

# “ISBE Midyear Report 2020 - Process Documentation”

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## 1. Introduction

In Illinois, at the at the end of every semester, each school is required to submit a set of data to the Office of I&I for transmission to the Illinois State Board of Education (ISBE). The state then uses this data to produce the annual State School Report Cards. The purpose of this project is to collect student and teacher data from KIPP Chicago’s different data systems and put them in a format that conforms to ISBE’s reporting requirements.

This document provides a detailed description of each data file and how to find it. The document also points out possible shortcomings and issues with 1) the code, and 2) the report submission process. There are also tips on how and when to begin preparing for the process.

## 2. Preparation

CPS will send detailed documentation on what is required for the report to whoever is designated as the “data liason”. **Once you find out what pieces of information you need, it is important to begin collecting data as soon as possible.** You may need to collect information from the COO, Chief of Staff, Talent Department and HR, so you need to put in your requests early. For more information on required data read section 3, “Data Sources and how to access them”. Note: Some data requirements may change from year to year.

Store all data collected from outside KIPP Chicago’s database within a Google cloud storage bucket. For example, all collected data for the 19-20 midyear report was saved in the `raw_data_storage` bucket under `ISBE_Student_Courses/19-20_files`.

You can find previous instructions on the Midyear ISBE Reporting Process from CPS in Google cloud storage within the `raw_storage` bucket under `ISBE_Student_Courses/19-20_files/cps_report_instructions`. These files will be downloaded to the documentation folder after running the `02-gcs_files.R` script in the `data` folder.

### 3. Data Sources and How to Access them

Some files that are needed for this report can be accessed directly from our database, but other files need to be collected from different departments within KIPP Chicago. Below is a list of the files that were required for the 2020 Midyear report.

#### 3A. Google Big Query

All data sources listed in the `01-bq_files.R` script are stored in KIPP Chicago's Big Query Database. In order to access these data sets you will need the credentials to gain access to KIPP Chicago's Google Cloud Platform. For more information please checkout the `01-bq_files.R` script.

#### 3B. Google Cloud Storage Files:

All data sources listed in the `02-gcs_files.R` script were collected from different departments within KIPP Chicago as well as other outside sources. Below is a list of all files and where to find them. The specific files for 2020 listed in this section can be found in KIPP Chicago's Google Cloud Storage in the `raw_data_storage` bucket under `ISBE_Student_Courses/19-20_files`. **Please make sure to read the descriptions below as well as note all required columns (by looking directly at each .csv) before making requests of other departments.**

#### I) Mapping of State Course IDs to Local Course IDs and Titles

##### File Description

File Name: `course_local_number_state_ids.csv`

This csv matches ISBE State Course Codes with local course IDs and local course titles for all KIPP Chicago classes. For more information, see the "ISBE State Course Codes" tab in the "Instructions - 2020 Course Assignment" file located in the documentation folder.

##### File Location

This file was created manually and should be downloaded from the Google cloud storage `raw_data_storage` bucket under `ISBE_Student_Courses/19-20_files`. As schools add or drop classes (or change course names), this file will need to be manually updated.

#### II) Zenefits Data (HR Data)

##### File Description

File Name: `zenefits_teacher_data_isbe_midyear_reporting.csv`

This csv contains a subset of HR information for everyone working at KIPP Chicago.

##### File Location

This is a custom report created from Zenefits (KIPP Chicago's HR SIS). This information can be pulled by either someone in HR or the Chief of staff.

### III) Teacher IEIN Numbers and Birth Dates

#### File Description

File Name: 19\_20\_IEIN\_numbers.csv

This csv contains identifying information for teachers. Information includes name, date of birth, IEIN number and serving school.

#### File Location

This file can be collected from the head of talent, COO or HR. Note, first ask both HR and the COO if they have an existing report with this information before putting in a request to talent. The teacherid column is required to match the information in the cc table and will need to be input by hand.

Note: The users table will need to be connected to the schoolstaff table in order to find the correct teacher id for each teacher. The teacher id column is the id column in the schoolstaff table (users and schoolstaff tables are located on big query).

```
users.user_dcid = schoolstaff.user_dcid THEN schoolstaff.id = cc.teacherid
```

### IV) List of Start Dates for teachers hired after the first day of school

#### File Description

File Name: kipp\_staff\_member\_start\_after\_20190819.csv

Some teachers start after the first day of school. In order to provide the correct start date for those teachers we need a file that lists the start dates for every teacher who started after the first day of school.

#### File Location

This file can be collected from HR.

### V) Datasets of all Students in KIPP Chicago from ASPEN

#### File Description

File Name: Ex. 400044\_ascend\_current\_students\_aspen.csv

File Name: Ex. 400044\_ascend\_former\_students\_aspen.csv

These files contain the legal name, date of birth, State and CPS ID and School for all KIPP Chicago Students. This includes both current students and transferred students (Note: our report needs to include students who have transferred within the year).

#### File Location

These files (8 in total) are downloaded from ASPEN. In order to log into ASPEN you will need your cps username and password (the same credentials that you use to log into your CPS email address). Below is a step-by-step guide for finding this information in ASPEN.

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1. Log into ASPEN then navigate to the view tab and select school view.

The screenshot shows the KIPP - ACADEMY 2019-2020 interface. The top navigation bar includes 'My Info', 'Student', 'Attendance', 'Gradebook', 'Planner', 'Assessment', and 'Tools'. A dropdown menu for 'Staff view' is open, showing 'School', 'Staff', and 'Health' options. The 'School' option is highlighted. The main content area displays the Aspen logo, a banner, and sections for Teacher Classes, Announcements, School Links, Workflows, and District Resources. The 'District Resources' section lists 'CPS Aspen Parent & Student Portal - Training Materials' and 'CPS Student Code of Conduct'. The 'Workflows' section shows a table with columns 'Received', 'Workflow', 'Task', and 'Subject', and a 'No Tasks' message.

2. Select a School

The screenshot shows the KIPP - ACADEMY 2019-2020 interface. The top navigation bar includes 'School view', 'Select school', and 'Log Off'. The 'Select school' button is highlighted. The main navigation bar includes 'School', 'Student', 'Staff', 'Attendance', 'Behavior', 'Grades', 'Assessment', 'Schedule', 'Extracurriculars', 'Global', 'Tools', 'Admin', and 'Plans'. The 'School' tab is selected. The main content area displays the Aspen logo, a banner, and sections for Announcements, Student Search, School Links, Workflows, and District Resources. The 'Student Search' section includes a search bar and checkboxes for 'Include Archive' and 'Secondary Students'. The 'District Resources' section lists 'CPS Aspen Parent & Student Portal - Training Materials' and 'CPS Student Code of Conduct'. The 'Workflows' section shows a table with columns 'Received', 'Workflow', 'Task', and 'Subject', and a 'No Tasks' message. The 'Tweets' section displays a tweet from @ChiPubSchools about a job fair at Park Fieldhouse.

3. Select the filter icon and choose either “All Active Students” or “Former Students”. NOTE: You cannot pull all students at the same time and will need to go through the following steps for both filters for all 4 schools.

KIPP - ACADEMY 2019-2020

School view Select school Log Off

Pages
School
Student
Staff
Attendance
Behavior
Grades
Assessment
Schedule
Extracurriculars
Global
Tools
Admin
Plans

Student List

Details
Contacts
Attendance
Behavior
Transcript
Assessments
Academics
Schedule
Membership
Transactions
Documents
At Risk
Snapshots
Awards

Options Reports Help

Search on Name

Manage Filters...

☒ All Active Students

☐ Primary Active Students

☐ All Primary Students

☐ All Secondary Students

☐ All Students

☐ Current Members

☐ Former Students

☐ Next Year Students

☐ ES - Missing Scheduled Math Class

☐ ES - Missing Scheduled Reading Class

☐ ES - Missing Scheduled Science Class

☐ ES - Missing Scheduled Social Science Class

☐ Extracurricular Participation

☐ Extracurricular Program = ?

☐ Gender = ?

☐ Grade Level = ?

☐ Home Language = ?

☐ Home Language Survey = Yes

☐ Homeroom = ?

1:Aaron, Shaliyah

0 of 512 selected

All Active Students

Name	EnrStatus	Grade	Homeroom	YOG	DOB	Alerts	QuickStatus	Organization
Aaron, Shaliyah	Enrolled	08	319 HU	2024	5/28/2006	REP		CHARTER
Adams, Antonio	Enrolled	04	SH203	2028	8/4/2010	REP		CHARTER
Adams, Dana	Enrolled	05	118JSU	2027	2/23/2009			CHARTER
Adams, Jameil	Enrolled	04	SH203	2028	4/17/2010			CHARTER
Adams, Keon	Enrolled	04	ND206	2028	1/8/2009			CHARTER
Alexander, Darrick	Enrolled	04	ND206	2028	12/10/2009			CHARTER
Anderson, Damarion	Enrolled	06	220 NW	2026	11/4/2007			CHARTER
Anderson, David	Enrolled	04	KU 201	2028	10/23/2009			CHARTER
Anderson, Julianna	Enrolled	08	322FAMU	2024	6/17/2006			CHARTER
Anderson, Kyia	Enrolled	08	317 CAU	2024	3/1/2006	REP		CHARTER
Anderson, Leroy	Enrolled	K	Hampton104	2032	12/28/2013			CHARTER
Anderson, Timell	Enrolled	05	118JSU	2027	6/24/2009	REP		CHARTER
Anderson, Zhavier	Enrolled	K	Depaul106	2032	6/8/2014			CHARTER

4. Click on the “Report” tab and select “Quick Report” in the drop-down menu.

The screenshot shows the 'KIPP - ACADEMY 2019-2020' interface. The 'Reports' dropdown menu is open, displaying a list of reports. The 'Quick Report' option is highlighted with a red box. The background shows a table of active students with columns for Alerts, QuickStatus, Organization2 > Name, and School > Name.

5. Select “New Report” then click “Next. On the next screen select”Simple" then click Next.

6. Ensure that “Student” is selected in the drop down menu then add all variables included in the “Selected Fields” box pictured below. Afterwards click next.

The screenshot shows the 'Quick Report: Field Selection' screen. The 'Available Fields' list on the left includes 'Student', which is highlighted with a red box. The 'Selected Fields' list on the right includes 'School > Name', 'Student ID', 'State ID', 'Last name', 'First name', 'Middle name', 'Date of Birth', and 'Enrollment status'. The 'Add >' button is visible between the two lists.

7. The next screen shows an almost identical display. No need to add variables to the “Selected Fields” box. Click next. On the next screen click next again.

**Quick Report: Sort Order** Step 4 of 8

Available Fields

Student

Photo

Last name

First name

Middle name

Title

Suffix

Gender

Date of Birth

Globally Unique Identifier

Globally Unique Identifier 2

Phone 1

Globally Unique Identifier 3

Phone 2

Name

Phone 3

Add >

< Remove

Selected Fields

Name

Up

Down

Change sort

Previous

Next

Finish

Cancel

8. Select comma-separated-values from the drop down menu. Afterwards select “Finish” This will open up a new page with all requested information. You can then copy and paste this information into a CSV and separate the column by commas (Google how to do this).

**Quick Report: Format Options** Step 6 of 8

Header

Report title

Student List - All Active Students

Print date

☒

Body

Format

Web Page (HTML)

Comma-separated values (CSV)

Comma-separated values (TXT)

Exclude byte order mark

☒

Font face

Arial

Font size

Medium

Grid lines

Horizontal & Vertical

Shade alternate lines

☐

Previous

Next

Finish

Cancel

## **VI) List of Students with Conflicting CPS Student IDs Between ASPEN and Power schools**

### **File Description**

File Name: `cps_id_corrections.csv`

List of students with differing IDs in ASPEN and Power school. For reporting purposes we need to use the CPS ID listed in power school for each student, but in order to join data accurately we need to use the IDs listed in Power schools.

### **File Location**

This file was created manually. first, I ran an anti\_join in R between the student information files and students table (join on CPS Student ID). Output shows students in ASPEN with no match in Power school. Next step was to take this list of students and search for each student in Power School and then note the differing CPS Student ID. This process will need to be repeated for any new report.

## **VII) List of all Students Enrolled in KIPP Chicago in ASPEN**

### **File Description**

File Name: *Ex.* `enrollment_academy_aspen_400146.csv`

This file lists enrollment information for KIPP Chicago Students. If a student starts school after the first day of class then KIPP Chicago's enrollment record (the records kept in powerschool) will likely be different from the official ASPEN records. The report needs to list the enrollment date from ASPEN in order to be accepted.

### **File Location**

The file is located in ASPEN. ASPEN. In order to log into ASPEN you will need your cps username and password (the same credentials that you use to log into your CPS email address). Below is a step-by-step guide for finding this information in ASPEN.

---



1. Follow the first two steps from section 3.3B.V

2. Within the “School View” under the “Students” tab click the report button and select "Enrollment Activity"

The screenshot shows the KIPP - ASCEND 2019-2020 interface. The top navigation bar includes tabs for Pages, School, Student, Staff, Attendance, Behavior, Grades, Assessment, Schedule, Extracurriculars, Global, Tools, Admin, and Plans. The 'Student' tab is selected. Below the navigation bar, the 'Student List' report is displayed. A dropdown menu is open, showing various report options. The 'Enrollment Activity' option is highlighted with a red box. To the right of the dropdown, a table titled 'All Active Students' is visible, showing columns for QuickStatus, Organization2 > Name, and School > Name. The table contains multiple rows of student data.

3. In the menu select “comma-separated-values” then click “Run”. This will produce a csv file to be downloaded to your device.

The screenshot shows the 'Enrollment Activity' report configuration form. The form includes fields for Organization (CHARTER), School (KIPP - ASCEND), Start date (7/1/2019), End date (2/29/2020), Sort results by (Date), and Format (Comma-separated values (CSV)). The 'Format' field is highlighted with a red box. Below the form, there are 'Run' and 'Cancel' buttons.

## VIII) Name Corrections

### File Description

File Name: `cps_name_replacement_aspen.csv`

List of names that were still incorrect the day before the submission was due. Because we are using names from ASPEN we should not need this file in future submissions.

## 4. Initial Report Generation

1. Ensure that you have the `ProjectTemplate` package installed in R.
2. Ensure that you have All required R Packages (check the `config/global.dcf` file for all required libraries).
3. Ensure that you have all required permissions for KIPP Chicago Google Cloud Platform account (Big Query and Google Cloud Storage used for this project).
4. Ensure that you have all of the required files listed in the “Google Cloud Storage Files” section. Files also need to be in the correct format (check format of required files in Google Cloud Storage `raw_data_storage` bucket under `ISBE_Student_Courses/19-20_files` if you have any doubts.)
5. Navigate to the `src` folder and run `01-A_write_submission_files.R` file. This will produce the report files in the required format for ISBE and write them to the `output\final_reports` folder. Note: if you'd like to see the final Files in R, then open the `isbe_midyear_report_400146`, `isbe_midyear_report_400044`, `isbe_midyear_report_400163`, and `isbe_midyear_report_400180` data frames.

## 5. Error Handling

1. After you receive your first error report from CPS navigate to the `src` folder and run the `02-A_evaluate_cps_validation_period_errors.Rmd` file. This file will produce data frames that show all unique errors by school. This file will also produce data frames that list all unique name errors and date of birth errors.
2. Use the `03-A_produce_write_submission_files_with_error_fixes.R` file to fix problems with the final reports that cannot be corrected in the original code (Note: use this file cautiously or not at all).

## 6. Issues and areas for improvement

### 6A. Code

- i) As of now, there is no clear way to connect teacher personal information with their course information. The solution used was to add each teachers teacherid to the personal information file by hand (explained in the Google Cloud Storage Section).
- ii) The student enrollment information downloaded from ASPEN Appears to have a number of issues. Many students are marked as enrolled, withdrawn and then enrolled again in the same school over the course of a couple of days. This makes choosing the correct enrollment date tricky. Because of this, it is likely that after you make your first submission and receive an error report you will need to hand-correct a number of students enrollment dates in order for them to be accepted by ISBE.
- iii) The process for matching elementary school students (specifically K - 3) needs significant improvement. Even after running the final code some students are rostered to the same class twice within the same school. This problem needs to be examined before the start of the next reporting cycle.

## 6B. File Submission

- i) If the data validation process is conducted in Google drive do not erase the original file. Instead, copy and paste the data into the files provided.
- ii) Each date column in the file will need to be put in the correct format in Google sheets (mm/dd/yyyy). All dates will throw an error if this step is skipped (I've tried to put it into the correct format in R to no avail).
- iii) It is likely that you will run into different spellings for student names between the ASPEN and powerschool systems. This is why it is important to use the name and dob listed in ASPEN.

## 7. Ideas for improvement

- i) Running an independent validation process on our reports (one that matches the validation process used by CPS) would be incredibly helpful in getting the reports out in a timely and painless manner. At the moment, we upload our data to google drive each day and then two hours later receive an error report. It may be worth asking CPS if we can get a copy of the scripts they use to validate the reports. If that is not possible, then we should use descriptions from both CPS and ISBE sources to write our own validation process scripts.

## 8. Useful Links

Below are links that lay out the exact validation information set by ISBE.

- <https://www.isbe.net/Pages/Illinois-State-Course-System.aspx>
- <https://www.isbe.net/Pages/SIS-Data-Elements-approved-codes-and-indicators.aspx>