

# Enhancing Educational Equity: Leveraging Attendance Data to Support Vulnerable Students



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# Motivation

**2013-2014:** The national average was **13%** - i.e., **6.5 million students** missing school

**2015-2016:** About **one out of every six** students missed **three or more school weeks**.

**2018:** Approximately **13%** missed school nationally. (US Department of Education, 2019).

- Students of different races and ethnicities experience chronic absenteeism at different rates.
- Chronic absenteeism is 15% more likely among English learners.
- Students with disabilities face a greater risk of chronic absenteeism.

**Students with high needs often face various challenges that can lead to increased absenteeism!**



# Literature review

Research suggests the reasons for chronic absenteeism include various factors such as poor health, limited transportation, and a lack of safety (**Balfanz & Brynes, 2012**) — which can be particularly acute in disadvantaged communities and poverty areas (**Douglas Ready, 2010**).

Chronic absenteeism may prevent children from reaching early learning milestones (**Ehrlich et al., 2013; Hernandez, D. 2011**)

Irregular attendance can better predict whether students drop out before graduation than test scores (**Petteruti et al, 2007**).

Frequent absences from school can shape adulthood (**U.S. Department of Education, 2019**)



# Objective of Database Management

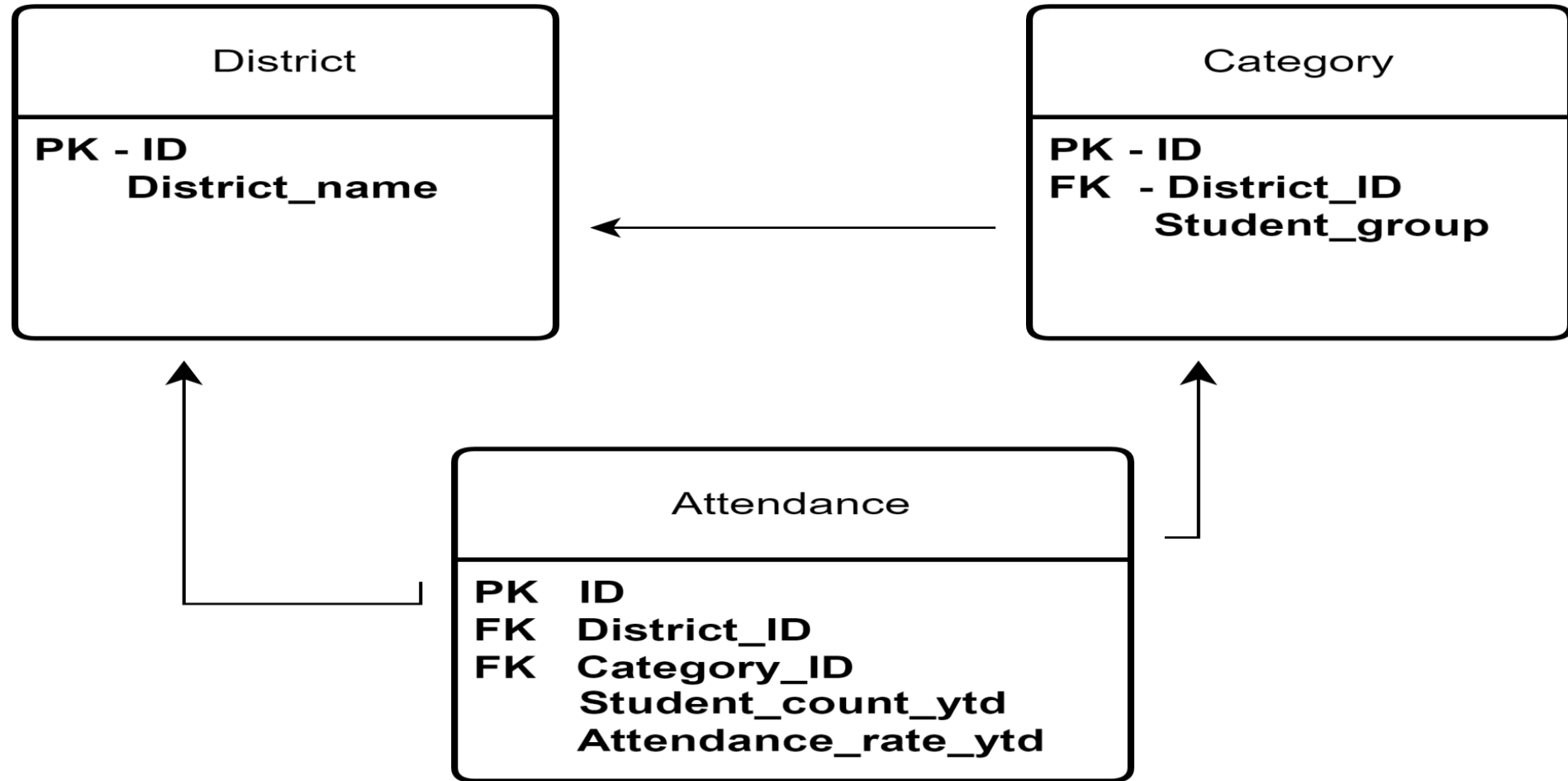
- Analyze attendance data for vulnerable student groups.
- Develop an application that will track students' attendance.
- Recommend evidence-based strategies to improve attendance rates and promote educational equity.

## Data Source - [www.data.gov](http://www.data.gov)

This dataset includes the attendance rate for public school students PK-12 of 136 districts in a state in the U.S. during the 2021-2022 school year.

- A few districts were selected for the database management prototype.

# Schema



# Students with High Needs

To query for students with **High Needs**

```
SELECT * FROM attendance WHERE student_group_ID = 'A13'
```

district_ID	category_ID	student_group_ID	student_count_ytd	attendance_rate_ytd
150011	C6	A13	13849	12393
170011	C6	A13	4510	4109
340011	C6	A13	7802	7098
430011	C6	A13	4447	3996
510011	C6	A13	2553	2352
570011	C6	A13	2328	2162
640011	C6	A13	13351	11307
770011	C6	A13	3821	3314
1510011	C6	A13	13926	12295

## Homelessness

```
SELECT * FROM attendance WHERE student_group_ID = 'A2'
```

district_ID	category_ID	student_group_ID	student_count_ytd	attendance_rate_ytd
150011	C1	A2	123	104
170011	C1	A2	65	58
340011	C1	A2	25	22
640011	C1	A2	107	85
930011	C1	A2	234	177
1510011	C1	A2	245	209

## English learners

```
SELECT * FROM attendance WHERE category_ID = 'C4'
```

district_ID	category_ID	student_group_ID	student_count_ytd	attendance_rate_ytd
150011	C4	A7	4177	3812
170011	C4	A7	423	386
340011	C4	A7	3541	3227
430011	C4	A7	900	809
510011	C4	A7	221	202
570011	C4	A7	354	330
640011	C4	A7	3591	3047
770011	C4	A7	461	408
930011	C4	A7	3569	3071
1510011	C4	A7	3008	2677

## Students with Disabilities

```
SELECT * FROM attendance WHERE category_ID = 'C2'
```

district_ID	category_ID	student_group_ID	student_count_ytd	attendance_rate_ytd
150011	C2	A3	3258	2853
170011	C2	A3	1417	1280
340011	C2	A3	1432	1288
430011	C2	A3	1238	1077
510011	C2	A3	1408	1293
570011	C2	A3	1093	1011
640011	C2	A3	3227	2629
770011	C2	A3	959	810
930011	C2	A3	2708	2142
1510011	C2	A3	3244	2797

# Reference

- Balfanz, R., & Byrnes, V. (2012). Chronic Absenteeism: Summarizing What We Know From Nationally Available Data. Baltimore: Johns Hopkins University Center for Social Organization of Schools.
- Douglas D. Ready (2010). Socioeconomic Disadvantage, School Attendance, and Early Cognitive Development: The Differential Effects of School Exposure. *Sociology of Education*. 83: 271 DOI: 10.1177/0038040710383520
- Ehrlich, S. B., Gwynne, J. A., Stitzel Pareja, A., Allensworth, E. M., Moore, P., Jagesic, S., & Sorice, E. (2014). *Preschool Attendance in Chicago Public Schools: Relationships with Learning Outcomes and Reasons for Absences*. University of Chicago Consortium on Chicago School Research. 1313 East 60th Street, Chicago, IL 60637.
- Hernandez, D. J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. *Annie E. Casey Foundation*.
- Petteruti, A., Walsh, N., & Ziedenberg, J. (2007). Education and Public Safety. Justice Policy Institute. **07-08\_rep\_educationandpublicsafety\_ps-ac**  
PDF ([justicepolicy.org](http://justicepolicy.org))
- U.S. Department of Education(2019). Chronic Absenteeism in The Nation's Schools: A Hidden Educational Crisis. [Chronic Absenteeism in the Nation's Schools \(ed.gov\)](https://www.ed.gov/chronicabsenteeism)

# THANK YOU!