

# BE Org Database Proposal Plan

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# Current Database Format (Google Spreadsheets): Enrichment Program (K-8th)

- Student Attendance
- Basic Student information (contact, school, grade, ethnicity)
- Student pre/post surveys
- Schedules (events, etc)
- Lesson plans
- Several more program documents

## How is the Info Stored?

- Google Spreadsheets
- Google Docs
- Google Drive

# Current Database Format: (Google Spreadsheets) Be Virtual (9-12th)

## What Info is Collected?

- Student Attendance
- Basic Student information (contact, school, grade)
- Other Be Virtual Operations documents

## How is the info stored?

- Google Spreadsheets
- Google Docs
- Google Drive

# Current Database Format: General Program Data

What other organization data is stored on Google Docs and Google Spreadsheets?

- Events' Attendance
- Event Info
- Volunteer/Intern contact information

Are there issues with the  
current format and  
collection of the  
organization's data?

# Current Database (Excel & Google Drive) Issues

- Unorganized; mixed up documents in folders in the Drive
- Often incomplete, missing data
- Forgotten spreadsheets/docs
- **As of now, Google Spreadsheets/Docs contain face value data with minimal or no calculated values which limits the potential of the stored data**
- **Google Spreadsheets can perform calculations but the task is tedious compared to alternative modern softwares**
- **Google Spreadsheets can graph only in two dimensions or measures which limits graphing capabilities**

After interviewing the  
coordinators of the  
Enrichment Program and Be  
Virtual program, the following  
**concerns** were brought up...

## Enrichment Program Data Concerns

- Student pre/post could be more reliable and accurate. Younger kids do not understand current survey format
- There's no formal way to assess students' level of understanding SEL Topics
- There's no formal collection of teachers' attendance.
- There's no formal way of tracking teachers' quality of teaching.

## Be Virtual Data Concerns

- Program lacks some student demographic data such as ethnicity, gender, etc
- There is no formal way to assess students' understanding of programming. There's no method for this data storage
- There's no formal collection of teachers' info
- No accuracy check for number/email

# Program Coordinators' Preferences

## Enrichment Program

### Software that can provide:

- Detailed query and specific reply  
(Ex: Name all the female students who attended a specific event in 2021)
- Graphs (line, bar, pie, etc.)

## Be Virtual

### Software that can provide:

- Detailed query and specific reply (Ex: List all the Hispanic students who attended the program in March 2021)

Are there  
Solutions??

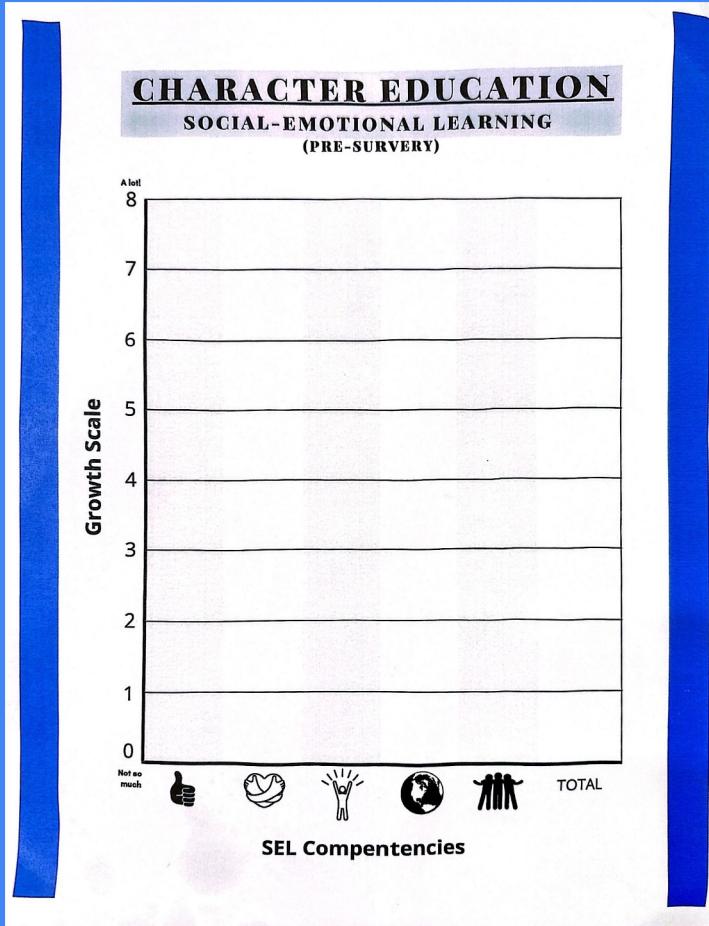
Based on the issues & concerns discussed, there are 2 categories of solutions: **Program** **Operations** & **Database** **Software**

# Program Operations

# Program Operations: Enrichment Program

Problems	Recommended Solutions
Student pre/post surveys are not reliable and accurate. Younger kids do not understand current survey format.	<ul style="list-style-type: none"><li>- Interactive, teacher guided surveys with Powerpoint (similar to usual lesson format) for K-2nd grade</li><li>- Independent, self guided surveys for 3rd-8th graders</li></ul>
No formal way to assess students' level of understanding SEL Topics.	<ul style="list-style-type: none"><li>- Use student pre/post surveys</li><li>- Use Teachers' monthly assessment on student</li><li>- Create 2-3 lesson worksheets that will be used to assess students' understanding.</li></ul>
No formal collection of teachers' attendance.	<ul style="list-style-type: none"><li>- Teachers also mark their attendance on the class attendance list on paper/Excel spreadsheet.</li></ul>
No formal way of tracking teachers' quality of teaching.	<ul style="list-style-type: none"><li>- 2-3 surprise visits to observe and examine teacher teaching lessons</li><li>- Teacher Opinion Survey (lessons, program, etc)</li></ul>

# Current Pre/Post Survey Format



**CHARACTER EDUCATION**  
**Social-Emotional Learning Evaluation**

Please complete pre- and post- evaluation surveys with your students. All evaluation dates are scheduled prior to programming.

Each student is required to complete the following graph based on the following:

The Growth Scale ranges from 1-8. 1 = the student is least confident or knowledgeable in the competency area. 8= the student is very confident and knowledgeable in the competency area.

Each competency is labeled with the 5 symbols below.

Read the definition and examples aloud for each competency, to ensure each student is aware of the meaning of the symbols/competency.

For your reference, the definitions and examples for each symbol are on the next page.

Thumbs-up icon

Heart icon

Hand reaching up icon

Globe icon

Three people icon

# K-2nd Grade Engagement Behavior when Learning

Kindergarten	1st Grader	2nd Grader
<ul style="list-style-type: none"><li>• Listens with attention for brief periods</li><li>• Recalls and carries out simple directions</li><li>• Perseveres at tasks with adult support.</li></ul>	<ul style="list-style-type: none"><li>• Begins to be able to focus on tasks assigned by others.</li><li>• Listens with attention for longer periods.</li><li>• With support, begins to be able to shift focus of attention when needed (transitions to new lesson or activity or topic).</li></ul>	<ul style="list-style-type: none"><li>• Stays focused on tasks for longer periods of time.</li><li>• Remembers and consistently applies directions.</li><li>• Shifts focus of attention with minimal prompting from adults.</li><li>• Uses skills in reading and math for a wider variety of purposes.</li></ul>

Source: <https://www.nj.gov/education/earlychildhood/grkto3/docs/approacheslearning.pdf>

# K-2nd Pre/Post Survey sample

## Enrichment Program SEL (Social & Emotional Learning) Pre/Post Survey

Name: \_\_\_\_\_

School: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: \_\_\_\_\_

Objective: To examine our understanding of SELTopics.

1. Which picture describes good **Self- Awareness?** Circle 1 picture.

a.



c.



2. Which picture describes good **Self- Management?** Circle 1 picture.

a.



b.



# K-2nd Pre/Post Survey: Teacher Assessment portion

**For Teachers ONLY:** Assess student's understanding of SEL Topics.

## SEL Topics

1. Self-Awareness:    a.(Most)= 3    b.(Medium)= 2    c.(Least)=1    = \_\_\_\_\_
2. Social Management:    a.(Most)= 3    b.(Medium)= 2    c.(Least)=1    = \_\_\_\_\_
3. Social Awareness:    a.(Most)= 3    b.(Medium)= 2    c.(Least)=1    = \_\_\_\_\_
4. Relationship Skills    a.(Most)= 3    b.(Medium)= 2    c.(Least)=1    = \_\_\_\_\_
5. Resp. Decision Making    a.(Most)= 3    b.(Medium)= 2    c.(Least)=1    = \_\_\_\_\_

**SEL Total:** \_\_\_\_\_

SEL Topic: (Most)= 3    (Medium)= 2    (Least)=1

SEL Total: (Good)= 11-15    (Decent)= 5-10    (Needs Improvement)= 0-4

# 3rd-6th Grade Engagement Behavior when Learning

3rd Grader	4-5th Grader	6th Grader
<ul style="list-style-type: none"><li>• Sustains involvement in complex learning activities extending over several weeks or more.</li><li>• Works collaboratively with classmates exerting collective effort on learning activities.</li><li>• Uses academic skills flexibly for multiple purposes.</li></ul>	<ul style="list-style-type: none"><li>• Can argue more than just one side of an issue</li><li>• Begin to rely on friends, the news, and social media to get info and form opinions</li><li>• Start understanding how things are connected</li><li>• Start predicting the consequences of an action and plan accordingly</li></ul>	<ul style="list-style-type: none"><li>• Remains focused on tasks</li><li>• Develops the capacity to cooperate and compromise.</li><li>• Disagree with others and still be accepted.</li><li>• Experiences the consequences of breaking the rules.</li><li>• Doing things because it is the “right” thing to do</li><li>• Exhibits contrary and oppositional behavior</li></ul>

Source: <https://www.understood.org/en/articles/developmental-milestones-for-typical-fourth-and-fifth-graders>

Source:

<https://resources.finalsitere.com/images/v1525985068/saacademyorg/ssg8n7kszapstu2e2jhj/DevelopmentalExpectations5th-6th.pdf>

**Enrichment Program**  
**SEL (Social & Emotional Learning) Pre/Post Survey**

Name: \_\_\_\_\_

School: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: \_\_\_\_\_

**Objective:** To identify positive and negative examples of SEL Topics in scenarios and build our understanding of

**SEL Topics**

**Self-Awareness: "Definition"**

1. Read the scenarios. Is **good Self-Awareness** being demonstrated in these scenarios? Check "Good" or "Bad".

Good      Bad

- a. Lisa yells "I'm not mad!" at Cindy while they are disagreeing.      \_\_\_\_\_
- b. Tiffany has clothes all over the floor in her room but can't find something to wear      \_\_\_\_\_
- c. Louis woke up with a bad cough. He takes his medicine.      \_\_\_\_\_
- d. Donte didn't do well on his spelling test. When he got home, he played video games until bedtime.      \_\_\_\_\_
- e. Kevin stopped talking when he heard the teacher start class.      \_\_\_\_\_

2. Draw a picture that demonstrates good Self-Awareness? Write a sentence describing the picture.

**Self-Management: "Definition"**

3. Read the scenarios. Is **good Self- Management** being demonstrated? Check "Good" or "Bad".

Good      Bad

- a. George loses track of time when he's watching TV.      \_\_\_\_\_
- b. Tasha starts studying for her science notes a month before the test      \_\_\_\_\_
- c. \*example\*      \_\_\_\_\_
- d. \*example\*      \_\_\_\_\_
- e. \*example\*      \_\_\_\_\_

4. Jackie sets her alarm clock at night. Jackie hits the snooze button 3 times before she gets up in the morning.

Jackie makes it to school on time but she forgets her homework while rushing out of the house. Did Jackie demonstrate self management? Why or why not?

# 3rd-6th Pre/Post Survey sample

**Enrichment Program**  
**SEL (Social & Emotional Learning) Pre/Post Survey**

**For Teachers ONLY:** Assess student's understanding of SEL Topics. Use student's survey to fill out form.

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

**SEL Topics**

Self-Awareness:

- a) Good= 2 Bad= 1 = \_\_\_\_\_
- b) Good= 2 Bad= 1 = \_\_\_\_\_
- c) Good= 2 Bad= 1 = \_\_\_\_\_
- d) Good= 2 Bad= 1 = \_\_\_\_\_
- e) Good= 2 Bad= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

Social Management:

- a) Good= 2 Bad= 1 = \_\_\_\_\_
- b) Good= 2 Bad= 1 = \_\_\_\_\_
- c) Good= 2 Bad= 1 = \_\_\_\_\_
- d) Good= 2 Bad= 1 = \_\_\_\_\_
- e) Good= 2 Bad= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

Social Awareness:

- a) Good= 2 Bad= 1 = \_\_\_\_\_
- b) Good= 2 Bad= 1 = \_\_\_\_\_
- c) Good= 2 Bad= 1 = \_\_\_\_\_
- d) Good= 2 Bad= 1 = \_\_\_\_\_
- e) Good= 2 Bad= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

Relationship Skills

- a) Good= 2 Bad= 1 = \_\_\_\_\_
- b) Good= 2 Bad= 1 = \_\_\_\_\_
- c) Good= 2 Bad= 1 = \_\_\_\_\_
- d) Good= 2 Bad= 1 = \_\_\_\_\_
- e) Good= 2 Bad= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

Responsible Decision Making

- a) Good= 2 Bad= 1 = \_\_\_\_\_
- b) Good= 2 Bad= 1 = \_\_\_\_\_
- c) Good= 2 Bad= 1 = \_\_\_\_\_
- d) Good= 2 Bad= 1 = \_\_\_\_\_
- e) Good= 2 Bad= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

SEL Total: \_\_\_\_\_

Key

SEL Subtotal: Good Understanding= 7-10 Decent Understanding=4-6 Needs Improvement=0-3

SEL Total: Good Understanding= 35-50 Decent Understanding= 17-34 Needs Improvement= 0-16

**3rd-6th Pre/Post Survey:  
Teacher Assessment  
portion**

# 7-8th Grade Engagement Behavior when Learning

7th Grader	8th Grader
<ul style="list-style-type: none"><li>Start to understand concepts like power and influence</li><li>Question things and don't take everything at face value</li><li>Think about how current actions affect the future and may worry about things like climate change and war</li><li>Memorize information more easily</li><li>Use flexible thinking, like checking work and changing approaches as needed</li></ul>	<ul style="list-style-type: none"><li>Begin developing a worldview and a basic set of values</li><li>Start to pay more attention to body language, tone of voice, and other nonverbal language cues</li><li>Go through “what if” scenarios and talk through other ways of solving problems</li><li>Continue to build grammar knowledge and vocabulary</li><li>Start to use writing to describe personal experiences</li></ul>

Source: <https://www.understood.org/en/articles/developmental-milestones-for-typical-middle-schoolers>

**Enrichment Program  
SEL (Social & Emotional Learning) Pre/Post Survey**

Name: \_\_\_\_\_

School: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: \_\_\_\_\_

Objective: To identify SEL Topics in scenarios and define our understanding of SEL Topics in the context of self and our environment.

**Self-Awareness: \* Definition\***

1. Read the scenarios. Is **Self- Awareness** being demonstrated in these scenarios? Check "Y" for yes and "N" for no.

Y      N

a. After throwing a shoe at the wall, Lisa says she is not mad after arguing with her brother.

\_\_\_\_\_    \_\_\_\_\_

2. Do you think you have Self-Awareness? Why do you think you do/don't?

**Self-Management: \*Definition\***

3. Read the scenarios. Is **good Self- Management** being demonstrated? Check "Y" for yes and "N" for no.

Y      N

a. George is so upset, he wants to curse and yell but he decides it's not worth losing his composure.

\_\_\_\_\_    \_\_\_\_\_

4. Provide 2 new scenarios describing **bad Self-Management**?

f.

g.

# 7-8th Pre/Post Survey sample

# 7-8th Pre/Post Survey: Teacher Assessment portion

## Enrichment Program

### SEL (Social & Emotional Learning) Pre/Post Survey

**For Teachers ONLY:** Assess student's understanding of SEL Topics. Use student's survey to fill out form.

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

#### SEL Topics

##### 1. Self-Awareness:

- a) Yes= 2 No= 1 = \_\_\_\_\_
- b) Yes= 2 No= 1 = \_\_\_\_\_
- c) Yes= 2 No= 1 = \_\_\_\_\_
- d) Yes= 2 No= 1 = \_\_\_\_\_
- e) Yes= 2 No= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

##### 2. Social Management:

- a) Yes= 2 No= 1 = \_\_\_\_\_
- b) Yes= 2 No= 1 = \_\_\_\_\_
- c) Yes= 2 No= 1 = \_\_\_\_\_
- d) Yes= 2 No= 1 = \_\_\_\_\_
- e) Yes= 2 No= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

##### 3. Social Awareness:

- a) Yes= 2 No= 1 = \_\_\_\_\_
- b) Yes= 2 No= 1 = \_\_\_\_\_
- c) Yes= 2 No= 1 = \_\_\_\_\_
- d) Yes= 2 No= 1 = \_\_\_\_\_
- e) Yes= 2 No= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

##### 4. Relationship Skills

- a) Yes= 2 No= 1 = \_\_\_\_\_
- b) Yes= 2 No= 1 = \_\_\_\_\_
- c) Yes= 2 No= 1 = \_\_\_\_\_
- d) Yes= 2 No= 1 = \_\_\_\_\_
- e) Yes= 2 No= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

##### 5. Responsible Decision Making

- a) Yes= 2 No= 1 = \_\_\_\_\_
- b) Yes= 2 No= 1 = \_\_\_\_\_
- c) Yes= 2 No= 1 = \_\_\_\_\_
- d) Yes= 2 No= 1 = \_\_\_\_\_
- e) Yes= 2 No= 1 = \_\_\_\_\_

Subtotal = \_\_\_\_\_

SEL Total: \_\_\_\_\_ Key

SEL Subtotal: Good Understanding= Decent Understanding= Needs Improvement= 2

SEL Total: Good Understanding= Decent Understanding= Needs Improvement= 2

# ET's Quality Assessment sample

Enrichment Teacher Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ Class Grade: \_\_\_\_\_

Assessor's Name: \_\_\_\_\_

## Enrichment Teachers' Quality Assessment

Directions: Quietly examine the Enrichment Teacher (ET) teaching the lesson. Answer the Tasks below. Rate ET Task performance: **1- Not At All, 2- Needs Improvement, 3- Decent, 4- Good, 5- Well Done**

### Category: Preparedness

Tasks	Notes	Rate 1-5
Arrive early, before arrival time?		
Successfully set up lesson materials for students before the lesson started?		
Possess all the materials needed?		
Execute the lesson with a good understanding of the lesson content?		
Prepare for the clean up process?		

### Category: Engagement with Students

Tasks	Notes	Rate 1-5


### Category: Disposition

Tasks	Notes	Rate 1-5

For Assessor **ONLY**:

Add Total Rating per Category. Add Overall Assessment Rating Total.

Category: Preparedness \_\_\_\_\_

Category: Engagement with Students \_\_\_\_\_

Category: Disposition \_\_\_\_\_

**Overall Assessment Rating** \_\_\_\_\_

Category Rating: (0-8) Needs Improvement, (9-19) Good, (19-25) Excellent

Overall Rating: (0-8) Poor Quality, (9-19) Good Quality, (19-25) Excellent Quality

# ET's Quality Assessment: Quality Calculation portion

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For Assessor **ONLY**:

Add Total Rating per Category. Add Overall Assessment Rating Total.

Category: Preparedness \_\_\_\_\_

Category: Engagement with Students \_\_\_\_\_

Category: Disposition \_\_\_\_\_

**Overall Assessment Rating** \_\_\_\_\_

**Category Rating: (0-8) Needs Improvement, (9-19) Good, (19-25) Excellent**

**Overall Rating: (0-8) Poor Quality, (9-19) Good Quality, (19-25) Excellent Quality**

# ET's Monthly Student Assessment sample

Enrichment Teacher Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ Class Grade: \_\_\_\_\_

Student Name: \_\_\_\_\_

## Enrichment Teacher Assessment of Student

Directions: Read the questions below. Keep a close, discrete eye on the students the following week and observe their behavior and performance. Answer the Tasks below. Rate ET Task performance: 1- None 2- Needs Improvement, 3- Decent, 4- Good, 5- Excellent

### Category: Disposition

Tasks	Notes	Rate 1-5
Does the student generally have appropriate behavior during lessons?		
Is the student's general temperament good in class?		
Does the student disturb other students' learning?		
Does the student express genuine interest in engaging with the lessons?		
In conflict, does the student act in an appropriate manner?		

### Category: Interpersonal

Tasks	Notes	Rate 1-5


### Category: Understanding of Lessons

Tasks	Notes	Rate 1-5

For Assessor ONLY:

Add Total Rating per Category. Add Overall Assessment Rating Total.

Category: Disposition \_\_\_\_\_

Category: Interpersonal \_\_\_\_\_

Category: Understanding of Lessons \_\_\_\_\_

Overall Assessment Rating \_\_\_\_\_

Category Rating: (0-8) Needs Improvement, (9-19) Good, (19-25) Excellent

Overall Rating: (0-8) Poor Assessment (9-19) Good Assessment (19-25) Excellent Assessment

# ET's Monthly Student Assessment: Calculation portion

For Assessor **ONLY**:

Add Total Rating per Category. Add Overall Assessment Rating Total.

Category: **Disposition** \_\_\_\_\_

Category: **Interpersonal** \_\_\_\_\_

Category: **Understanding of Lessons** \_\_\_\_\_

**Overall Assessment Rating** \_\_\_\_\_

**Category Rating:** (0-8) Needs Improvement, (9-19) Good, (19-25) Excellent

**Overall Rating:** (0-8) Poor Assessment (9-19) Good Assessment (19-25) Excellent Assessment

# Program Operations: Be Virtual

Problems	Brainstorm Solutions
Program lacks demographic data of students such as demographics (ethnicity, gender, etc)	<ul style="list-style-type: none"><li>- Add demographic questions to student application form (gender, age, race, disability, etc)</li></ul>
No formal collection of student progress	<ul style="list-style-type: none"><li>- Provide and assess students with monthly worksheets that asks questions based on lesson content</li></ul>
No formal collection of teachers' info	<ul style="list-style-type: none"><li>- Require certain paperwork/info during Be Virtual instructor hiring process (application, background check, credentials, etc)</li></ul>
No accuracy check for number/email in student info	Database Software Solution; <b>See Slide 33, 44, &amp; 49</b>

# Be. Virtual Monthly Worksheet sample

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ Class Grade: \_\_\_\_\_

## Be Virtual C# Programming Worksheet

Directions: Read the following questions and answer to the best of your knowledge.

1. How do you define a constant in C#?
2. What is the purpose of the `static` keyword in C#?
3. What is the difference between `==` and `=` in C#?
4. Write a C# program to calculate the area of a rectangle given its length and width as input.
  
5. Write a C# program to reverse a string entered by the user.
  
6. What are the basic data types in C#?
7. How do you declare a variable in C#?
  
8. Write a C# program to determine whether a given number is prime or not.
  
9. Write a C# program to find the maximum number among three given numbers.
  
10. What are the different types of control flow statements in C#?

**For Instructors ONLY:** Assess and rate accuracy of student's answers.

Questions:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

Total: \_\_\_\_\_ /50

Poor Understanding: 0-10

Needs Improvement: 11-20

Average Understanding: 21-30

Above Average Understanding: 31-40

Excellent Understanding: 41-50

# Database Software solutions

1st Option:

Tableau

# Tableau: Enrichment Program

Problems	Brainstorm Solutions
Student pre/post surveys are not reliable and accurate because younger students do not understand current survey format	Programs Operation solution; <b>See Slide 16-23</b>
No formal way to assess students' level of understanding SEL Topics	<ul style="list-style-type: none"><li>- In accordance with pre/post surveys shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of Enrichment Teachers' (ET) attendance	<ul style="list-style-type: none"><li>- ET's attendance can be documented on a Google Spreadsheet (preferably a separate spreadsheet than students)</li></ul>
No formal way of tracking Enrichment Teachers' (ET) quality of teaching	<ul style="list-style-type: none"><li>- In accordance with ET's Quality Assessment shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>

# Tableau: Be Virtual

Problems	Brainstorm Solutions
Program lacks demographic data of students such as demographics (ethnicity, gender, etc)	Program Operations solution. <b>See Slide 33, 44, &amp; 49</b>
No formal collection of student progress	<ul style="list-style-type: none"><li>- In accordance with Be Virtual Monthly worksheet shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of teachers' info	Program Operations solution. <b>See Slide 28</b>
No accuracy check for number/email	<ul style="list-style-type: none"><li>- Tableau Prep can “clean” Excel spreadsheets containing contact info using a Regex calculation that will filter out inadequate contact info <a href="https://community.tableau.com/s/question/0D54T00000C5RVXSA3/how-to-validate-email-address-website-url-phone-number-and-postal-code">https://community.tableau.com/s/question/0D54T00000C5RVXSA3/how-to-validate-email-address-website-url-phone-number-and-postal-code</a></li></ul>

# Tableau Features: LOD Expressions

What?

LOD (Level of Detail) Expressions

- Click this [link](#) to view a video explaining this feature in further detail with an example

What does it do?

“LOD expressions are a way to efficiently compute aggregations that are not at the level of detail of the visualization. A simple example is adding a dimension to an already calculated aggregate value. They help you quickly get answers involving multiple levels of granularity in a single visualization. You can actually define the level of detail at which a calculation should be performed.” (Tableau Software (n.d.)

What can this mean?

Easily create & view graphs that shows:

- Students in a class who have a specific rating
- Students in a grade level who have a specific rating
- Students who have a score below a number during the spring within the last 3 years

# Tableau Features: LOD Expressions

## So What?

LOD (Level of Detail) Expressions can create graphs layered with dimensions and measures (direct or aggregated). These graphs can tell provide us with a variety of information, such as:

- Change of scores and ratings over time
- Patterns within grade level, class, school, gender, ethnicity, etc
- Outlier values
- Calculated then graphed measures (such as averages, mode, etc)

# Tableau Features: Join Step

What?

Join Step

- Click this [link](#) to view a video explaining this feature in further detail with an example

What does it do?

"A Join Step in Tableau involves combining data from two or more tables based on a common field, creating a single unified dataset for analysis and visualization. This process allows you to merge related information from different sources, facilitating comprehensive insights and reporting" - Tableau Software (n.d.)

What can this mean?

Easily create graphs that shows using data from several spreadsheets,

- Ex: Graph showing students pre/post survey ratings from different schools and grade level (different data spreadsheets involved)

# Tableau Features: Join Step

## So What?

Join Step combines data from two or more tables. This feature:

- Expands LOD Expressions by adding details
- Can connect columns or rows from different spreadsheets to create new calculated measures and graphs (Ex: join, graph, and compare 3rd grade and 5th grade pre/post survey ratings stored in different spreadsheets)
- Eliminates the tedious tasks of creating new spreadsheet and overloading database storage/driver with duplicate & unnecessary spreadsheet files

# Tableau Features: Explain Data

What?

Explain Data

- Click this [link](#) to view a video explaining this feature in further detail with an example

What does it do?

“Explain Data in Tableau provides AI-driven answers and easy-to-understand explanations for the value of any data point” - Tableau Software (n.d.)

What can this mean?

- Makes it easy to uncover and describe relationships in your data

# Tableau Features: Explain Data

## So What?

Explain Data feature can:

- Summarize conclusions from visually complex graphs such as multi dimensional (more than x and y axis) graphs
- Summarize discrepancies in datasets
- Summarizes seasons of high data points, low data points, averages, etc
- Summarize relationships between graphs (ex: finding a relationship between time graph showing attendance in Summer24 and graph showing ET's Quality Assessment ratings in Summer24)

# Tableau

Cost (how much does it cost?) <a href="https://www.tableau.com/pricing/teams-orgs">https://www.tableau.com/pricing/teams-orgs</a>	<ul style="list-style-type: none"><li>- Recommended: One <b>Creator</b> license to start since only 1 or 2 trained professionals need to be actively using Tableau-\$75/month, \$900/annually</li><li>- <u>Optional</u>: <b>Viewer</b> license for other employees (ETs, program coordinators, Program Director, etc ) who want direct access to graphs without a middle man (cannot edit or create graphs) -\$15/month, \$180/annually</li></ul>
Learnability (how easy is it to learn?)	<ul style="list-style-type: none"><li>- Will need trained professional to use software</li><li>- Training can be informal (Youtube videos), semi formal (Udemy courses), or formal (Tableau instructor guided classes)</li><li>- Using Tableau is a “learn on the job” experience; learning the basics should take less than a month</li></ul>
Other Relevant Features	<ul style="list-style-type: none"><li>- Compatible with Google sheets and Salesforce (for data transfer)</li><li>- Once data is uploaded, can apply filters in <b>Tableau Prep</b> to get specific info (ex: number of students with perfect attendance in Fall23, number of attendees at an event who are under 18, etc)</li></ul>

# Other Alternative Database Software

# 2nd Option:

# Microsoft Power BI

# Power BI: Enrichment Program

Problems	Brainstorm Solutions
Student pre/post surveys are not reliable and accurate because younger students do not understand current survey format	Programs Operation solution; <b>See Slide 16-23</b>
No formal way to assess students' level of understanding SEL Topics	<ul style="list-style-type: none"><li>- In accordance with pre/post surveys shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of Enrichment Teachers' (ET) attendance	<ul style="list-style-type: none"><li>- ET's attendance can be documented on a Google Spreadsheet (preferably a separate spreadsheet than students)</li></ul>
No formal way of tracking Enrichment Teachers' (ET) quality of teaching	<ul style="list-style-type: none"><li>- In accordance with ET's Quality Assessment shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>

# Power BI: Be Virtual

Problems	Brainstorm Solutions
Program lacks demographic data of students such as demographics (ethnicity, gender, etc)	Program Operations solution. <b>See Slide 33, 44, &amp; 49</b>
No formal collection of student progress	<ul style="list-style-type: none"><li>- In accordance with Be Virtual Monthly worksheet shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of teachers' info	Program Operations solution. <b>See Slide 28</b>
No accuracy check for number/email	Filter can be set to only accept contact information in a specific format. If a contact does not fit format, the data will not be used in final graph

# Microsoft Power BI

Pros	Cons
<ul style="list-style-type: none"><li>- Offers a wide range of detailed and attractive visualizations/graphs (bar, pie, scatter, etc)</li><li>- Compatible with Google Spreadsheets</li><li>- Receives data from multiple data sources for one dashboard (Note: dashboard is the page where graph customizations occur)</li><li>- Customizable graphs</li><li>- Filters for data (customizable or pre-made)</li><li>- Finds trends and relationships in data</li><li>- Control Access/Permissions</li></ul>	<ul style="list-style-type: none"><li>- Does not work on Mac devices without emulator</li><li>- Reported to have a “crowded user interface” making it hard to use at first</li><li>- Visualizations are customizable, but the customizations options are smaller compared to Tableau</li></ul>

# *Microsoft Power BI*

Cost (how much does it cost?)	<ul style="list-style-type: none"><li>- Recommended: One Power BI Pro license to start since only 1 or 2 trained professional need to be actively using Power BI- <b>\$10/per month, per user</b></li></ul>
Learnability (how easy is it to learn?)	<ul style="list-style-type: none"><li>- Will need trained professional to use software</li><li>- Training can be informal (Youtube videos), semi formal (Udemy or Coursera courses), or formal (Power BI instructor guided classes)</li><li>- Using Power BI is a “learn on the job” experience; learning the basics should take less than a month</li></ul>
Other Relevant Features	<ul style="list-style-type: none"><li>- Using the <b>Q&amp;A</b> feature, a user can ask questions about the graph or dataset and the system will search for data and information in the Power BI system</li></ul>

# 3rd Option:

# Google Charts

# Google Charts: Enrichment Program

Problems	Brainstorm Solutions
Student pre/post surveys are not reliable and accurate because younger students do not understand current survey format	Programs Operation solution; <b>See Slide 16-23</b>
No formal way to assess students' level of understanding SEL Topics	<ul style="list-style-type: none"><li>- In accordance with pre/post surveys shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of Enrichment Teachers' (ET) attendance	<ul style="list-style-type: none"><li>- ET's attendance can be documented on a Google Spreadsheet (preferably a separate spreadsheet than students)</li></ul>
No formal way of tracking Enrichment Teachers' (ET) quality of teaching	<ul style="list-style-type: none"><li>- In accordance with ET's Quality Assessment shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>

# Google Charts: Be Virtual

Problems	Brainstorm Solutions
Program lacks demographic data of students such as demographics (ethnicity, gender, etc)	Program Operations solution. <b>See Slide 33, 44, &amp; 49</b>
No formal collection of student progress	<ul style="list-style-type: none"><li>- In accordance with Be Virtual Monthly worksheet shown in previous slides, rating points can be graphed without calculation, graphed over time, or aggregated (combined &amp; calculated in some way) then graphed</li></ul>
No formal collection of teachers' info	Program Operations solution. <b>See Slide 28</b>
No accuracy check for number/email	<ul style="list-style-type: none"><li>- Filter can be set to only accept contact information in a specific format. If a contact does not fit format, the data will not be used in final graph</li></ul>

# Google Charts

Pros	Cons
<ul style="list-style-type: none"><li>- Provides more than 30 types of charts for data visualization (bar, line, pie, etc)</li><li>- Compatible with Google Spreadsheets and Salesforce for data transfer</li><li>- Customizable graphs</li><li>- Allows manipulation of graphs that responds to an event (ex: a graph can be customized to show number of students from one school per month then switch to another school with a prompt, such as a button click, on the same graph)</li></ul>	<ul style="list-style-type: none"><li>- No Access Control/Permission (any untrained professional with pass/user could access account)</li><li>- No Collaboration tools (one account per subscription)</li><li>- No Predictive Analysis</li><li>- No feature to summarize chart findings</li><li>- No multiple data source/spreadsheet per dashboard</li></ul>

# Google Charts

Cost (how much does it cost?)	<ul style="list-style-type: none"><li>- FREE!</li></ul>
Learnability (how easy is it to learn?)	<ul style="list-style-type: none"><li>- According to GetApp reviews, Google Charts learnability is 4.5/5</li><li>- Similar to Tableau, there are resources to learn Google Charts on Youtube and Google</li><li>- Unlike Tableau, there are short courses available on Coursera (but not Udemy)</li><li>- Using Google Charts is a “learn on the job” experience; learning the basics should take less than a month</li></ul>
Relevant Features	<ul style="list-style-type: none"><li>- Filters data through <b>Slicer</b> feature (can customize the filter or use pre-made filters)</li></ul>

# Recommendations

# Software Comparison

Features	Tableau	Power BI	Google Charts
Customizable graphs	x	x	x
Access multiple data source for one dashboard	x	x	
Feature that summarizes graph findings	x	x	
Data Filters	x	x	x
Access Control/Permissions	x	x	
Predictive Analysis	x	x	
Graphs can have multiple dimension	x	x	
Compatible with Google Spreadsheets	x	x	x
Compatible with all Devices	x		x

# Recommended Software Choice: Power BI

I recommend using **Power BI** because:

- \$65 cheaper than Tableau by per month, per user
- More advanced visualization options than Google Charts
- Has a query and answer feature to answers questions about graph results and datasets quickly
- Has similar capabilities to Tableau (though not as extensive with customizations)
- Has more capabilities than Google Charts

# Conclusion

“The more information you know, the better your decisions will be.” - Unknown

## Program Operations

With new methods of evaluating and documenting students' and ETs' progress, decision makers can have a better understanding of where the program currently stands in achieving the program's objectives. To support this, the following documents were created:

- Student Pre & Post Surveys w/ results rating portion (K-2nd, 3rd-6th, and 7-8th)
- ET's Assessment of Student Progress w/ results assessment portion
- ET's Quality Assessment w/ results rating portion
- Student Be. Virtual Monthly Worksheet w/ results assessment portion

Having improved methods of assessing The Be Org's overall progress will give

# Conclusion

“The more information you know, the better your decisions will be.” - Unknown

## Database Software

With an upgraded database software, we can have a better understanding of progress and areas of need from the past, present, and future. The possibilities are endless. Some graph case uses can include:

- Student's understanding of SEL topics before/after a semester
- ETs' quality progress over the course of months or years
- Student's competency progress with Be Virtual material over the course of months or years

These visualizations can reflect well on The Be Org and could be used to increase partner and donor relationships.

# Resources

## Google Charts

Think Big Analytics. (n.d.). *Google Charts*. Retrieved June 3, 2024, from <https://thinkbiganalytics.com/google-charts>

## Power BI

DataFlair Team. (n.d.). *Power BI Features*. Data Flair. Retrieved June 3, 2024, from <https://data-flair.training/blogs/power-bi-features/>

Microsoft. (n.d.). *Pricing*. Power BI. Retrieved June 3, 2024, from <https://powerbi.microsoft.com/en-us/pricing/>

## Tableau

Tableau Software. (n.d.). 26 Tableau features you need to know from A to Z. Retrieved [insert date you accessed the website], from <https://www.tableau.com/blog/26-tableau-features-know-a-to-z>

Tableau. (n.d.). Pricing for teams & organizations. Tableau. Retrieved May 28, 2024, from <https://www.tableau.com/pricing/teams-orgs>