2019 School Grades vs. Teacher Performance in Florida

Team Members:

Christina R.

Christine H.

Juan S.

# Extract Data from Florida Department of Education:

Data sets were downloaded as Excel files from: <http://www.fldoe.org/>

* [School Grades](http://108.59.20.64/core/fileparse.php/18534/urlt/SchoolGrades19.xls) (Excel)
* [2018-19 District Educator Evaluation Ratings](http://108.59.20.64/core/fileparse.php/7503/urlt/1819DistEduEvalRate.xls) (Excel)

# Transform Data Using Excel

### Creating the Districts CSV File

1. From the School Grades Excel file, extract District Number and District Name into a new file
2. Save as a CSV document, titled Districts.csv
3. Replace spaces in column headers with underscores (e.g., District\_Name)
4. Remove leading zeros from District\_Number column

### Creating the Schools CSV File

1. From the SchoolGrades Excel file, extract the following columns into a new file:
   1. District Number
   2. School Number
   3. School Name
   4. Grade 2019
   5. Charter School
   6. Title I
   7. Alternative/ESE Center School
   8. School Type
   9. Percent of Minority Students
   10. Percent of Economically Disadvantaged Students
2. Save as a CSV document, titled Schools.csv
3. Create a new column, following the School Number column, called School ID
   1. Create the unique identifier “School ID” by concatenating the District Number and School Number
   2. Format the column as Text
   3. Copy and paste as values
4. Delete the School\_Number column
5. Replace spaces in column headers with underscores (e.g., District\_Name)
6. Remove leading zeros from District\_Number column
7. Convert the Chart\_School and Title\_I columns from “Yes” and “No” to “1” and “0”
8. Convert the Alternative/ESE\_Center\_School from “A” and “N” to “1” and “0”

### Creating the School\_Data CSV File

1. From the TeacherEvals Excel file, extract all columns except District Name and School Name into a new file
2. Save as a CSV document, titled School\_Data.csv
3. Create a new column, following the School Name column, called School ID
   1. Create the unique identifier “School ID” by concatenating the District Number and School Number
   2. Copy and paste as values
4. Delete the School\_Number column
5. Replace spaces in column headers with underscores (e.g., District\_Name)
6. Remove leading zeros from District\_Number column
7. Separate the evaluation data columns (Highly\_Effective, Effective, etc.) that include both the evaluation count values and the evaluation percent values into separate columns
   1. This will create an \_Count and an \_Percent column for each evaluation rating (e.g., Effective\_Count, Effective\_Percent)
   2. Transform the percent data into numerical data by multiplying the percent values by 100
8. Copy the School\_ID and School\_Grade columns from Schools.csv and inserted into a separate sheet within School\_Data.csv
   1. Remove the School\_Grade column from Schools.csv
   2. Create a School\_Grade column after the School\_Name column
   3. Use an Index Match formula to import the school grades into the School\_Data.csv file
      1. e.g., =INDEX(Sheet2!C:C,MATCH(School\_Data!B2,Sheet2!A:A))
   4. Copy the School\_Grade column and paste as values
9. Remove any records with “#N/A” or “I” in the School\_Grade column
10. Remove rows that do not include both school grade and teacher evaluation results leaving a little over 3100 rows
11. Transform School Grades into numerical values
    1. A = 1
    2. B = 2
    3. C = 3
    4. D = 4
    5. F = 5

# Load Data Into PostgresSQL

### Create the Districts table

1. CREATE TABLE Districts(

District\_Number INT PRIMARY KEY,

District\_Name VARCHAR(50)

)

1. Import Districts.csv

### Create the Schools table

1. CREATE TABLE Schools (

District\_Number INT,

school\_id VARCHAR(7) PRIMARY KEY,

School\_Name VARCHAR,

Charter\_School BOOLEAN,

Title\_I BOOLEAN,

Alternative\_ESE\_Center\_School BOOLEAN,

School\_Type INT,

Percent\_of\_Minority\_Students DECIMAL,

Percent\_of\_Economically\_Disadvantaged\_Students DECIMAL

)

1. Import Schools.csv

### Created School\_Data table

1. CREATE TABLE school\_data (

District\_Number INT,

School\_ID VARCHAR(7),

School\_Grade INT,

Highly\_Effective\_Count INT,

Highly\_Effective\_Percent DECIMAL,

Effective\_Count INT,

Effective\_Percent DECIMAL,

Needs\_Improvement\_Count INT,

Needs\_Improvement\_Percent DECIMAL,

Development\_Plan\_Count INT,

Development\_Plan\_Percent DECIMAL,

Unsatisfactory\_Count INT,

Unsatisfactory\_Percent DECIMAL,

Not\_Evaluated\_Count INT,

Not\_Evaluated\_Percent DECIMAL

)

1. Import School\_Data.csv

# Sample Analyses

### How many schools are there in each school district?

* SELECT d.district\_name, count(s.school\_name) AS total\_schools

FROM schools as s

INNER JOIN districts AS d ON

d.district\_number = s.district\_number

GROUP BY d.district\_name

ORDER BY 2 desc;

### How many school in each district have at least 80% of their teachers rated “Highly Effective”?

* SELECT d.district\_name, COUNT (sd.highly\_effective\_percent) AS highly\_effictive
* FROM school\_data AS sd, districts AS d
* WHERE sd.district\_number = d.district\_number
* AND sd.highly\_effective\_percent >=80
* GROUP BY d.district\_name
* ORDER BY 2 desc;

### Which are the best school districts to live in?

*What is the ratio of number of schools with at least 80% of their teachers rated “Highly Effective” compared with the total number of schools in that district?*

* SELECT dd.district\_name, COUNT (s.school\_name) AS total\_schools,

(

SELECT COUNT (sd.highly\_effective\_percent) AS highly\_effective FROM school\_data AS sd, districts AS d

WHERE sd.district\_number = d.district\_number

AND sd.highly\_effective\_percent >=80

AND d.district\_name = dd.district\_name

)

FROM schools as s, districts AS dd

WHERE dd.district\_number = s.district\_number

GROUP BY dd.district\_name

ORDER BY 2 desc;