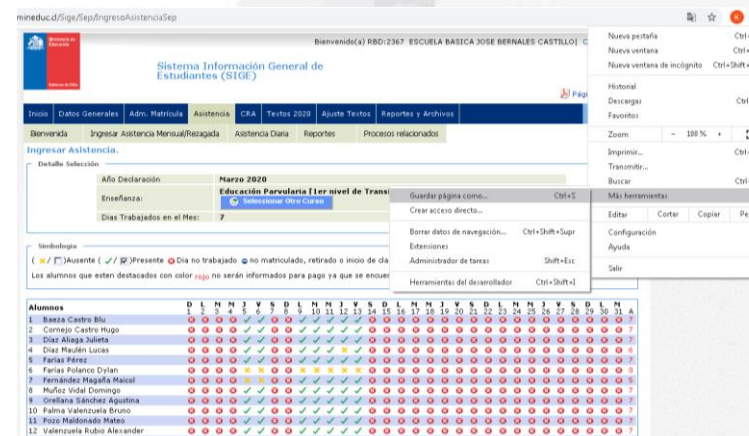# Chilean school attendance data

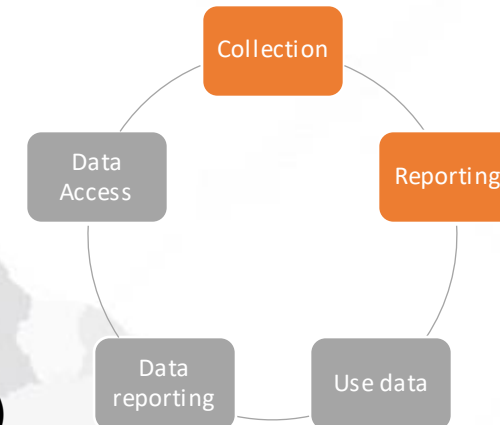- Attendance process

1.- Class roll

- *Teacher are responsible for recording attendance (present, absent, or **late**) in a class roll every day.* Circular Nº 30 of the Superintendence of school Education.

2.- General student information system (SIGE)

- *The attendance officer or the school's general inspector is responsible for reporting attendance to MINEDUC by the online digital system SIGE.*

Chilean school attendance data

- Attendance process

3.- Attendance/ absence data usage
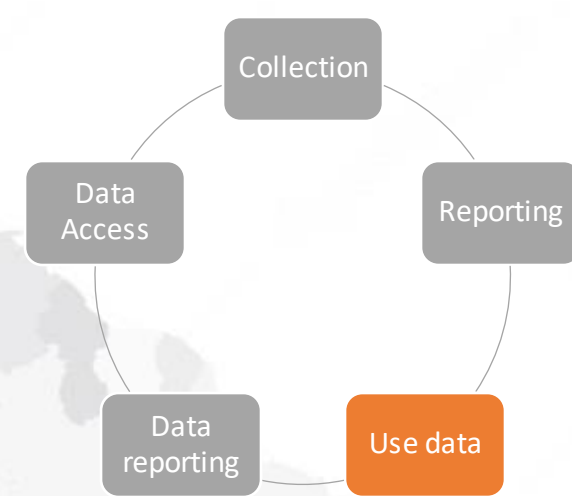
Payment of subsidies to schools

- Characteristics of the school (rural o urban)
- Characteristics of the students
- The average daily attendance (% of students enrolled and attending daily, on average in the month)

Promote students from one grade to another

- Reach the learning objectives established in the curriculum.
- Achieve attendance equal to or greater than 85% of the days in the year.

Assess the quality of the school

- Considering different indicators:
- The distribution of students in the levels of learning.
- Personal and social development (student attendance)
- The outcomes of the SIMCE test.

Collection

Reporting

Use data

Data reporting

Data Access

Chilean school attendance

- Attendance process

4.- How is attendance data reported by the government to schools?

5.- Attendance data access

- *The MINEDUC study center provides a variety of school data, including attendance.*

- *Chilean school data is available for researchers, external organizations and local authorities.*
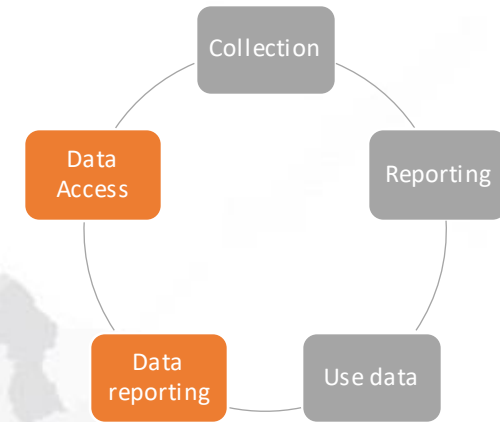
Chilean education system

The number of days a student attends classes, in relation to the total number of annual school days. MINEDUC, 2018

Attendance categories	
Outstanding attendance	≥ 97%
Normal attendance	≥ 90% - 97%
Repeated absenteeism	≥ 85% - 90%
Serious absenteeism	≤ 85%

• Average National Attendance.

Average Daily Attendance

68% 77% 72% 68% 74%

March ... July

2022

Chilean education system

FACTORS OF SCHOOL ABSENCE

Factor	Value
Facility infrastructure	~1%
Student works	~1%
Lack of teachers	~1%
Demotivation	~2%
Other	~3%
Transportation difficulty	~6%
Socioemotional problems	~9%
Fear of contagion	~11%
Family problems	~18%
Winter Weather	~34%
Health	~87%
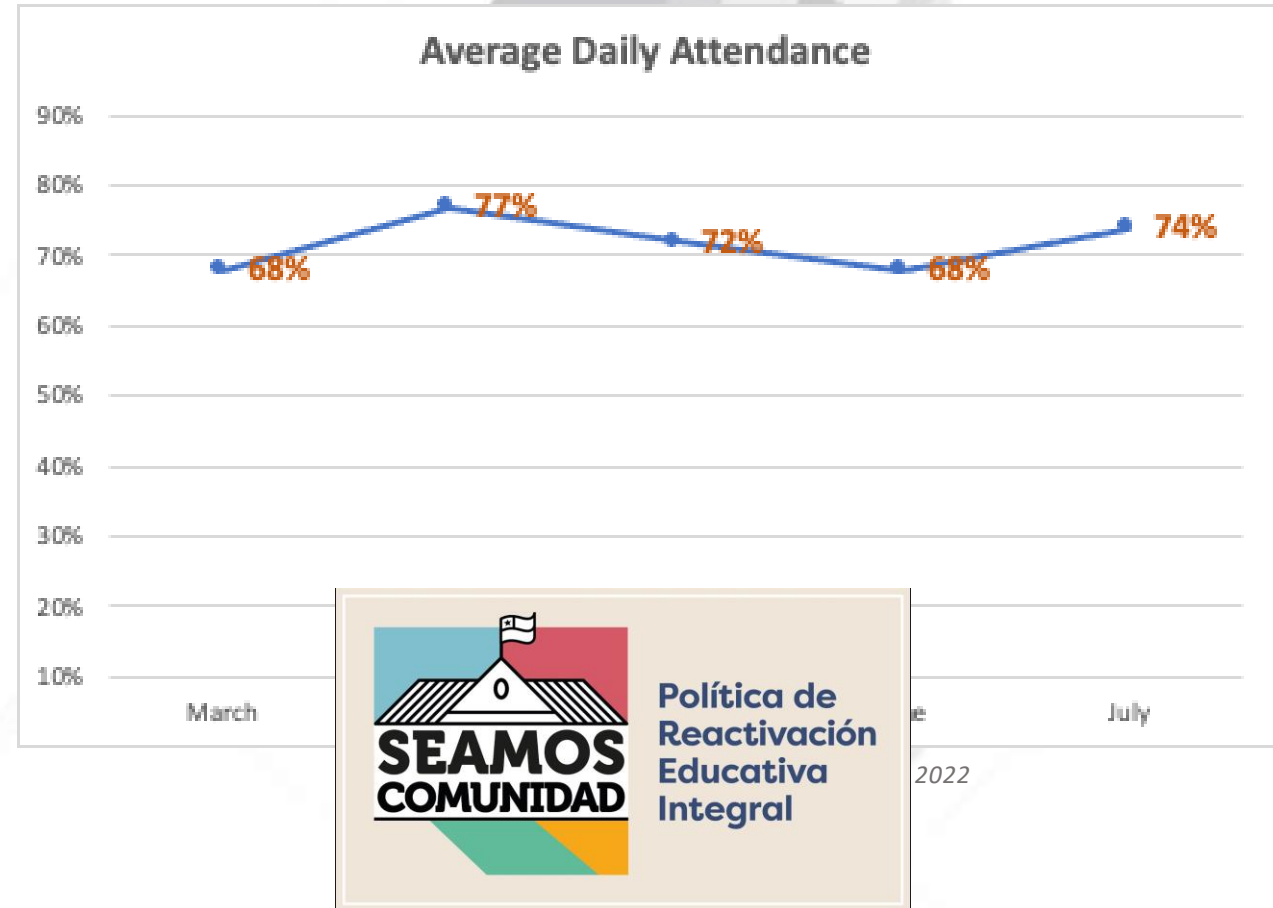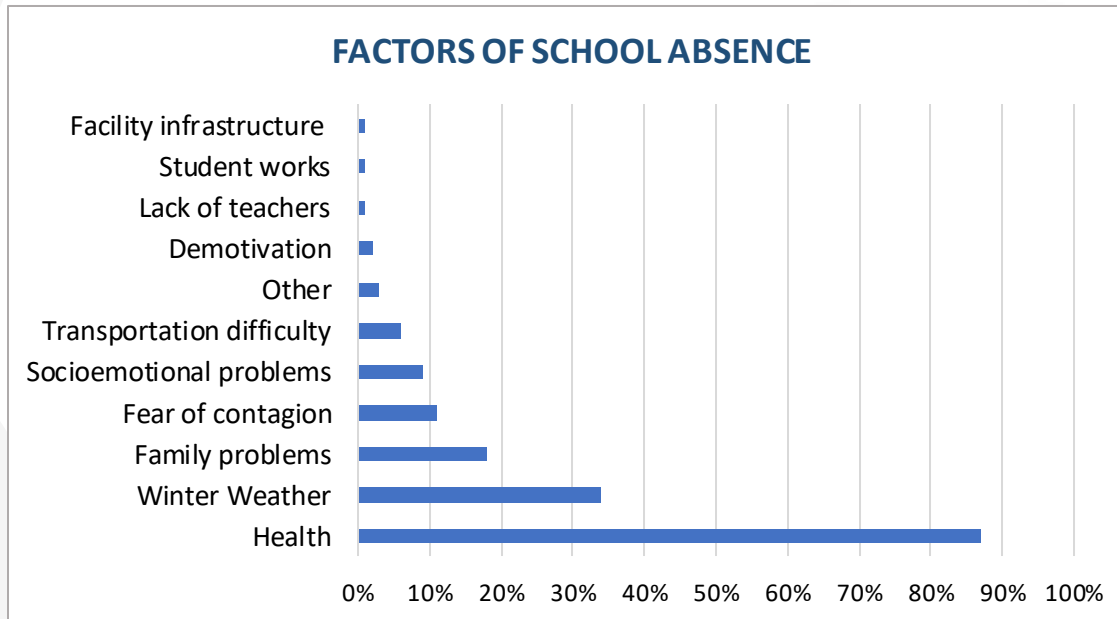
School of Government UC and CIAE university of Chile 2022

- Attendance process limitation

- SIGE platform does not allow registration of partial attendance.

- The average proportion of enrolled attended children each day.

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Oportunidad Educational Foundation

Un buen comienzo
EDUCACIÓN INICIAL DE CALIDAD

- **Improving language development of preschool children from rural communities in Chile**

Building professional capabilities to enhance the school system

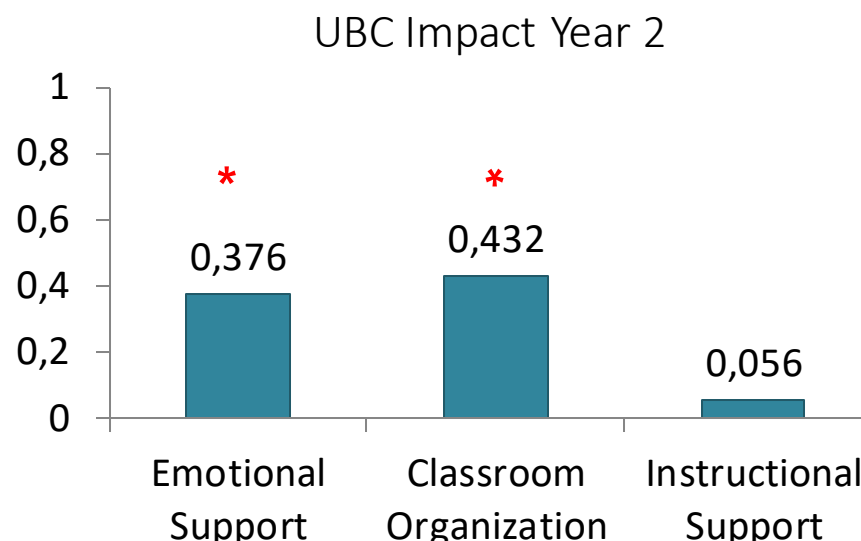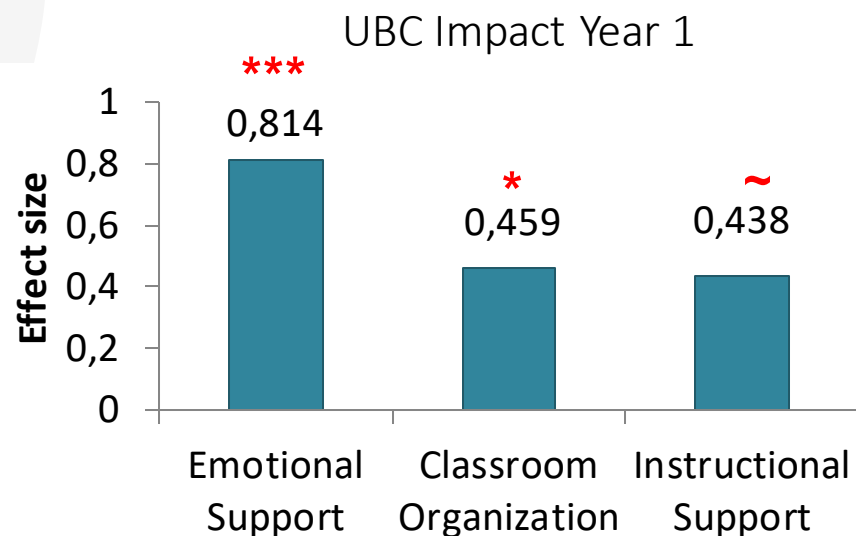# UBC: A story of perseverance

- **2006 - 2010**

  Design and experimental phase

  - Based on best evidence
  - Private public collaboration
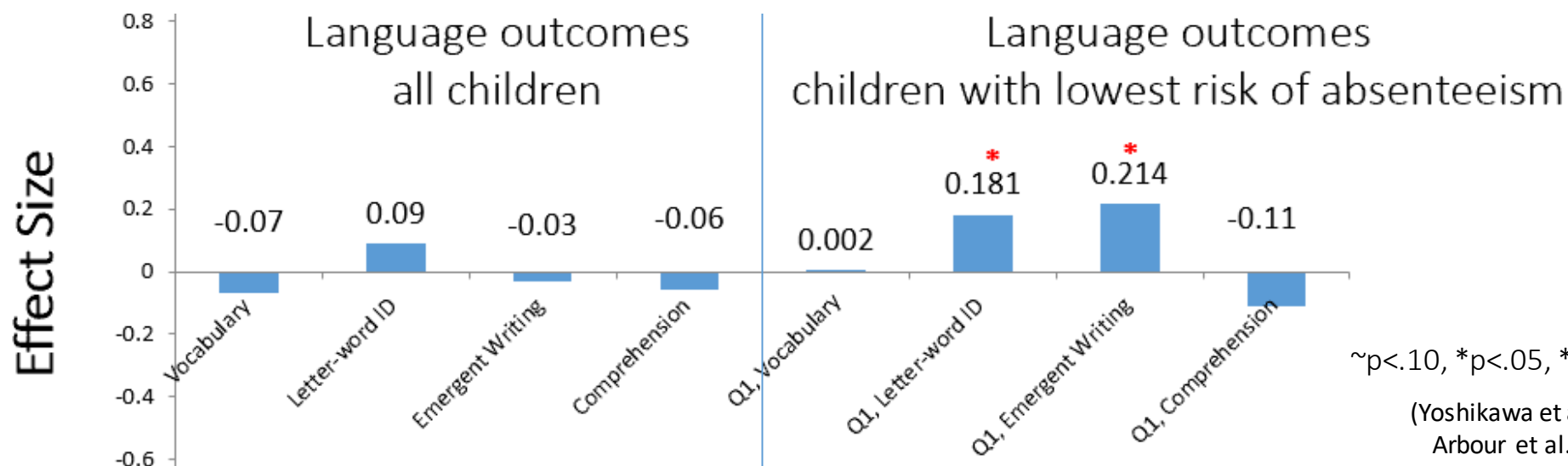 - Experimental evaluation

- 6 Municipalities in the Metropolitan Region (Santiago)
- 32 Schools
- 3.200 Children

- UBC had positive impact on classroom quality

UBC Impact Year 1

***
0,814
*
0,459
~
0,438

Effect size

| Emotional Support | Classroom Organization | Instructional Support |

UBC Impact Year 2

*
0,376
*
0,432
0,056

| Emotional Support | Classroom Organization | Instructional Support |

- Effects on child language and literacy skills moderated by absenteeism

Language outcomes all children

Effect Size

-0.07 Vocabulary
0.09 Letter-word ID
-0.03 Emergent Writing
-0.06 Comprehension

Language outcomes children with lowest risk of absenteeism

0.002 Q1, Vocabulary
* 0.181 Q1, Letter-word ID
* 0.214 Q1, Emergent Writing
-0.11 Q1, Comprehension

~p<.10, *p<.05, ***p<.001

(Yoshikawa et al., 2014;
Arbour et al., 2016)
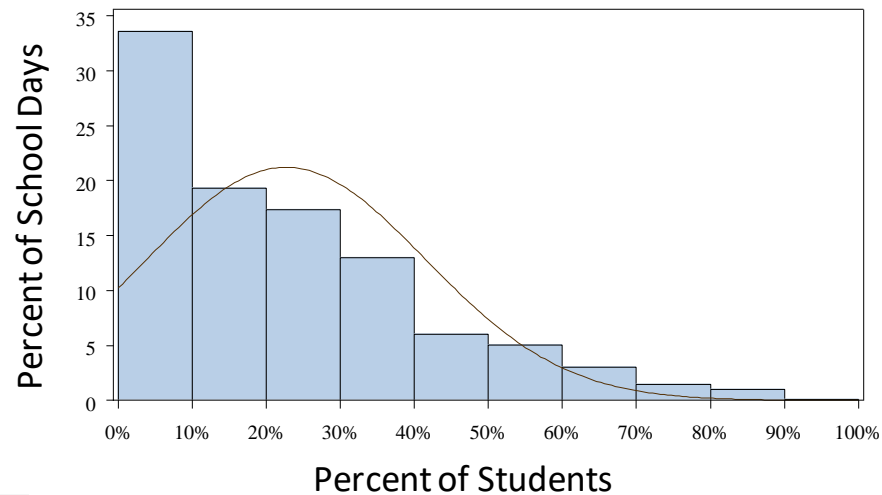
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- Absenteeism rates among 4- and 5-year-old children attending public preschool

	Average Individual-Level Absenteeism	% of students with chronic absenteeism
Prekindergarten	23.2% (19.6)	66%
Kindergarten	21.3% (17.7)	69%

- Percent of School Days Absent Among Children Attending UBC Schools
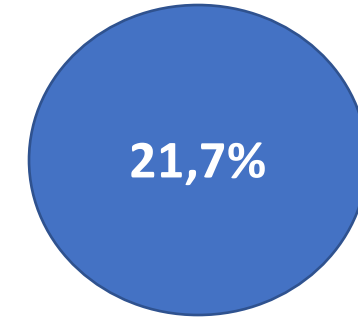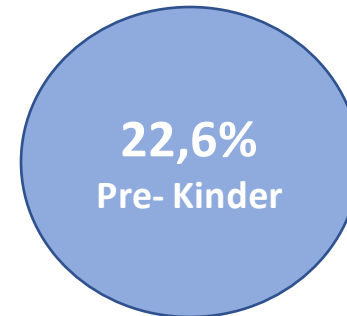
Year 1: Prekindergarten

Year 2: Kindergarten
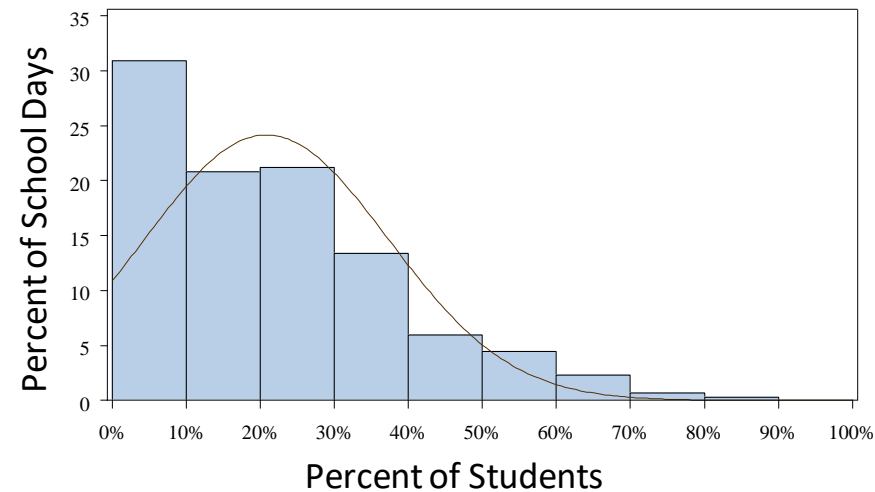
• Learning

67% of children have chronic absenteeism

21,7%

Average absenteeism

22,6%
Pre- Kinder

20,8%
Kinder

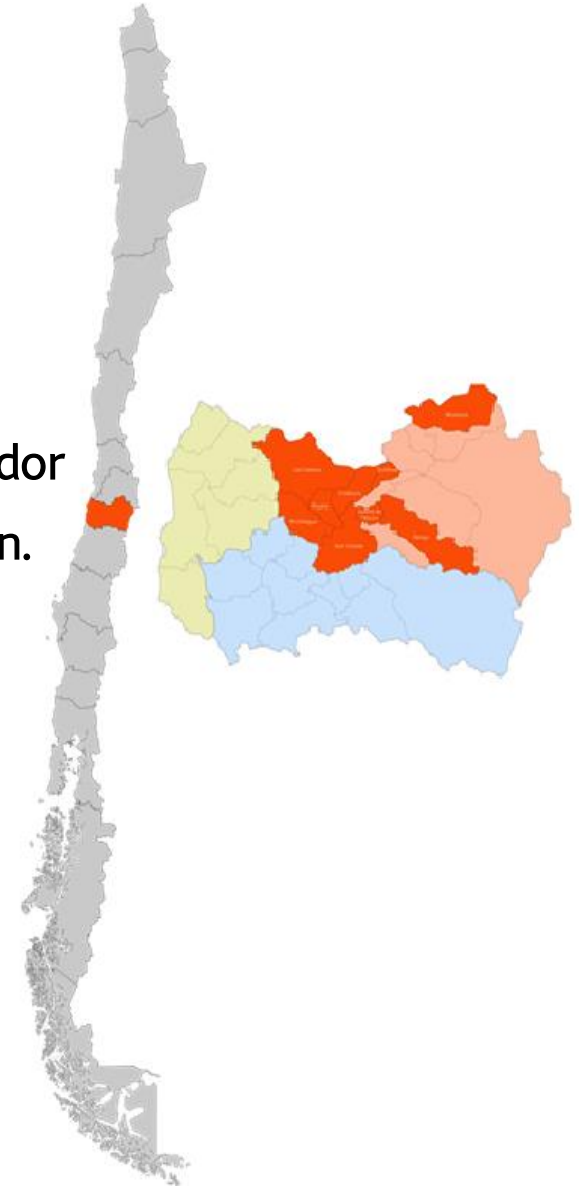(Arbour, Yosykawa, & Treviño, 2014).

UBC: A story of perseverance

2011 - 2015

Model consolidation phase

- Continuous Improvement Model (IHI)
- Voice & participation of teachers and school leaders

- 13 Municipalities in the Libertador General Bernardo O'Higgins region.
- 60 Schools
- 1.636 Children

Institutional School Attendance Board

Meeting with different educational institutions

Campaign with the educational team and parents

The campaign "Enough of I was not"

Theory of improvement: Driver Diagram

PRIMARY DRIVERS

AIM: 80% of pre-K and 90% of K children reach advanced language proficiency

Instructional time

Effective classroom interactions

Students' attendance

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Act | Plan

Study | Do

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Building capacity at 3 levels

	March	April	May	June	July	August	September	October	November	December
Classroom			*	*		*		*	*	
School			*	*		*		*	*	
Network		*			*					*

CLASSROOM level strategies

Teachers:
- Propose ideas
- Test
- Measure
- Evaluate

P D S A

Teachers and school leaders:
- **Analyze** data to **make decisions**
- **Adapt** innovations to context

SCHOOL level strategies

Teachers and school leaders:

- Conduct school-to-school visits
- Model and observe testing changes in pedagogical practices
- Analyze shared experience based on data analysis

NETWORK level strategies

Full teams and sponsors **attend learning sessions**

- Embrace a shared aim
- Analyze progress using common metrics
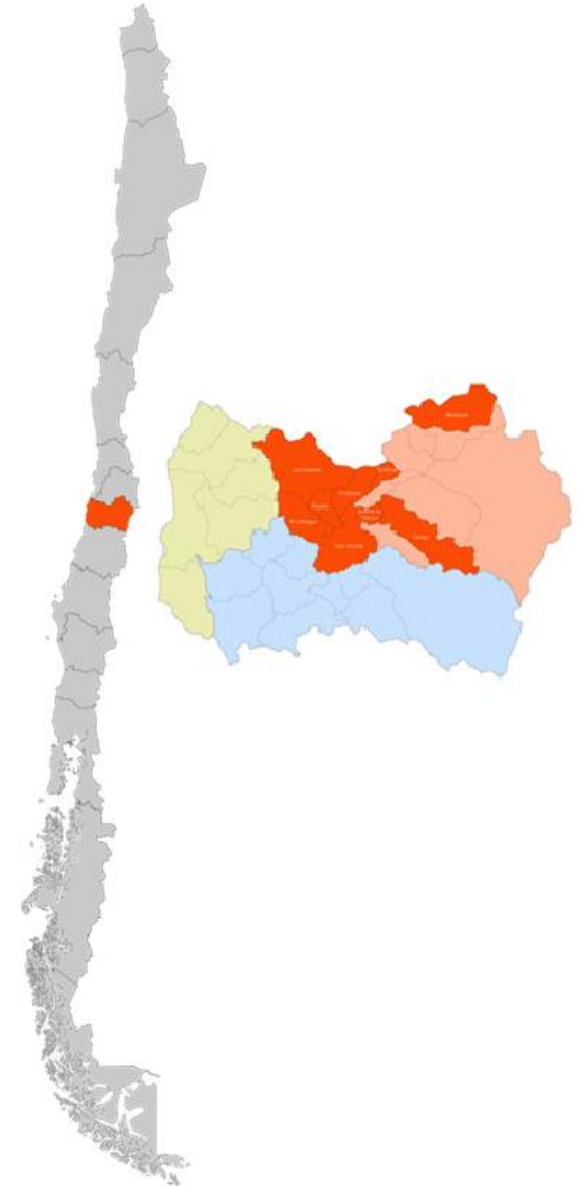- Share innovations
- Set new challenges

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UBC: A story of perseverance

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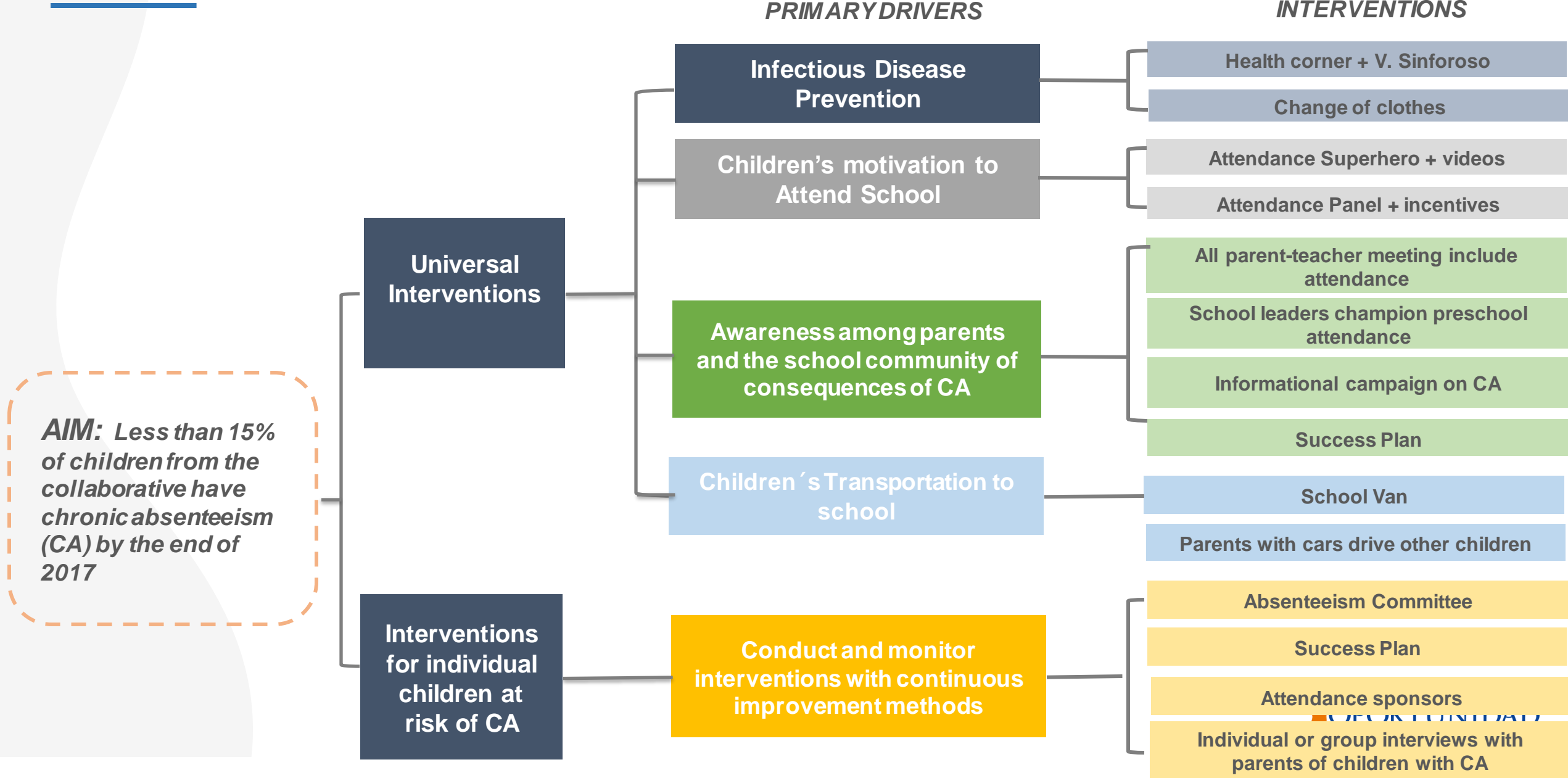
- *2016 - 2022*

Improvement Network

- Innovation for sustainability
- Collaboration
- UBC Improvement Network

- 23 Municipalities in the Libertador General Bernardo O'Higgins region
- 153 Schools
- 12.400 Children

Attendance Driver Diagram: Theory and Interventions

Multi-tier Approach

AIM: *Less than 15% of children from the collaborative have chronic absenteeism (CA) by the end of 2017*

PRIMARY DRIVERS

INTERVENTIONS

Universal Interventions

Infectious Disease Prevention
- Health corner + V. Sinforoso
- Change of clothes

Children's motivation to Attend School
- Attendance Superhero + videos
- Attendance Panel + incentives

Awareness among parents and the school community of consequences of CA
- All parent-teacher meeting include attendance
- School leaders champion preschool attendance
- Informational campaign on CA
- Success Plan

Children´s Transportation to school
- School Van
- Parents with cars drive other children

Interventions for individual children at risk of CA

Conduct and monitor interventions with continuous improvement methods
- Absenteeism Committee
- Success Plan
- Attendance sponsors
- Individual or group interviews with parents of children with CA

School attendance program

Building capacity at 3 levels

	March	April	May	June	July	August	September	October	November	December
Classroom			*	*		*		*	*	
School			*	*		*		*	*	
Network		*			*					*

CLASSROOM level strategies

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- Propose ideas
- Test
- Measure
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Teachers and school leaders:
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NETWORK level strategies

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- Share innovations
- Set new challenges

Attendance program results

Table 1. UBC Schools that prioritized attendance and the strategies they tested each month.

Key to Table 1.

| Color	Strategy
	Attendance panel
	Inclusion of the attendance issue in all parent-teacher meetings
	Absenteeism Committee
	Incentives for children
	Incentives for families
	Success Plan
	Health Corner

Results: RQ1

Table 3: Average percent of days absent per child and the percent of children with chronic absenteeism in preschools in the VI Region.

| Average, 2011-2017	Total	Comparison Schools	UBC Schools that did not prioritize attendance	UBC Schools that prioritized attendance
Percent of days absent per child	14.2 (10.4-17.3)	14.4 (12.1-16.3)	14.0 (10.8-15.3)	14.2 (10.4-17.3)
Percent of children with chronic absenteeism	52.1 (33.5-68.9)	50.9 (33.5-68.9)	51.2 (40.3-57.1)	54.2 (35.3-62.0)

Attendance program results

- Results: RQ2   Is there a difference in evolution of absenteeism?

- **Average percent days absent per child per month**
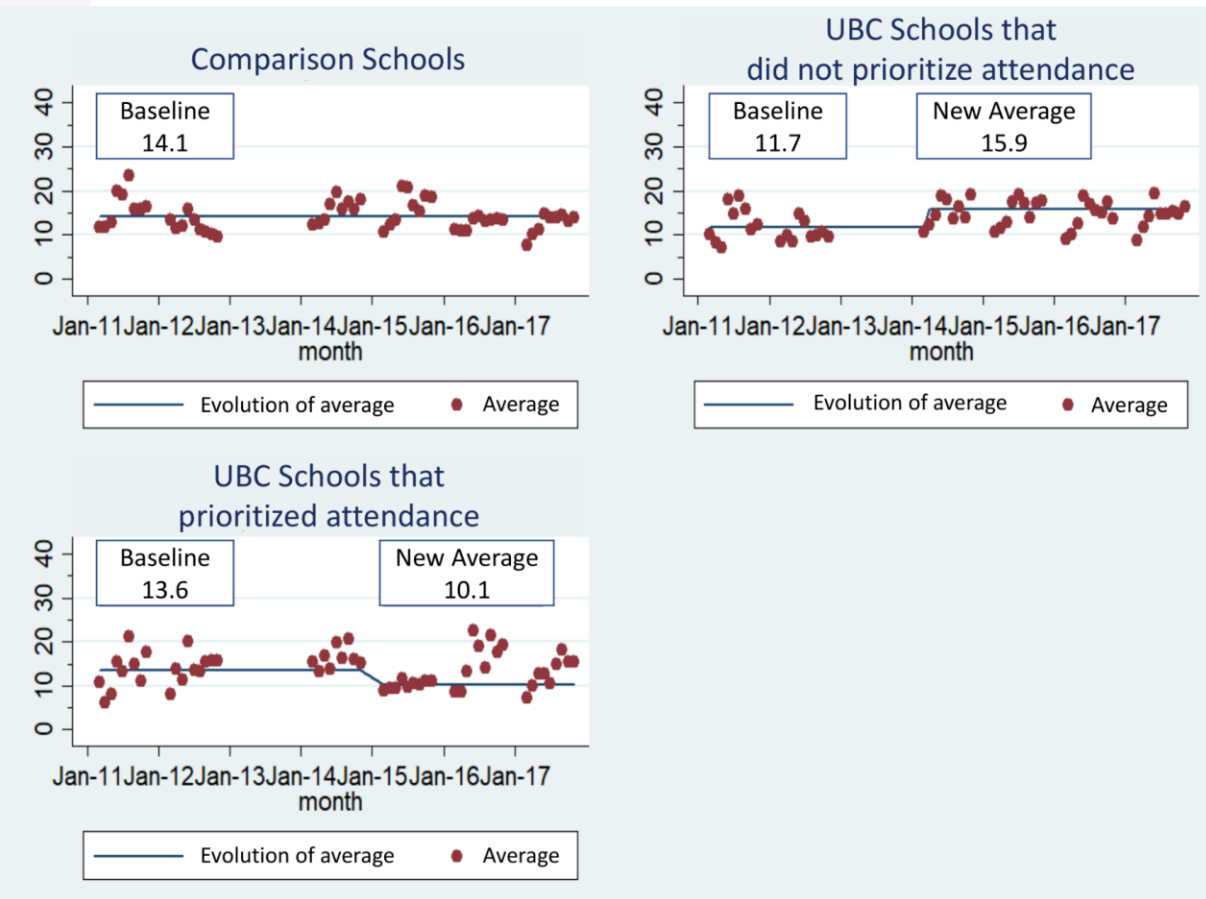
- **Percent of children with chronic absenteeism per year** 2011-2017
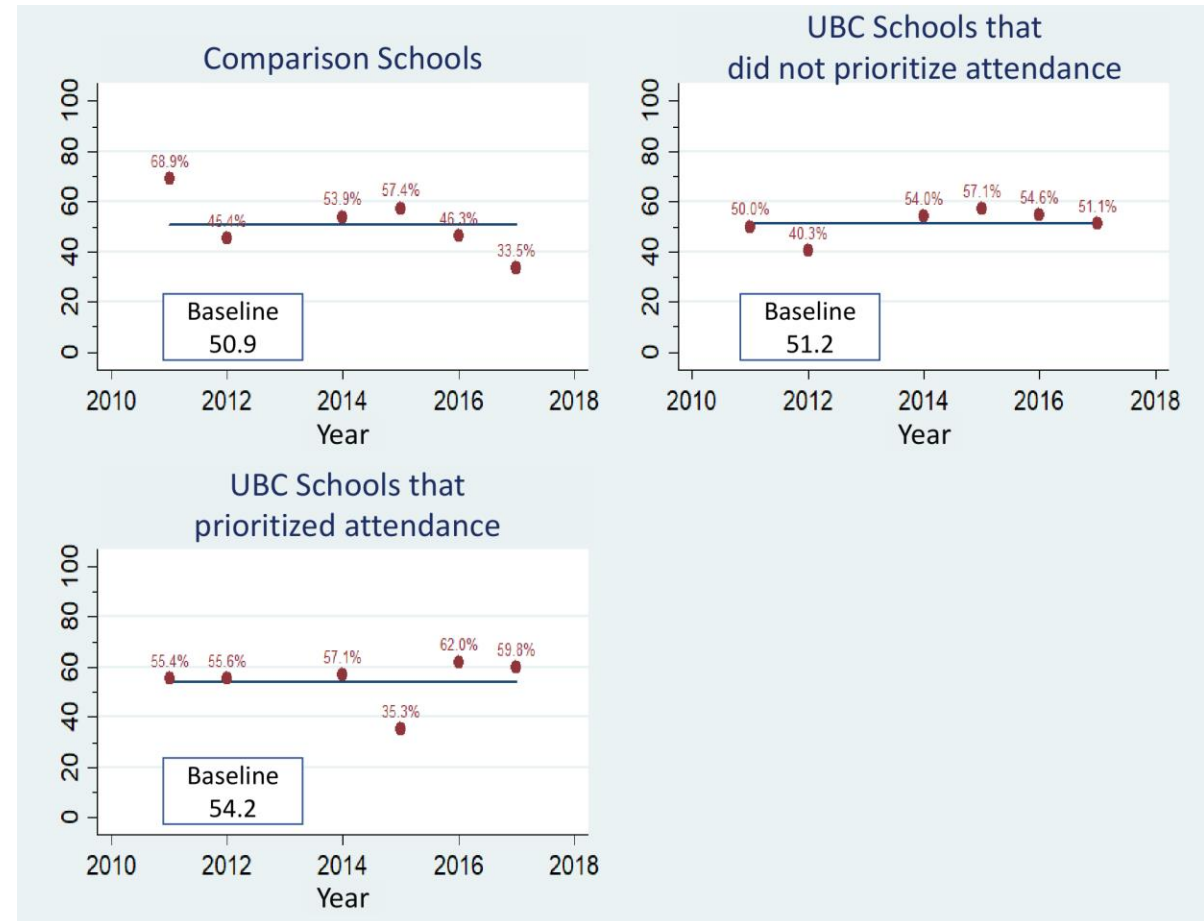
Power of Networks for Learning

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