Using Data to Make Decisions

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Positive Behaviour for Learning School-wide

- **Objectives**

1. Define the elements of effective decision-making
2. How to transform “data” into useful information
3. One rubric for using data in decision-making
4. Considerations for the data your team needs?

Positive Behaviour for Learning School-wide

Big Idea:

Data are necessary but insufficient

Build “Decision-Systems” not Data Systems

The data will guide you to ask the right questions, but your knowledge about the children, system, faculty, and families is critical for effective academic and social decisions.

Collective Goal:

Improve the effectiveness and efficiency with which school teams use data to make academic and behavior support decisions.

Assumptions:

Every school has teams that meet regularly to improve academic and behavior support

* 2500+ primary and secondary schools in New Zealand
* 450,000 person-hours/year spent in meetings.

- Effective Decision-Making

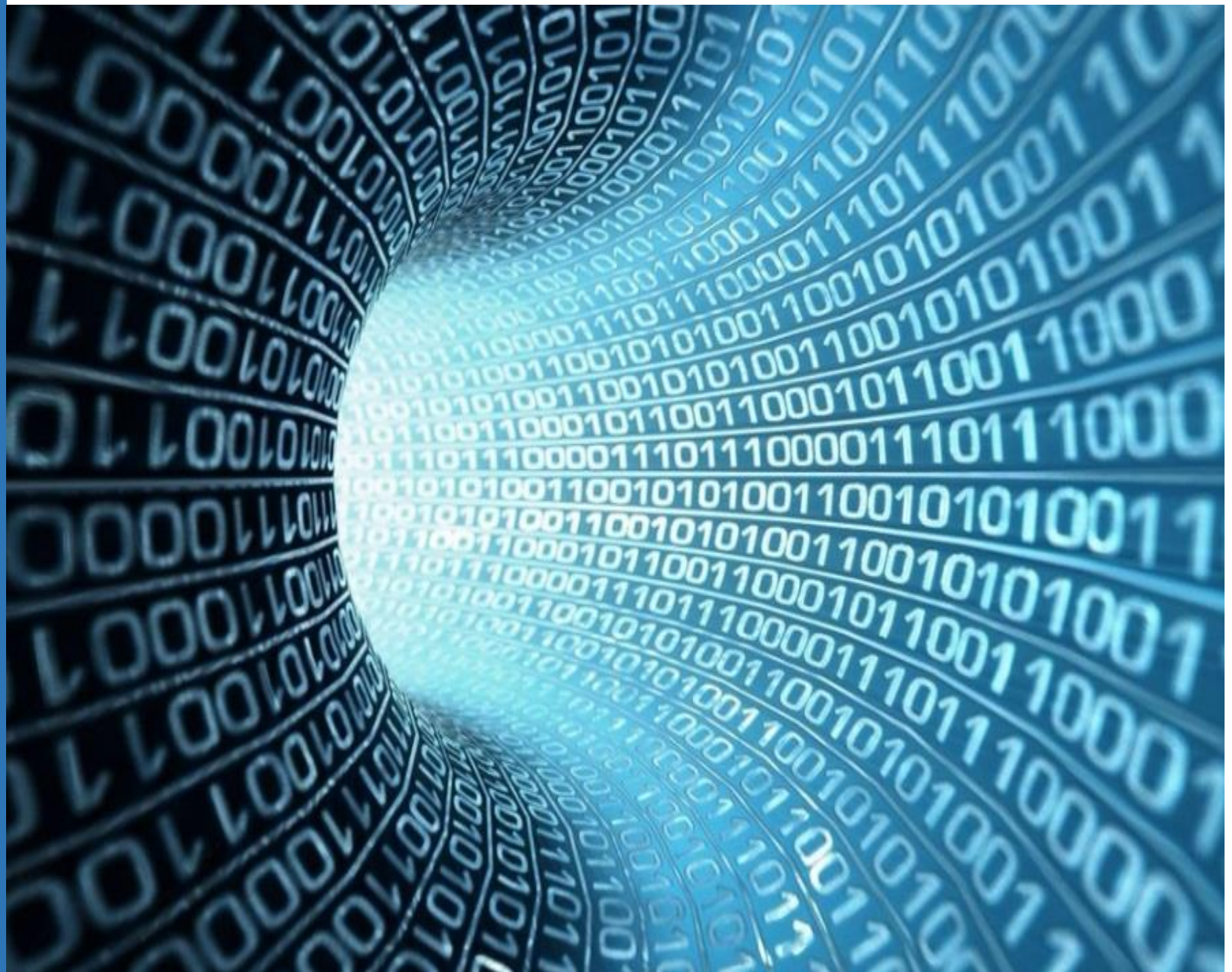
Decisions will be more effective, efficient, and culturally sensitive if they are based on local, accurate, timely information

The data available to teams is increasing in **amount, quality and precision** (academic and behavior support)

To scale-up PB4L we need not just better data, but better protocols for team-based decision-making.

Challenge: Data Overload

Challenge: The Black Hole of Administrivia

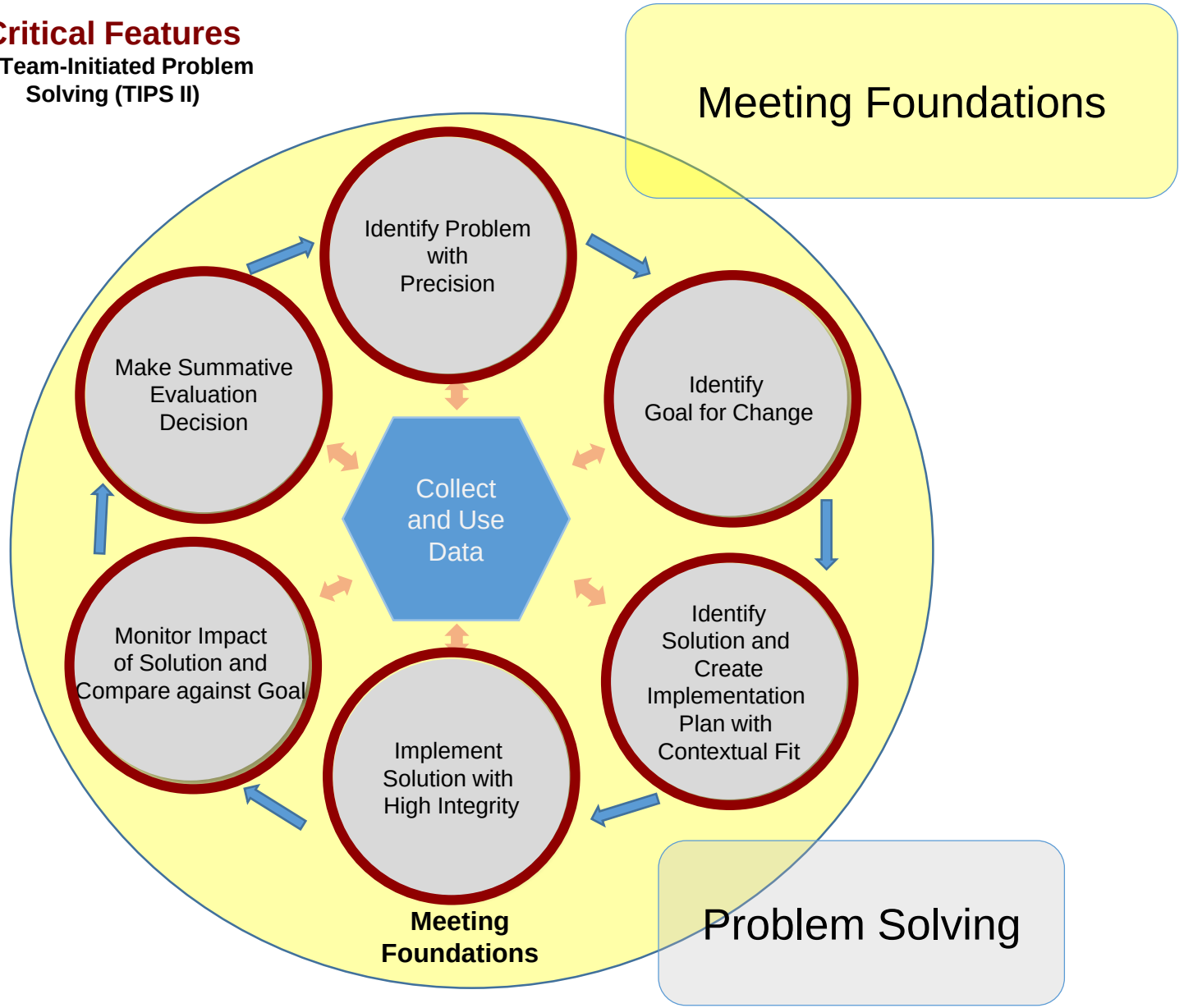


- One Approach: Team Initiated Problem Solving

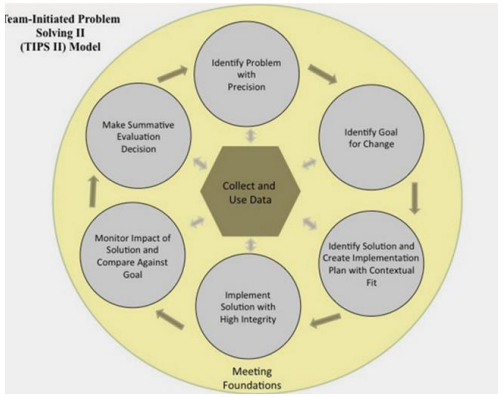
TIPS

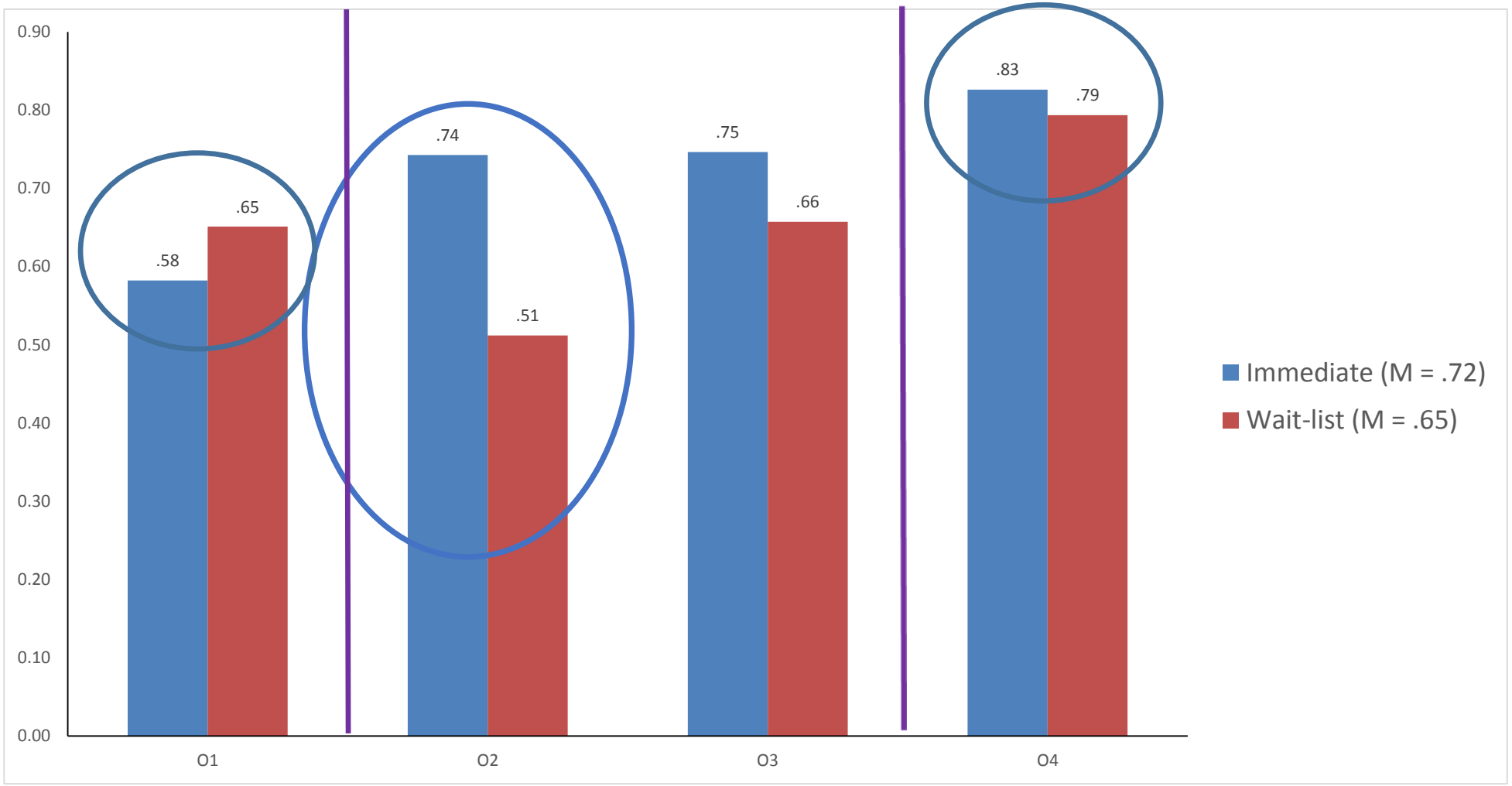
Critical Features

of Team-Initiated Problem Solving (TIPS II)



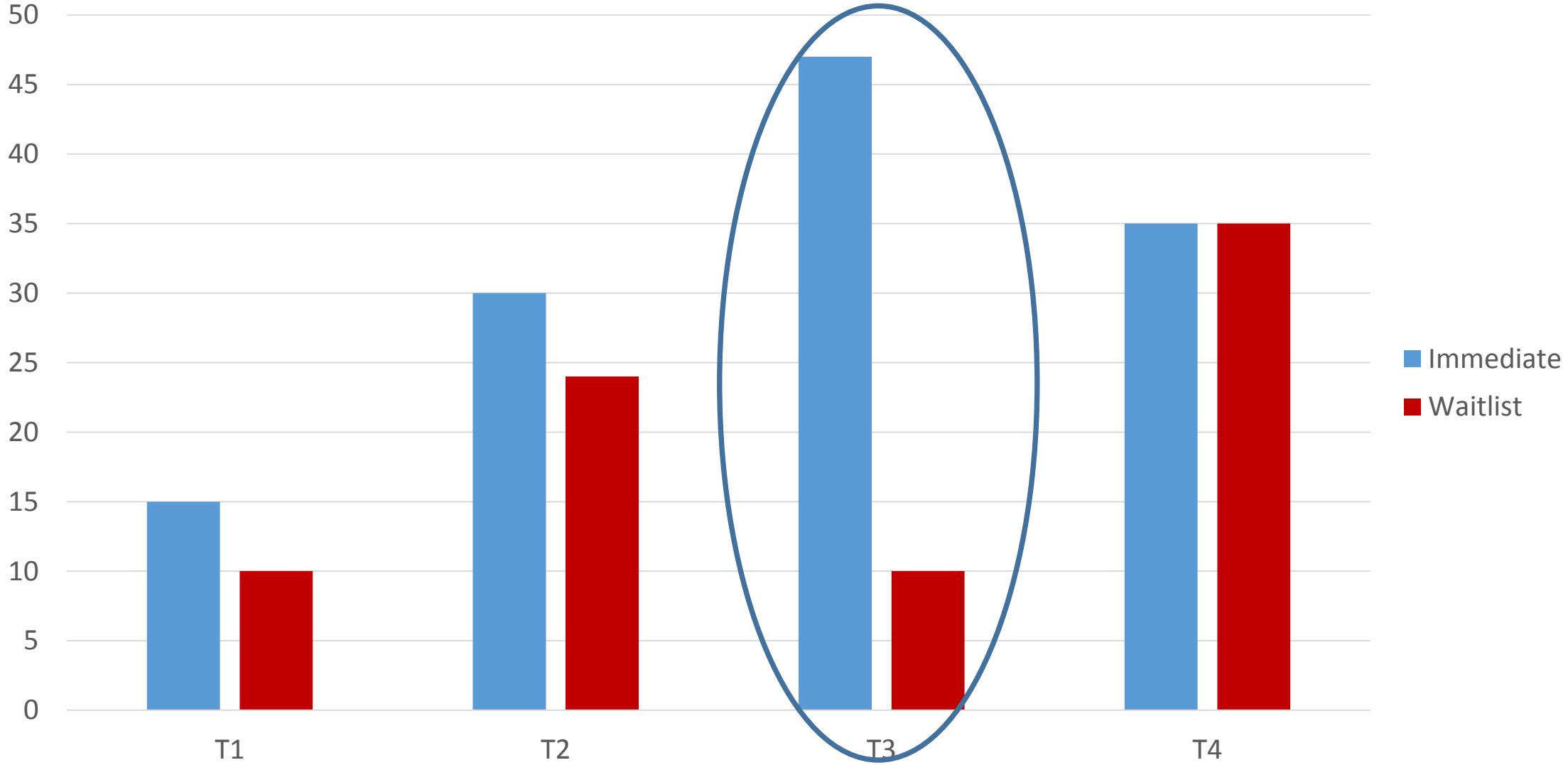
DORA: Problem Solving Score (t_{O2} = 3.03, *df* = 36, *p* < .05, *ES* = .87)



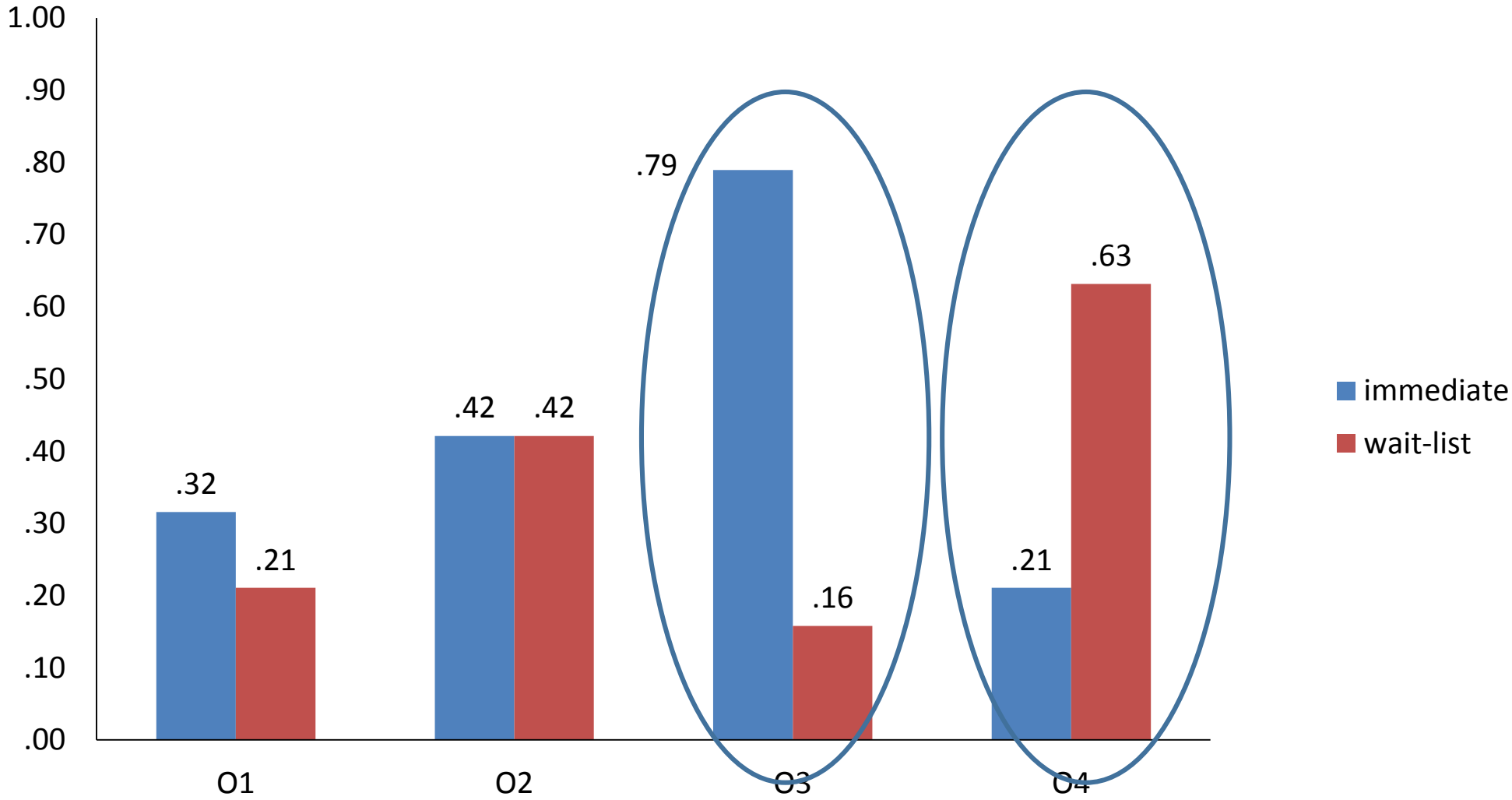


Horner, R., Newton, J.S., Todd, A., Algozzine, B., Algozzine, K., Cusumano, D., & Preston, A.I. (in press). A randomized wait-list controlled analysis of team problem solving.

DORA: Proportion of Teams Implementing Solutions with Integrity ($X^2 = 6.21$, $p < .05$, $V = .34$)

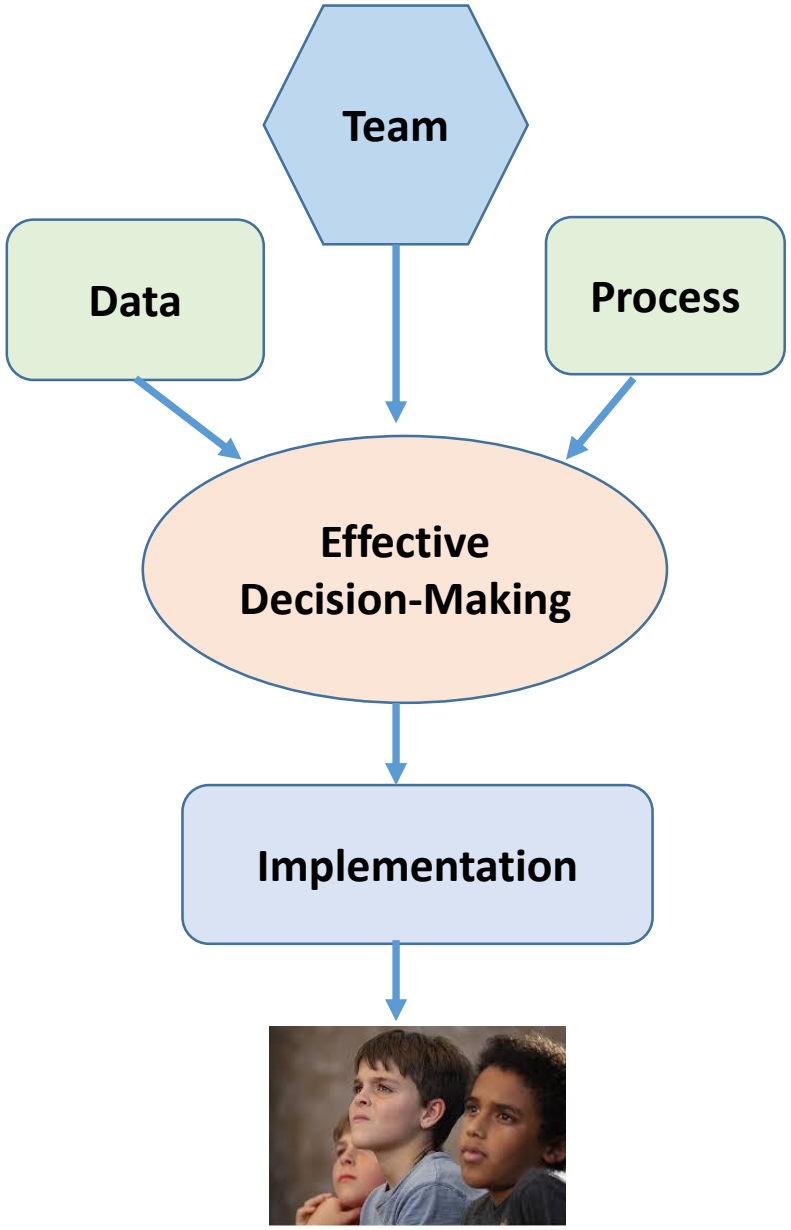


DORA: Proportion of solutions benefiting students ($X^2 = 4.40$, $p < .05$, $V = .28$)



Build Decision Systems not Data Systems

- Effective Decision-making



Membership, Responsibility, Authority, Opportunity

Information, Decision-Making

Identify “Problems”
Select Solutions/ Action Plans

Resources, Review, Adaptation

- Decision Making

Decision Making

Identification of a problem

School pattern, classroom pattern, group pattern, student pattern

Develop Solutions / Action Plan

Prevention, teaching, reward, extinction, correction, evaluation

Implement and Adapt Solutions

Fidelity, effect, efficiency, alterations

Problem Solving

- ***Identify*** current status

A "Problem" is any observed difference between what is expected (desired) and what is actual

- ***Problem Solving*** starts by defining a problem with precision

What
- behaviors are a barrier and **how often** are they performed?

Where
- are the behaviors most and least likely

When
- are the problem behaviors are most and least likely

Who
- is engaging in the behaviors

Why
- do the behaviors keep occurring?

Defining a Problem with Precision

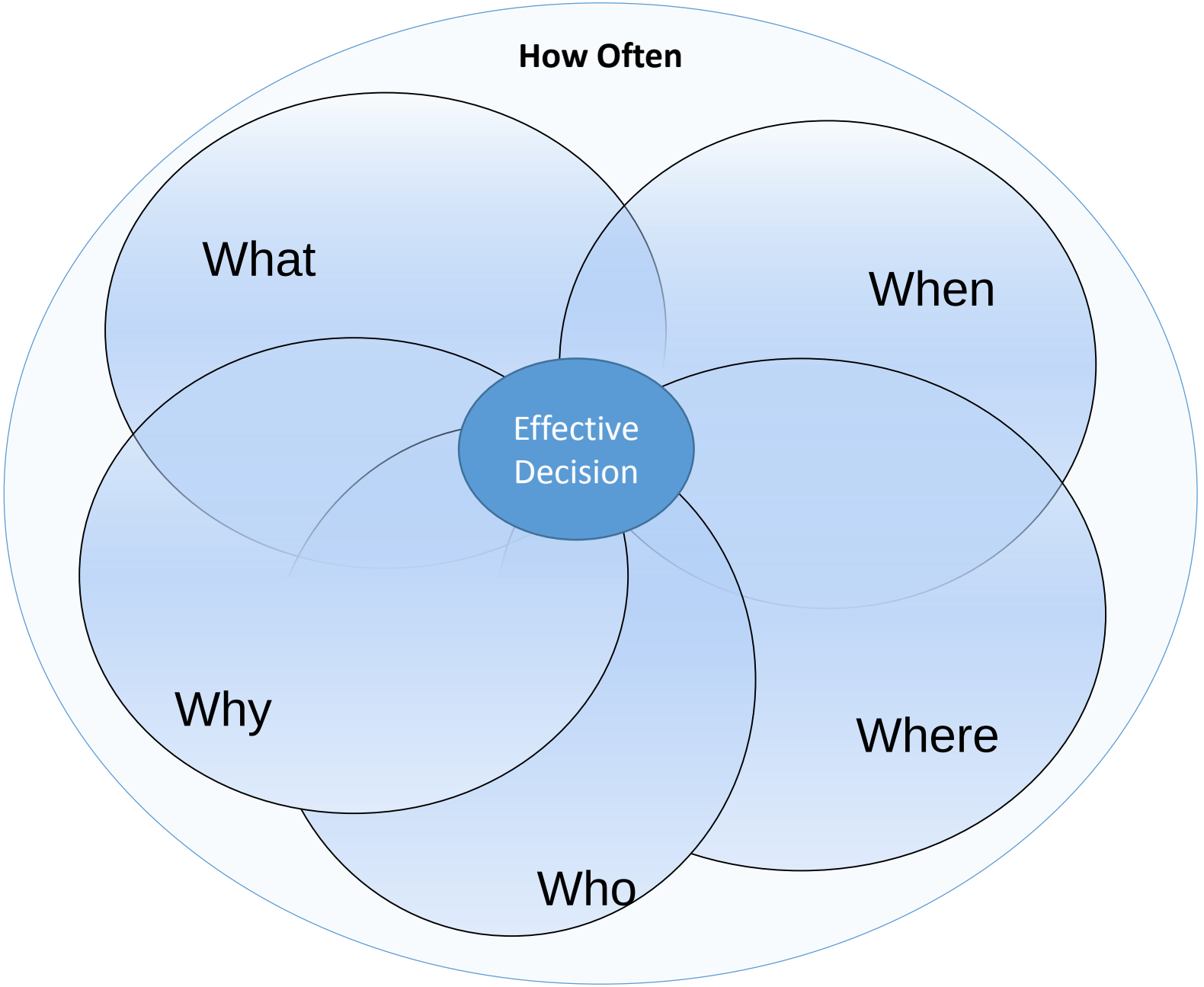
- A major error is to launch into problem solving BEFORE the problem has been defined with precision.

- **Selecting solutions without precise problem statement**
  - What we did last year
  - What my cousin did with her son
  - What I can buy (or download) a
  - What I can buy from a

- **These solutions**
  - Often do not work
  - Usually are more expensi
  - Typically do not "fit" the context.

Implementing Behavior Support without taking the time to define a problem behavior with precision is as likely to produce plans that make things worse as plans that make things better.

Defining a Problem with Precision



Defining a Problem with Precision

Primary	Precise
Indicates a difference between what is happening and what is desired.	What, Who, Where, When, Why, and How Often
Too much aggression in cafeteria	3-5 ODRs for aggression per day from 5-8 students who yell and hit in the cafeteria after they are done with lunch. Appears related to getting peer attention

Defining a Problem with Precision

- **Primary Statements**
  - Too many referrals
  - September has more suspensions than last year
  - Gang behavior is increasing
  - The cafeteria is out of control
  - Student disrespect for teachers is outragious

- **Precision Statement**
  - **There are twice as many ODRs for aggression on the playground** than last year. These are most likely to occur during **first recess**, with a **large number of students**, and the aggression is related **to getting access to the new playground equipment**.

Defining a Problem with Precision

Who, What, Where, When, Why (How often)

- Darin uses sexually explicit language in the classroom. This is creating a climate of disrespect and incivility.

Primary

- Tantrums in the van are creating unsafe travel.

Primary

Defining a Problem with Precision

Who, What, Where, When, Why (How often)

- James D. is hitting others in the cafeteria during lunch at least five times a week, and his hitting is maintained by peer attention.

Precise

- Boys are engaging in sexual harassment.

Primary

- Three 5th grade boys are name calling and touching girls inappropriately during recess in an apparent attempt to obtain attention. This is occurring at least 5 times a week.

Precise

Defining a Problem with Precision

- Define a **PRIMARY** problem

- Transform that description in to **PRECISE** problem statement.
    - Who
    - What
    - Where
    - When
    - Why
    - How Often

Define a Precise Academic Problem

Problem Solving

Effective Problem Solving Using Data

1. First identify if there is a problem

   Difference between observed and expected behavior.

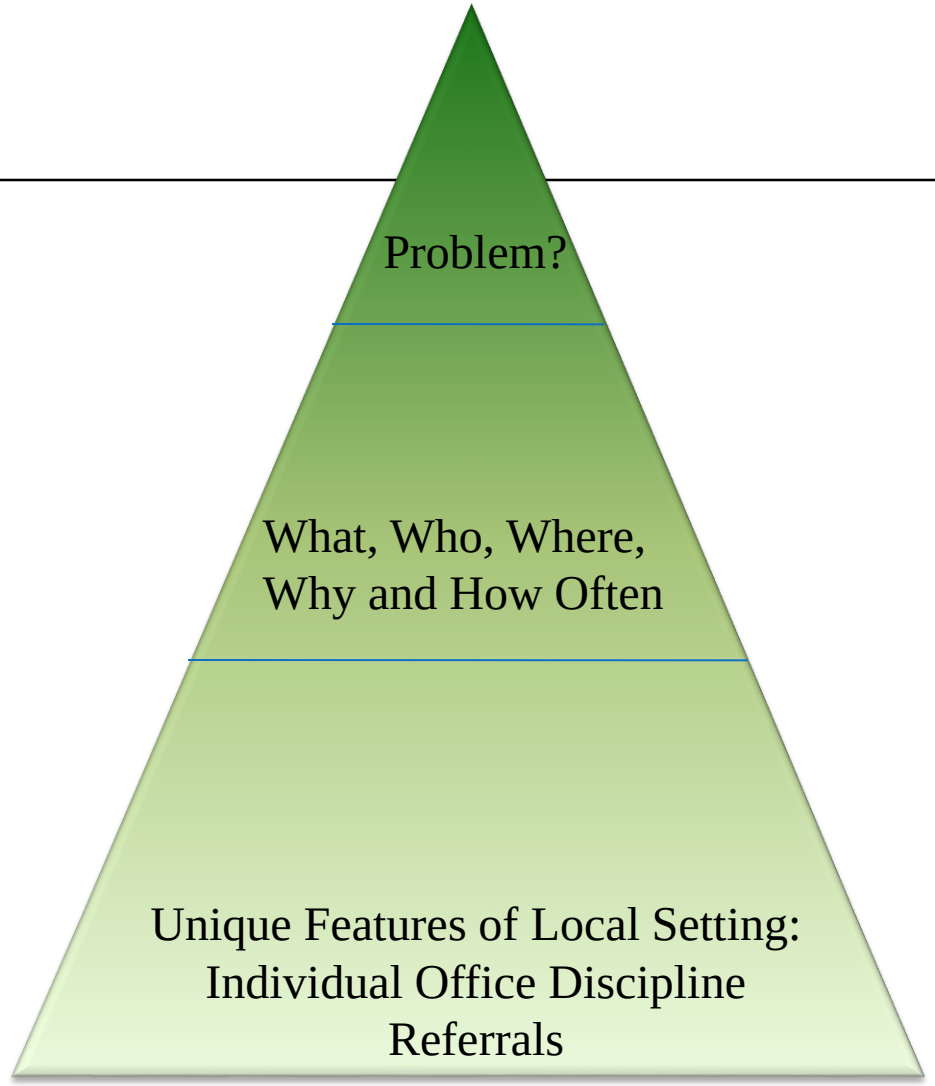
2. Define the problem with precision

   Who, What, Where, When, Why & (How often)

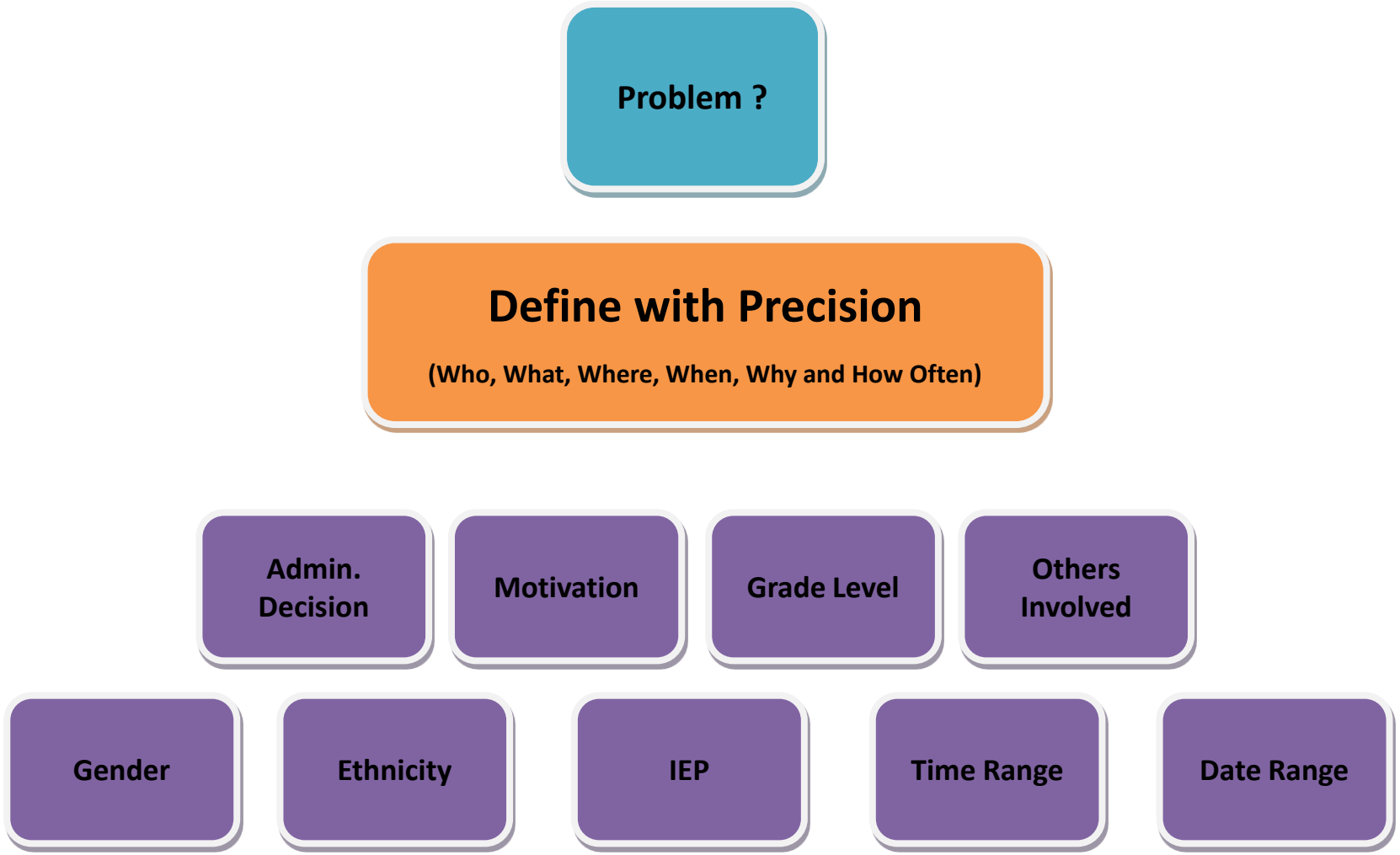
3. Build solution that is practical, instructional and functional.

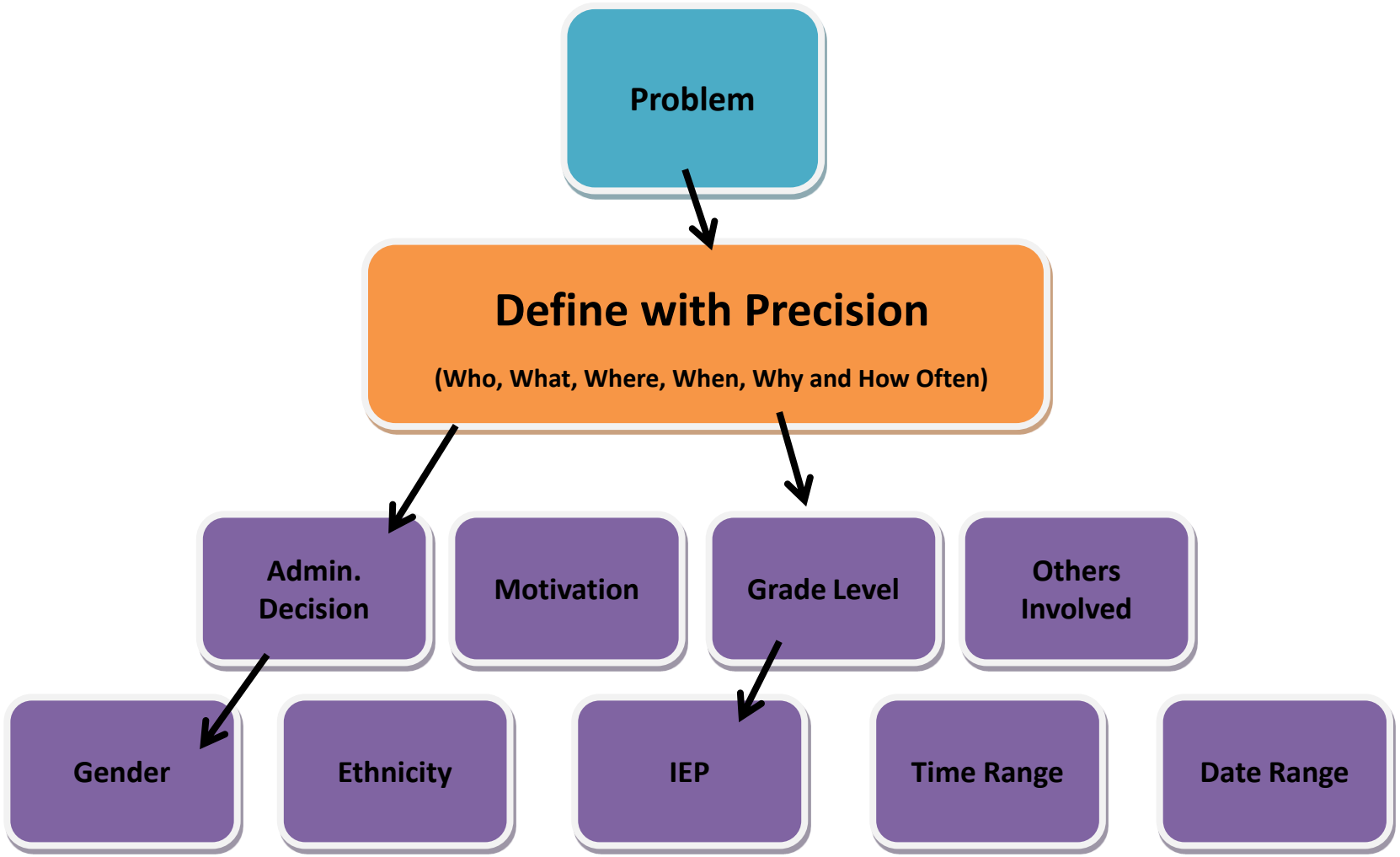
   Based on behavioral function, comprehensive, and fits with team values, skills, resources and administrative support.

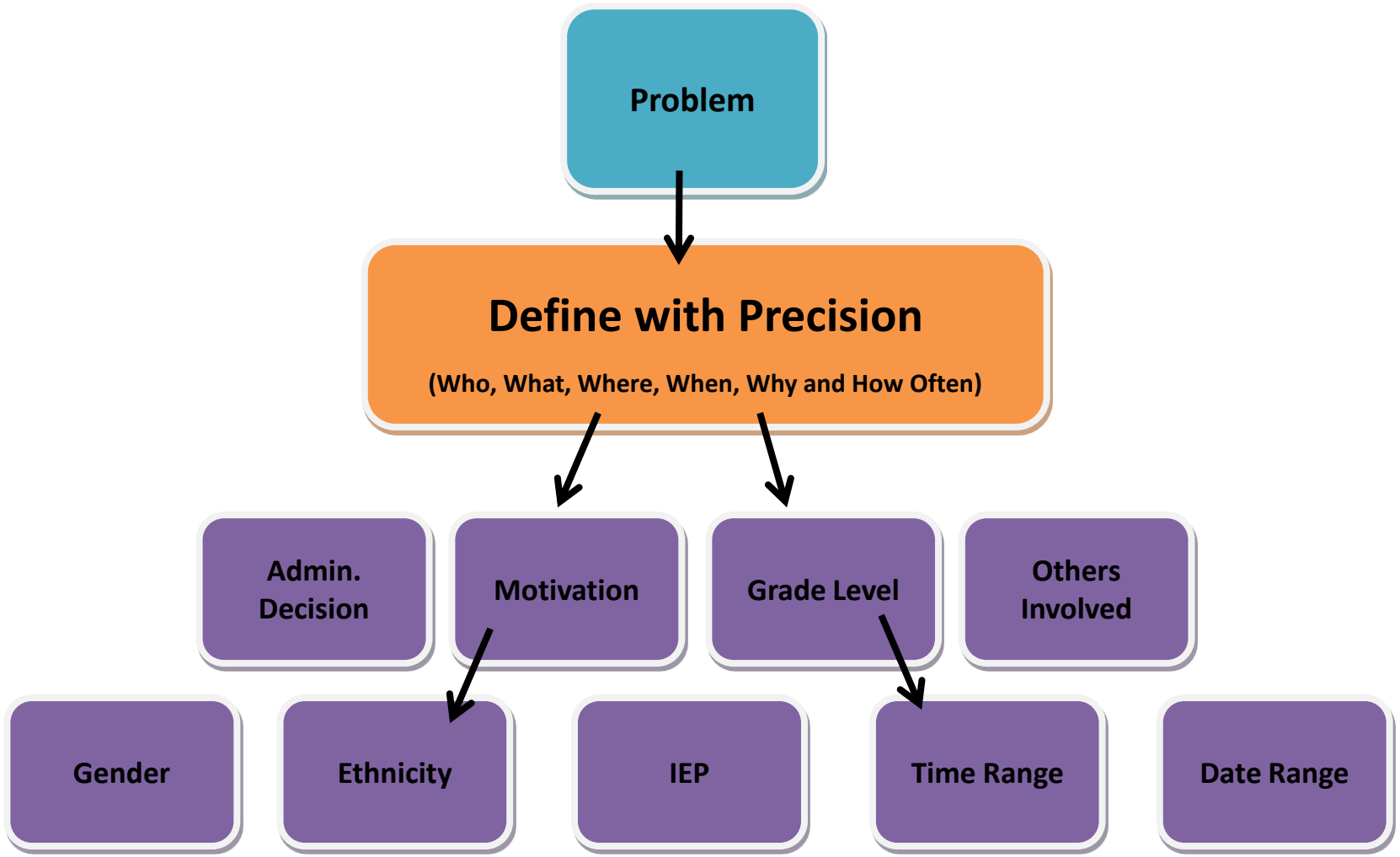
Gilbert Decision Hierarchy



Using Data to Solve Problems:




Problem
Define with Precision
(Who, What, Where, When, Why and How Often)
Admin. Decision
Motivation
Grade Level
Others Involved
Gender
Ethnicity
IEP
Time Range
Date Range


Problem
Define with Precision
(Who, What, Where, When, Why and How Often)
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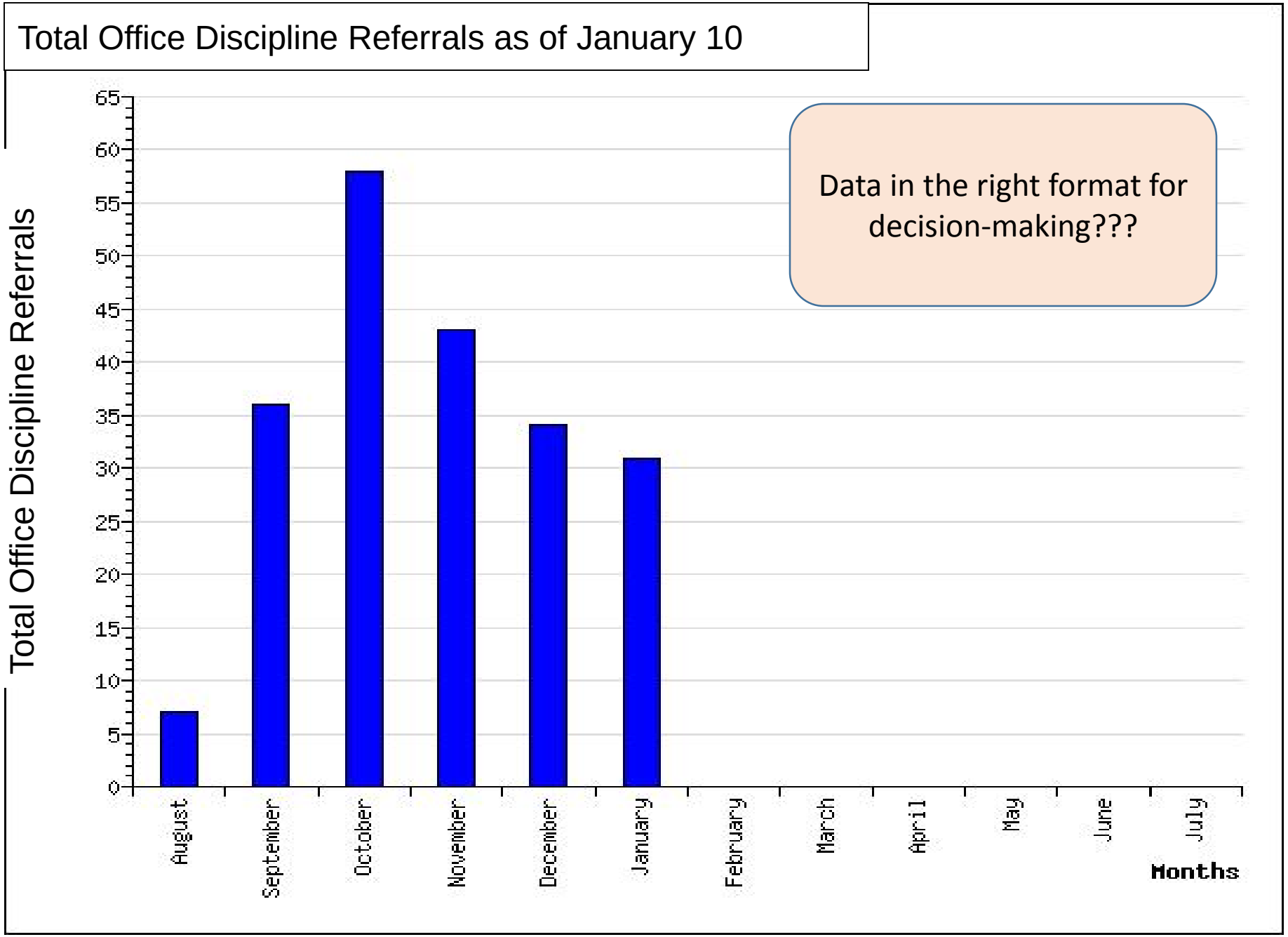
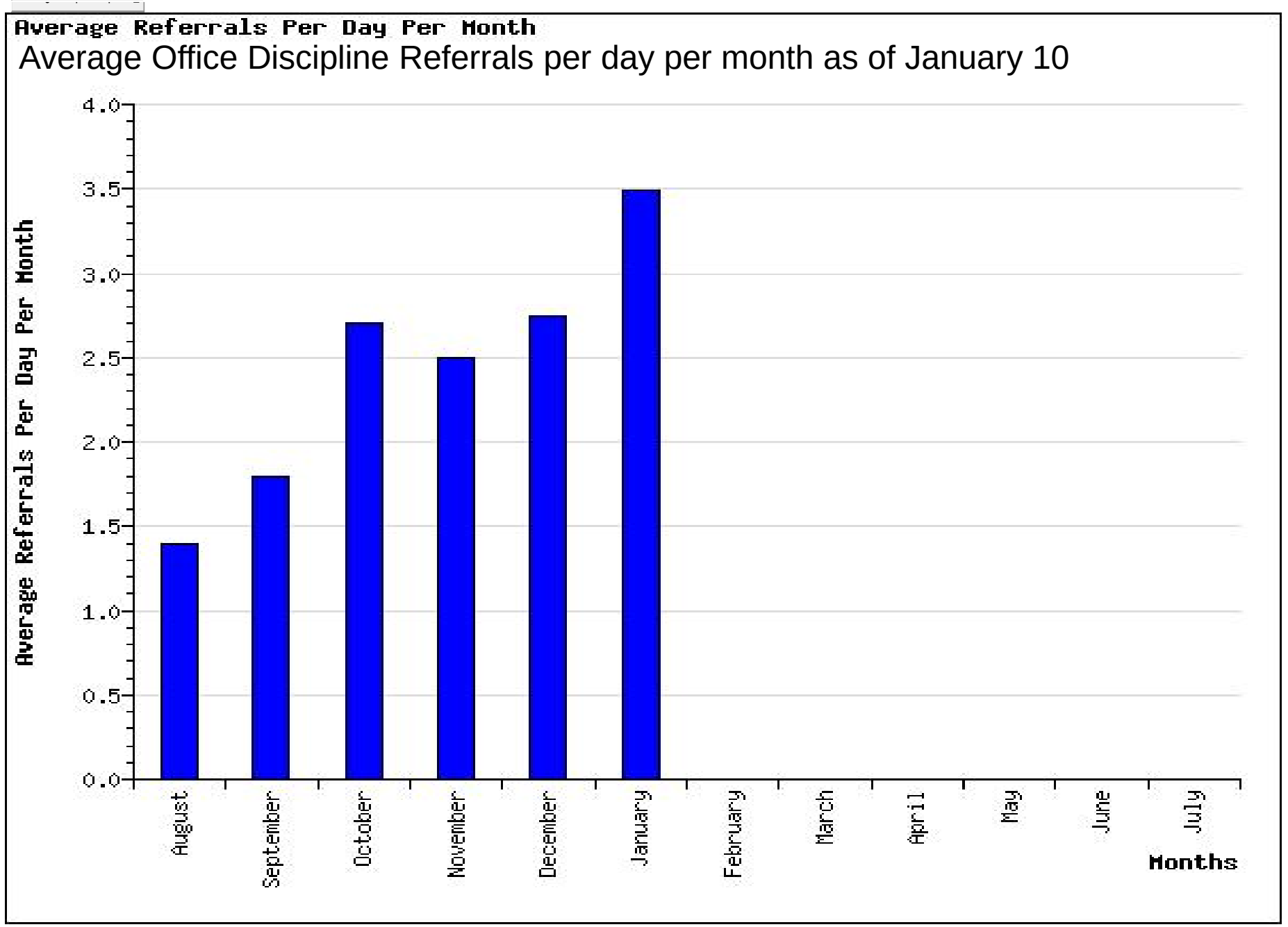
Gender
Ethnicity
IEP
Time Range
Date Range

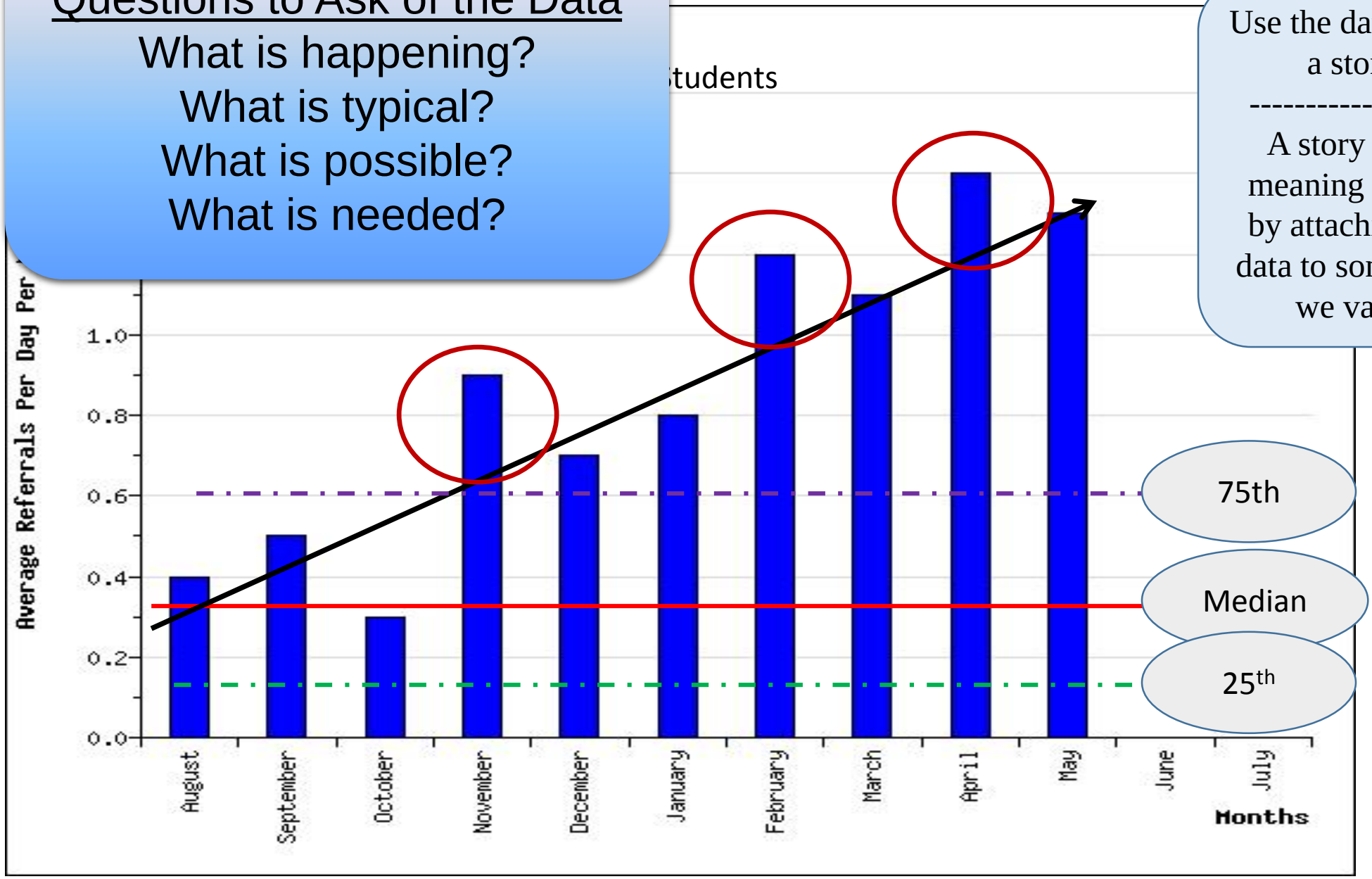
Total Office Discipline Referrals as of January 10




Average Referrals Per Day Per Month
Average Office Discipline Referrals per day per month as of January 10
Average Referrals Per Day Per Month
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
August
September
October
November
December
January
February
March
April
May
June
July
Months

Questions to Ask of the Data

What is happening?
What is typical?
What is possible?
What is needed?



Use the data to tell a story.

A story gives meaning to data by attaching the data to something we value

Problem Solving

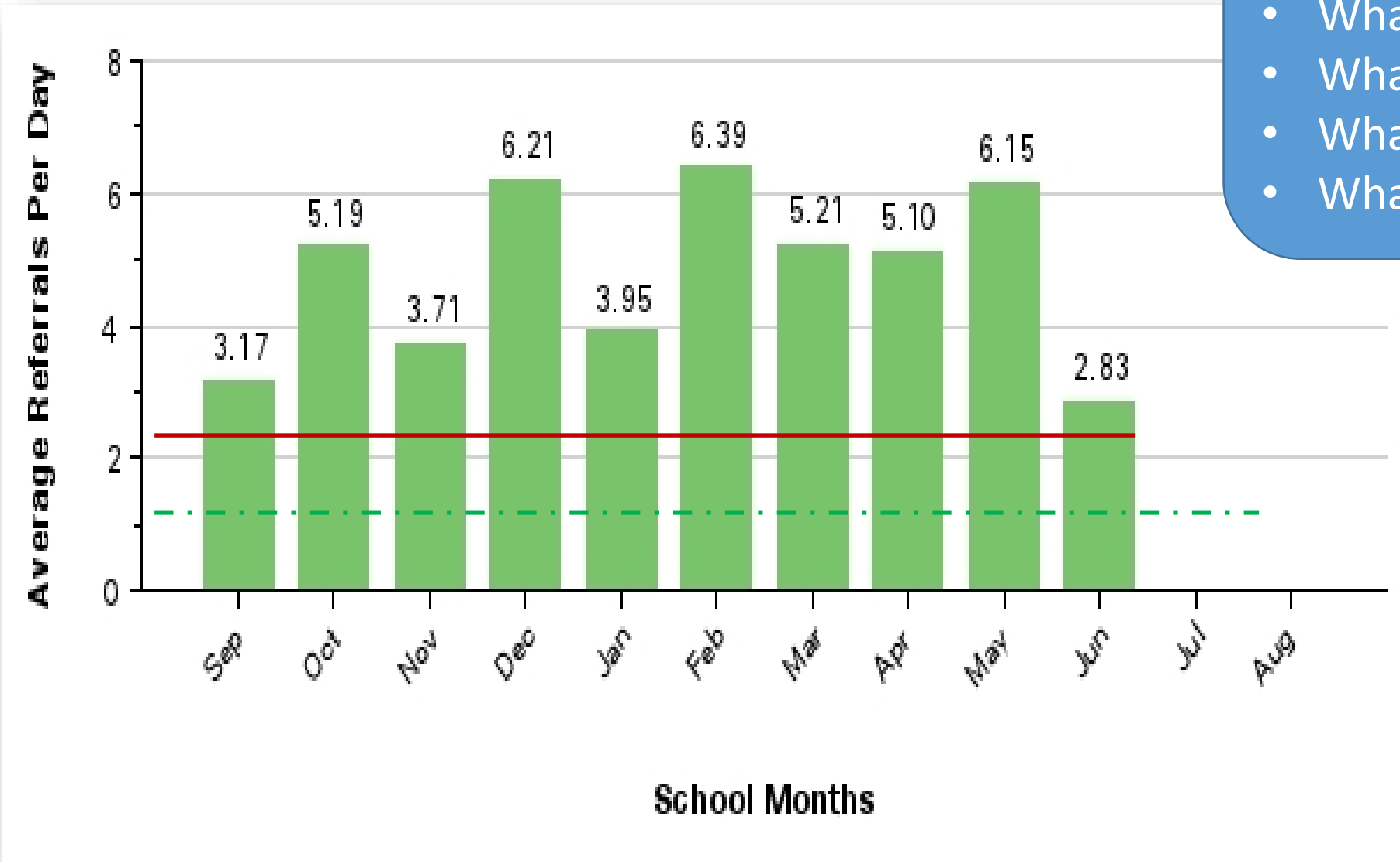
SWIS Summary 2016-17(Majors Only)
5586 Schools, 2,500,992 Students

What is typical?

What is possible?

Grade Range	Number of Schools	Mean Enrollment per School	Mean ODRs per 100 Students/ School Day	Median ODRs per 100 per Students/ School Day	25th Percentile ODR/100 Students/ School Day	75th Percentile ODR/100 Students/ School Day
K-6	3580	468	.34 (.60)	.20	.09	.39
6-9	1023	643	.48 (.67)	.30	.15	.57
9-12	526	931	.48 (.71)	.28	.16	.53
PreK-8	365	427	.55 (1.04)	.27	.12	.51
PreK-12	92	308	.88 (.2.11)	.26	.15	.65

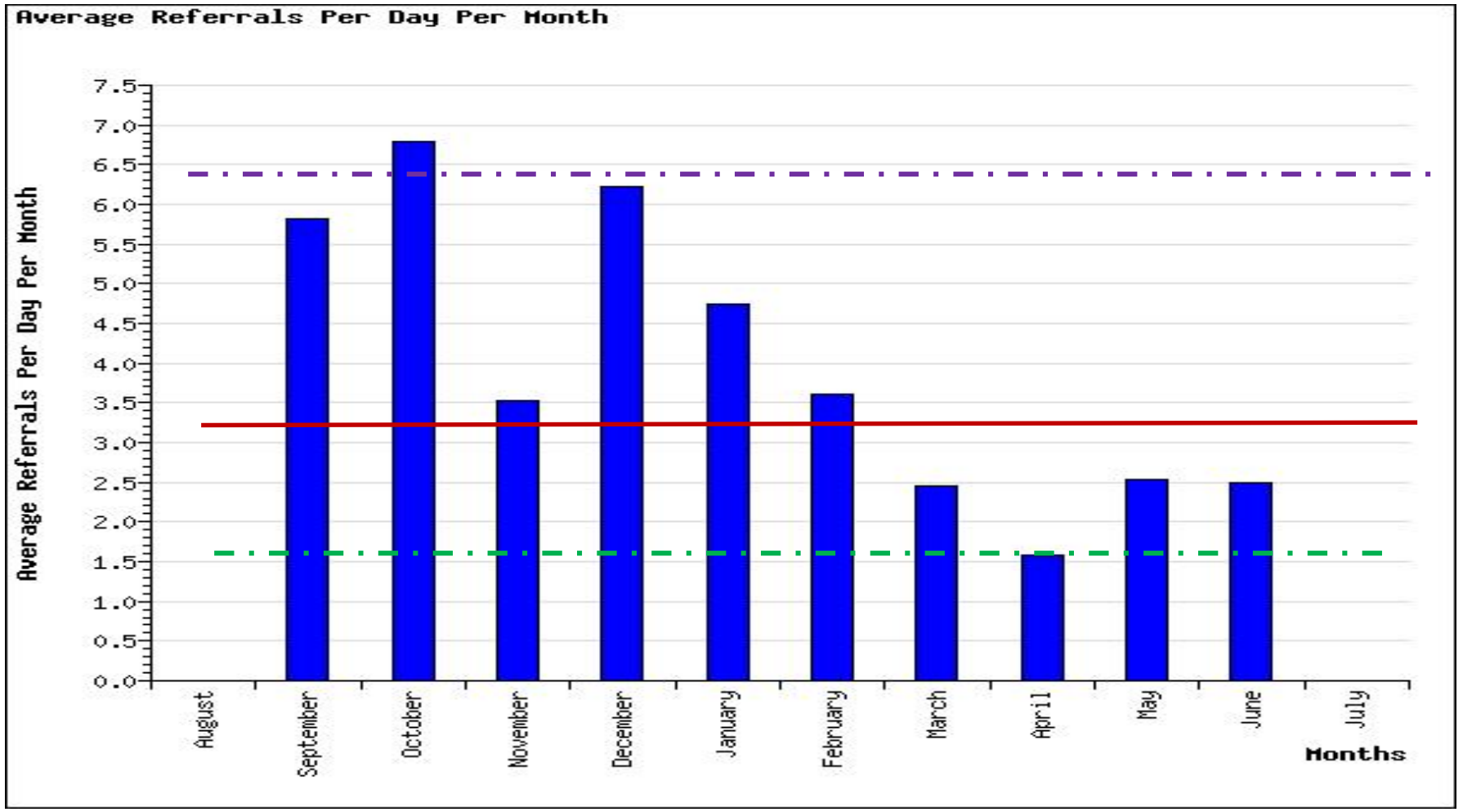
Example



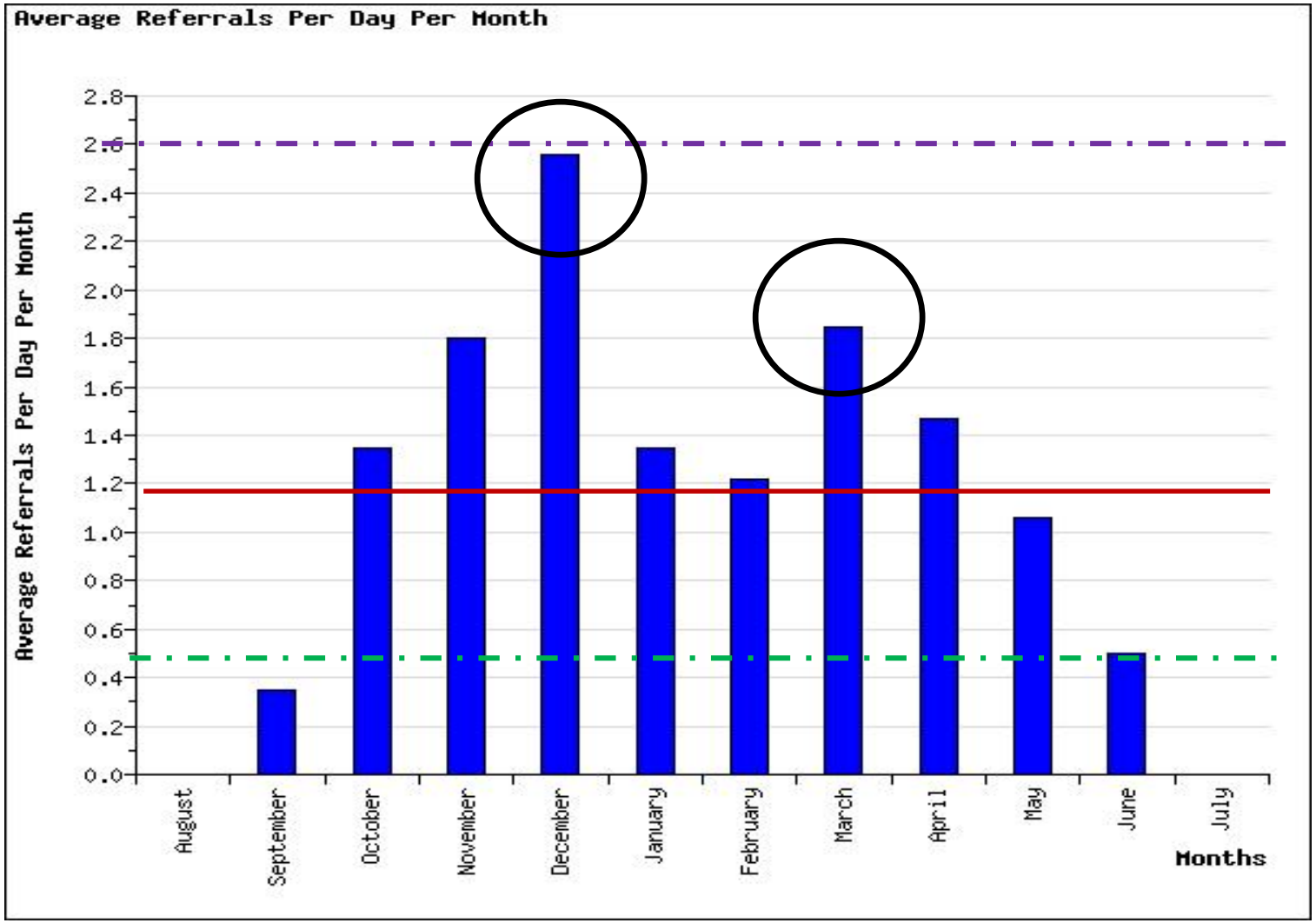
Do we have a problem?

- What is pattern
- What is typical
- What is possible
- What is needed

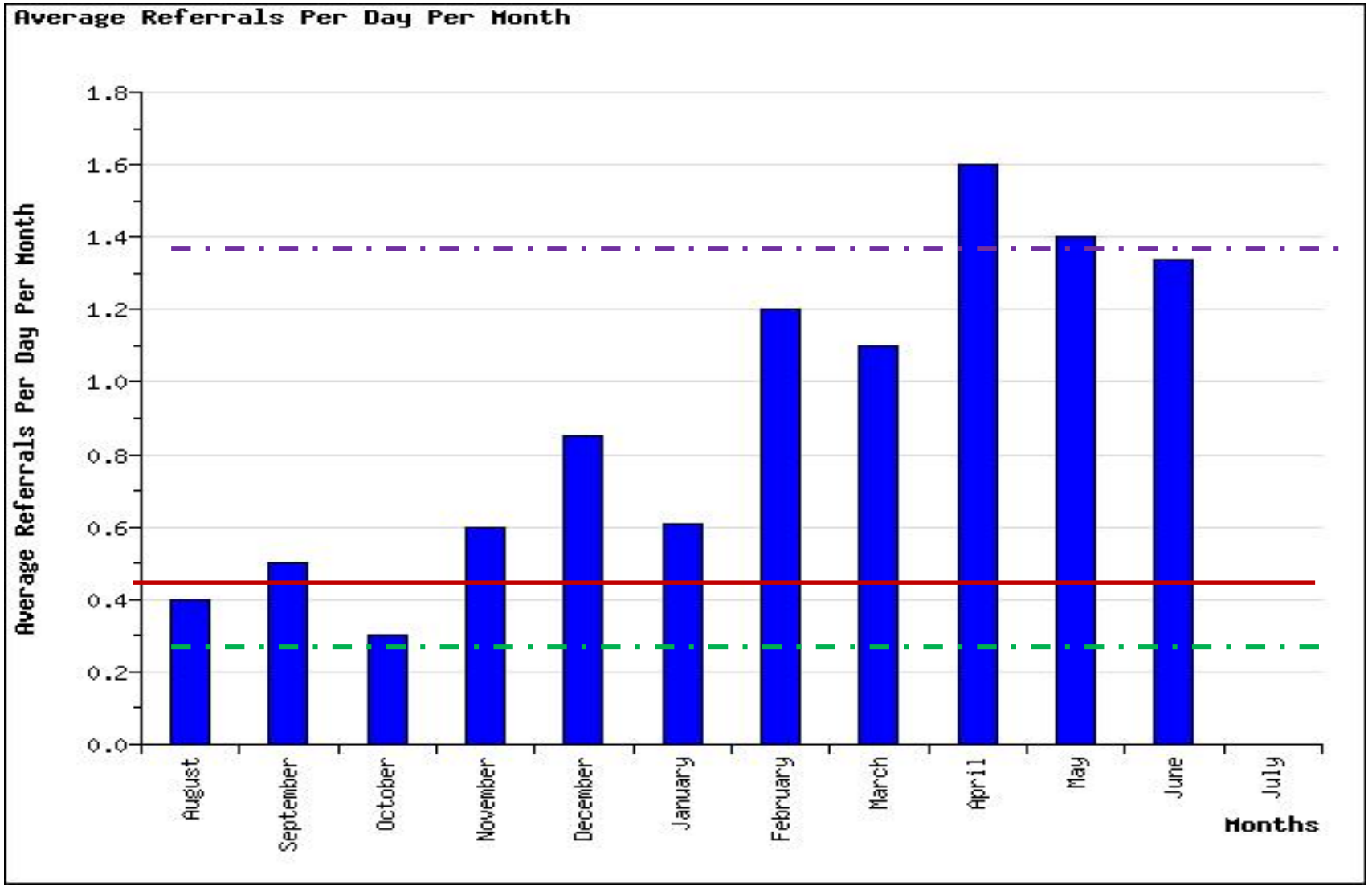
Elementary School 1500 Students (1500/100 =105 X .22= 3.3)



Describe the narrative for this school



Describe the narrative for this school



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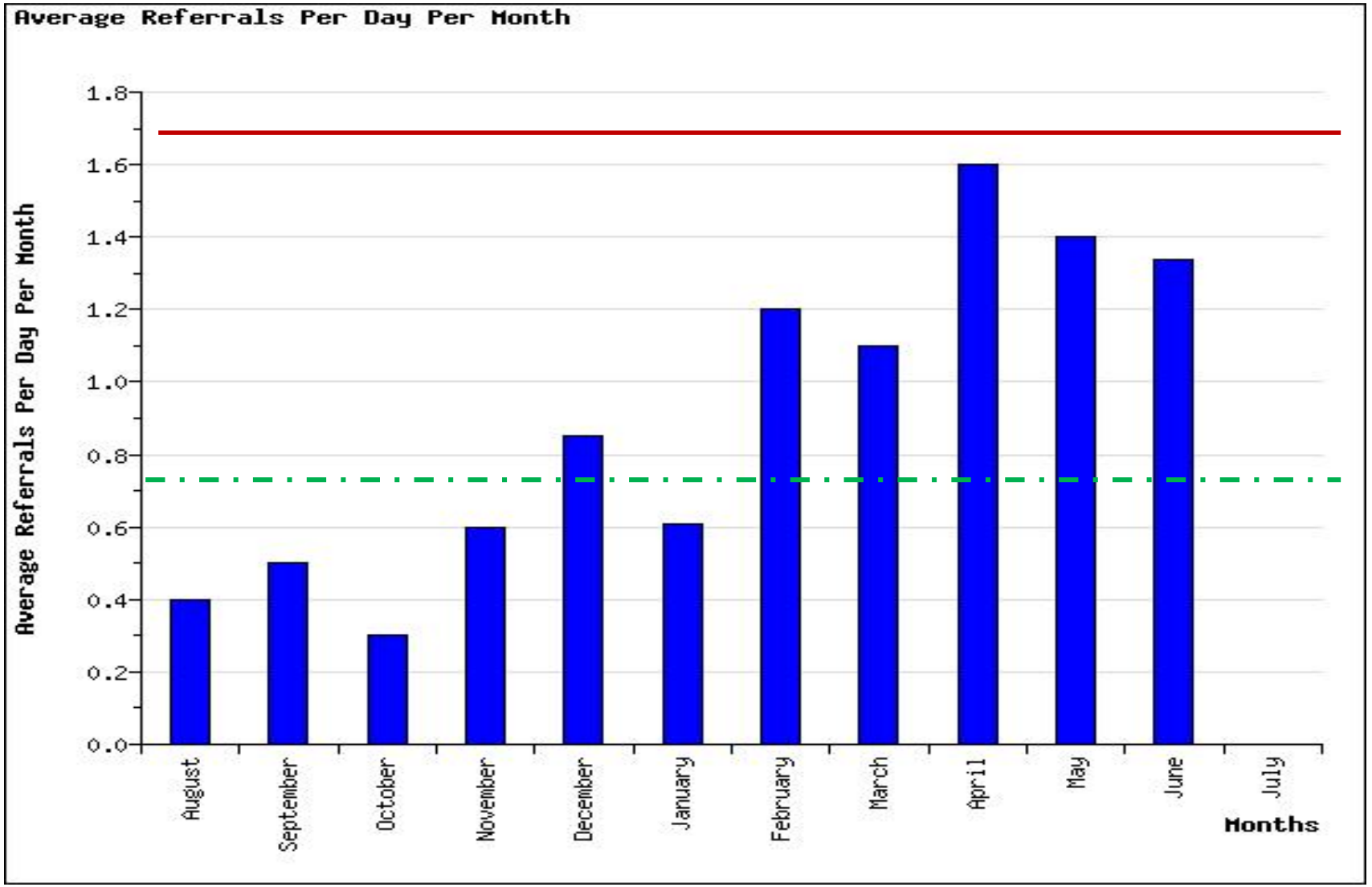
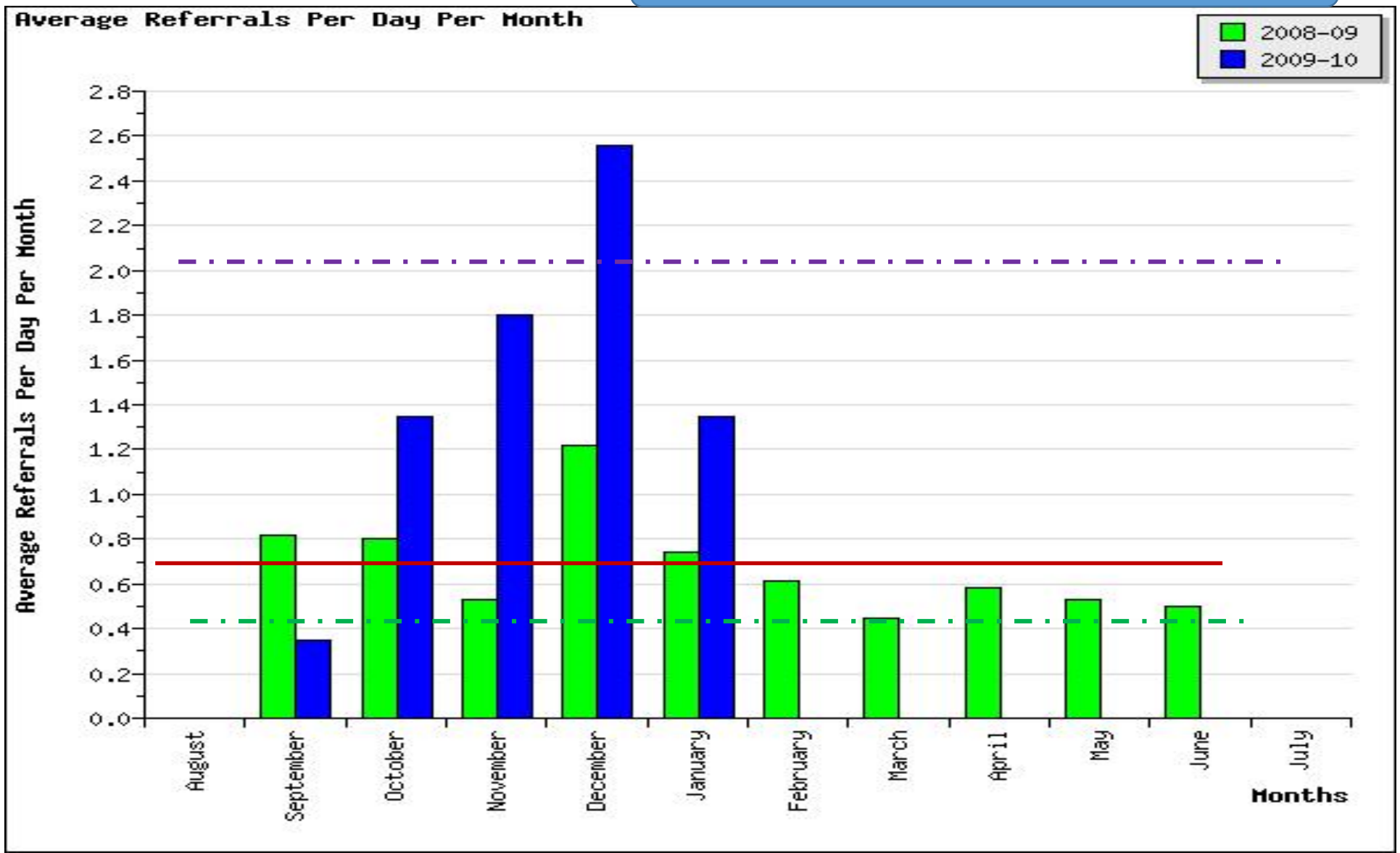
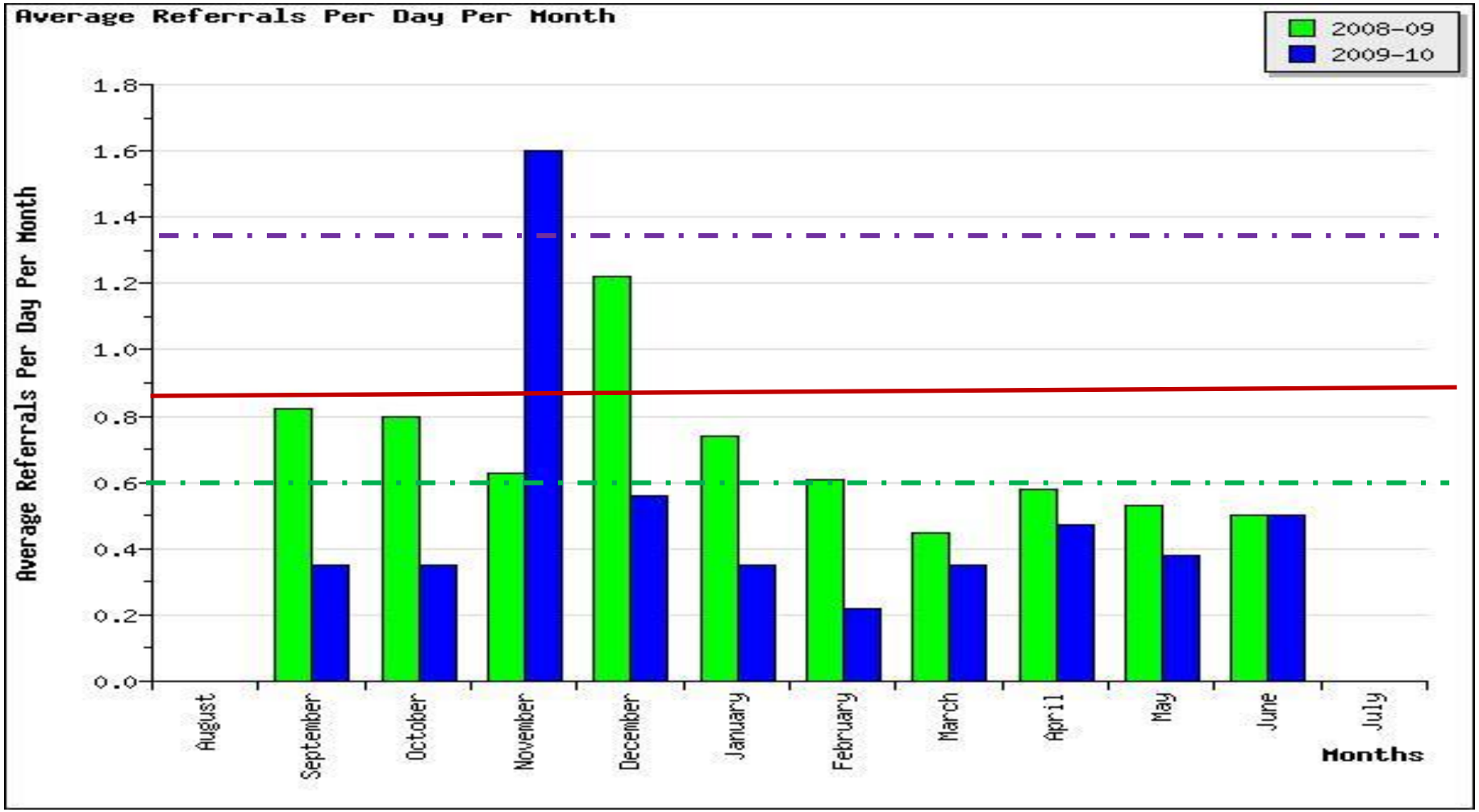


Describe the narrative for this school



Describe the narrative for this school



Problem Solving

Effective Problem Solving

1. First identify if there is a problem

   Difference between observed and expected behavior.

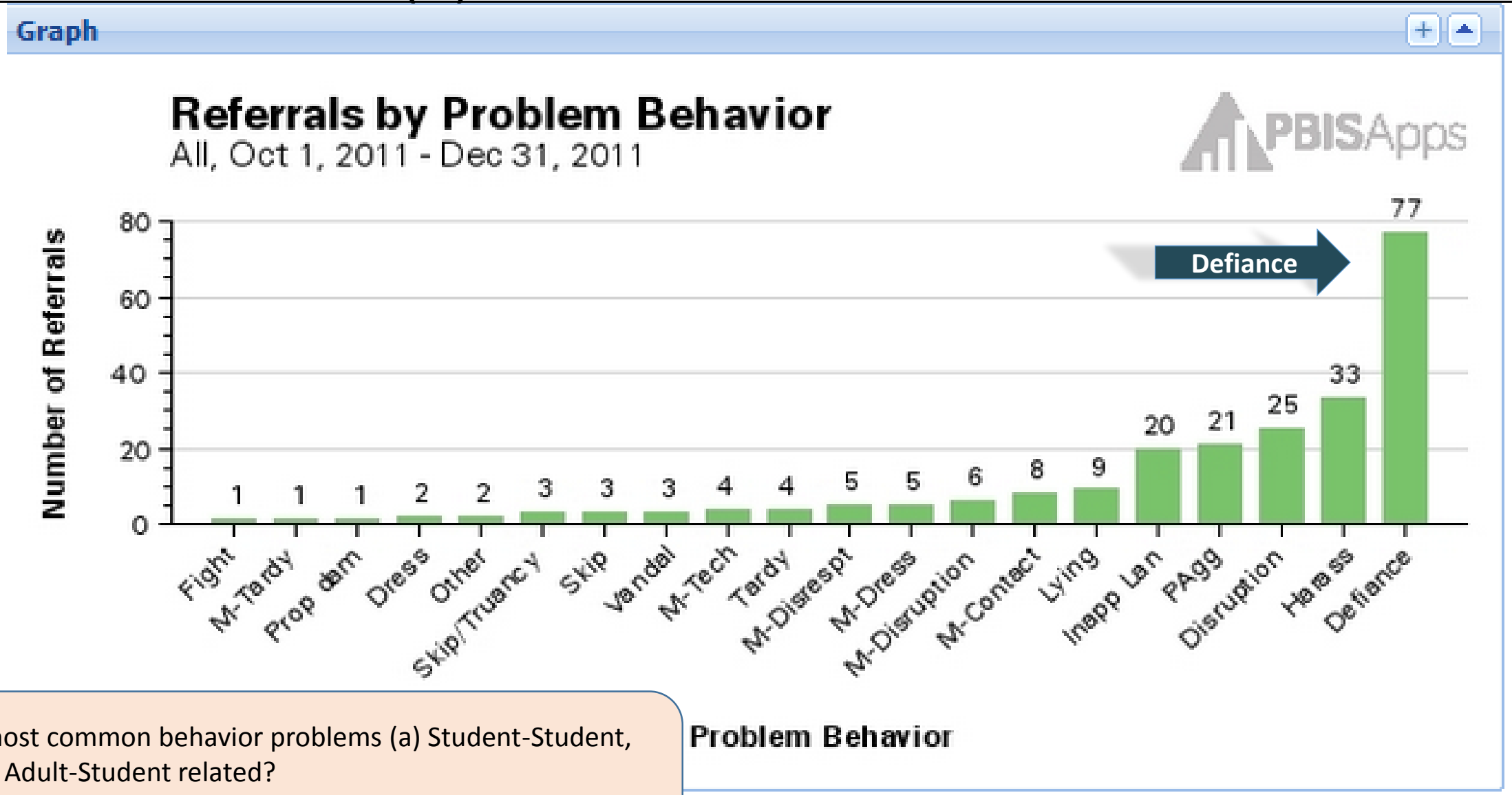
2. Define the problem with precision

   Who, What, Where, When, Why & (How often)

3. Build solution that is practical, instructional and functional.

   Based on behavioral function, and fits with the values, skills, resources and administrative support.

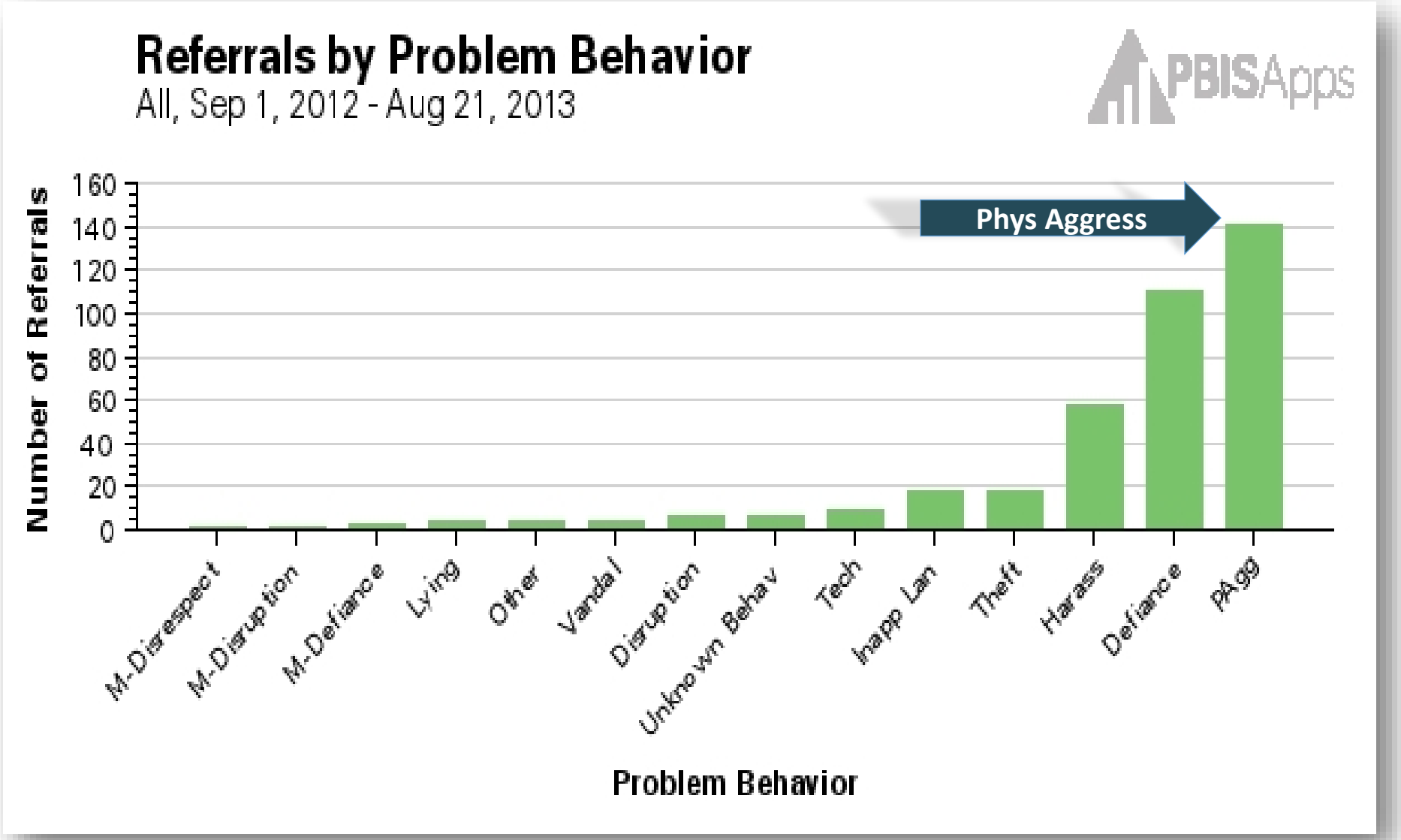
What Behavior(s)



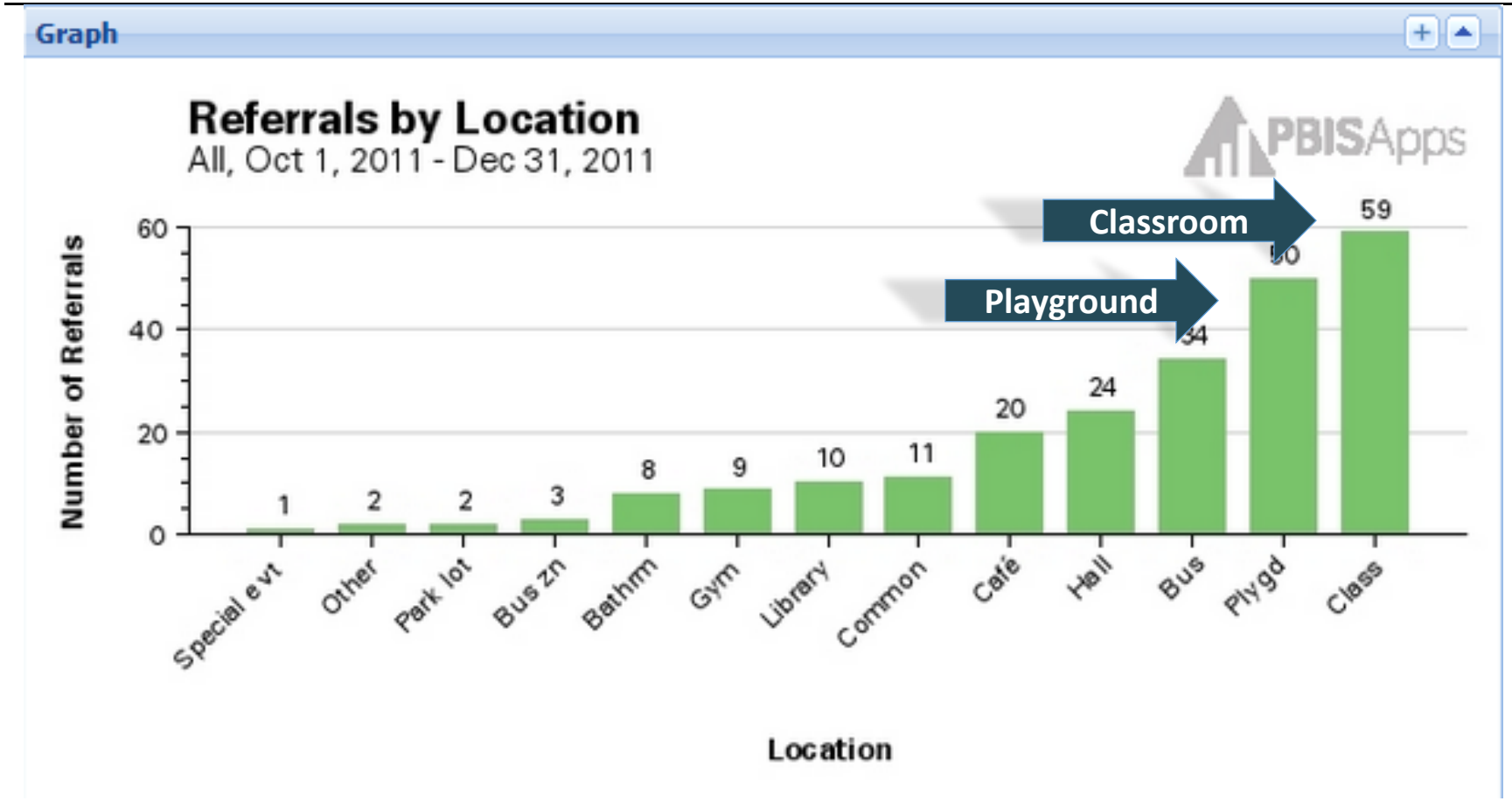
1. Are most common behavior problems (a) Student-Student, or (b) Adult-Student related?

2. Are problem behaviors MAJOR or MINOR or BOTH?

What Behavior(s)



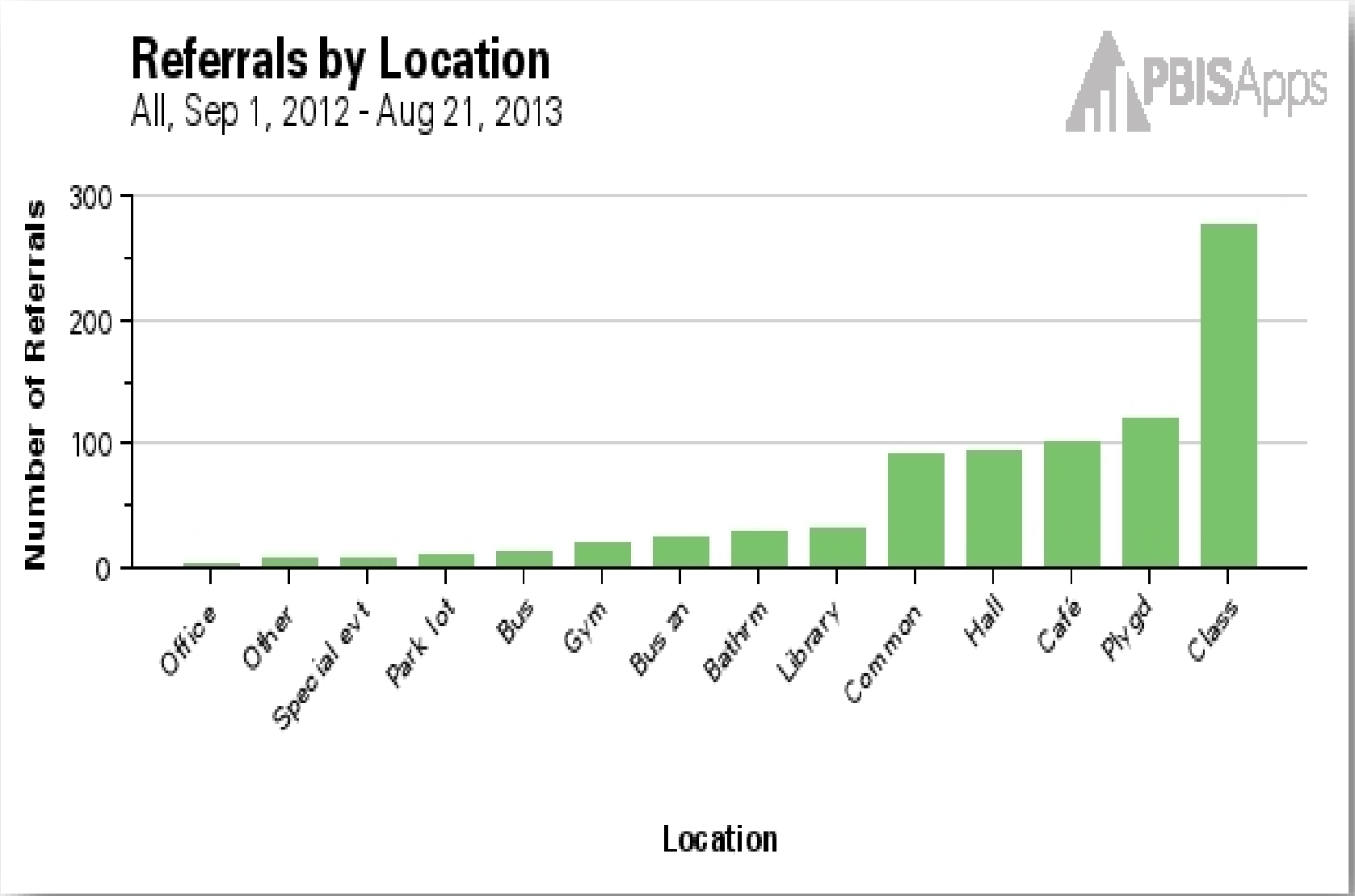
Where?



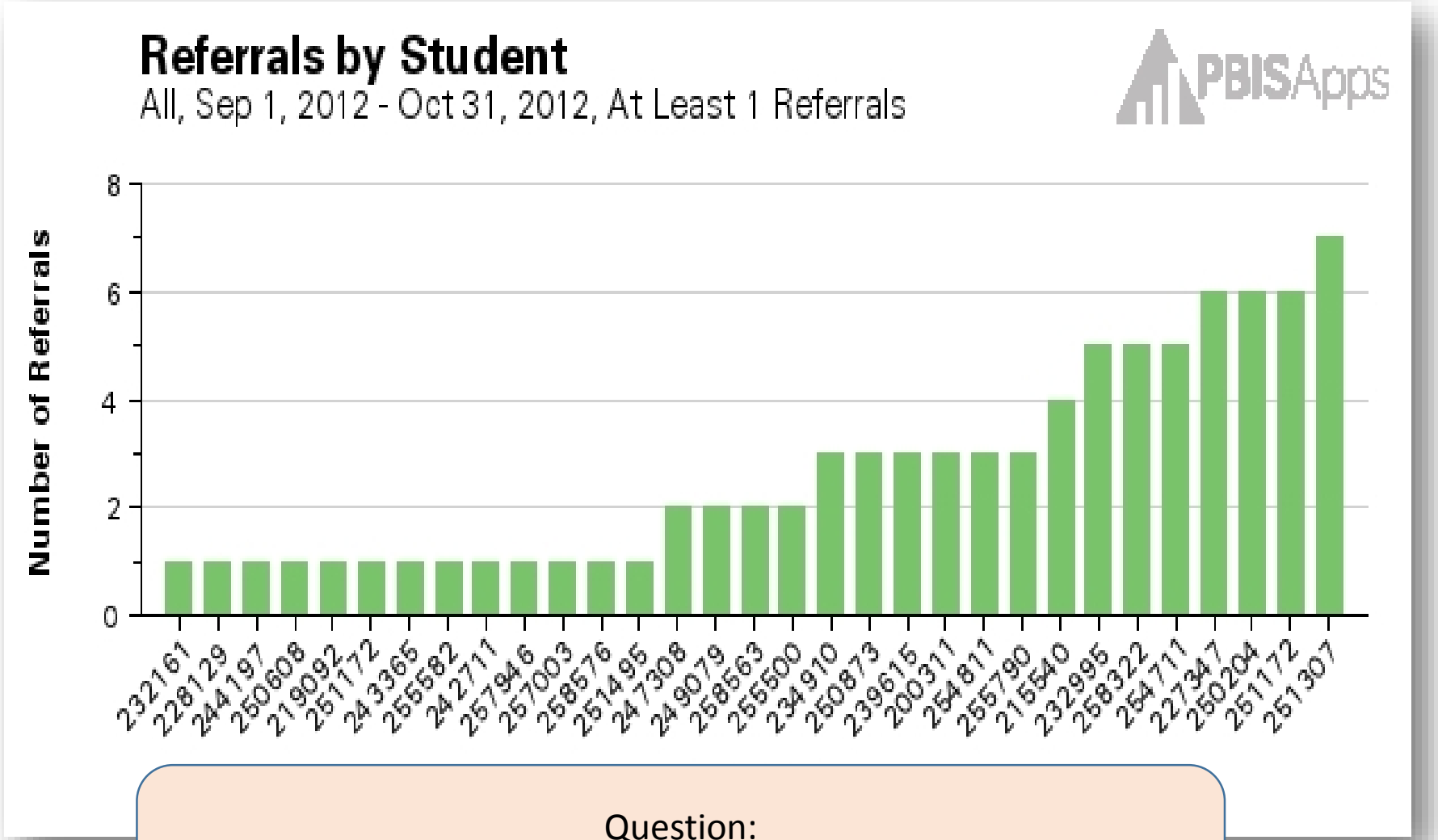
Questions:

1. What location(s) are associated with the most ODRs?
2. Sort by “structured” settings and “non-structured” settings
   (Classroom & Gym vs. Commons, Cafeteria, Hall, Playground)

Where


Referrals by Location
All, Sep 1, 2012 - Aug 21, 2013
PBISApps
Number of Referrals
300
200
100
0
Office
Other
Special evt
Park lot
Bus
Gym
Bus zn
Bathrm
Library
Common
Hall
Café
Plygd
Class
Location

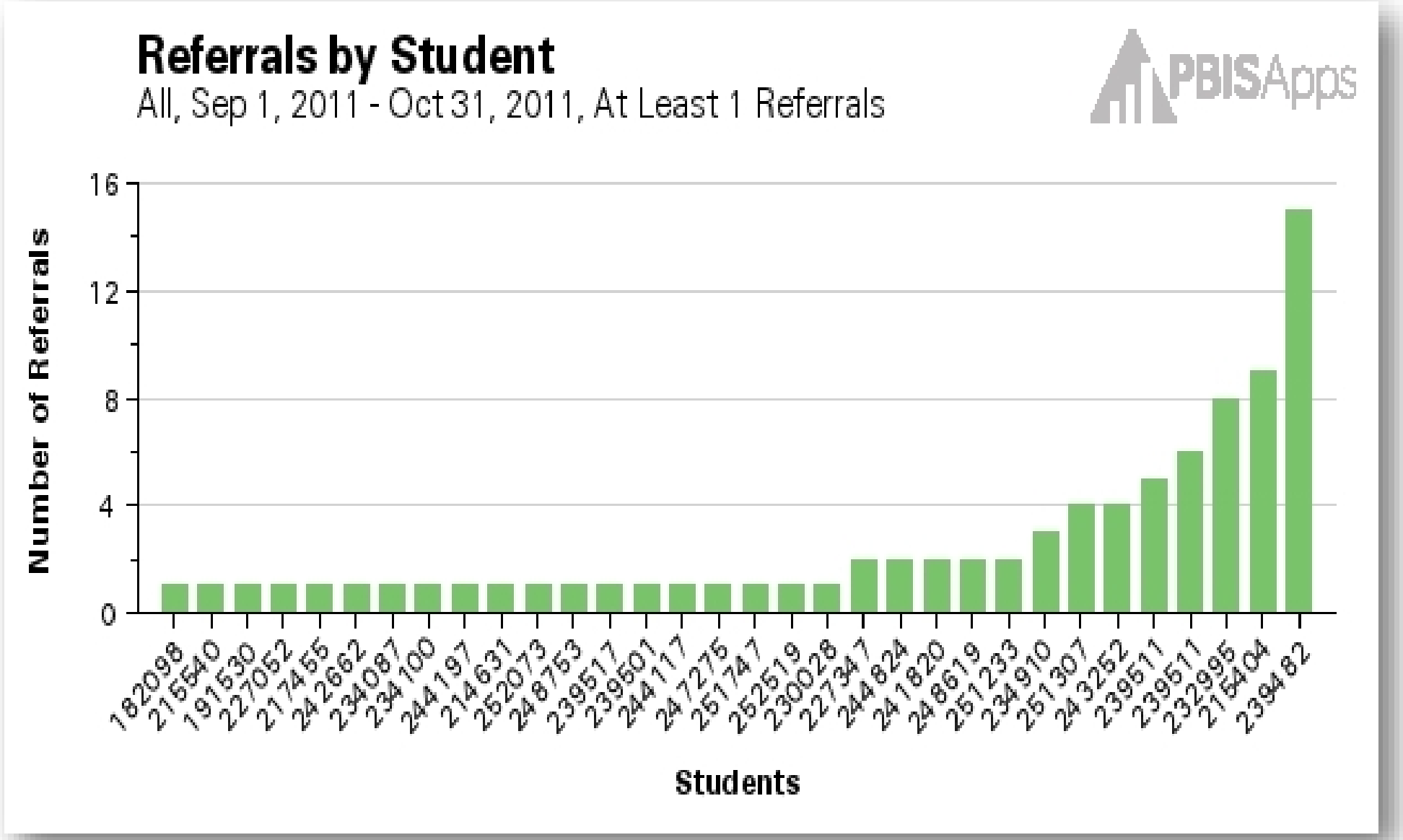
Who



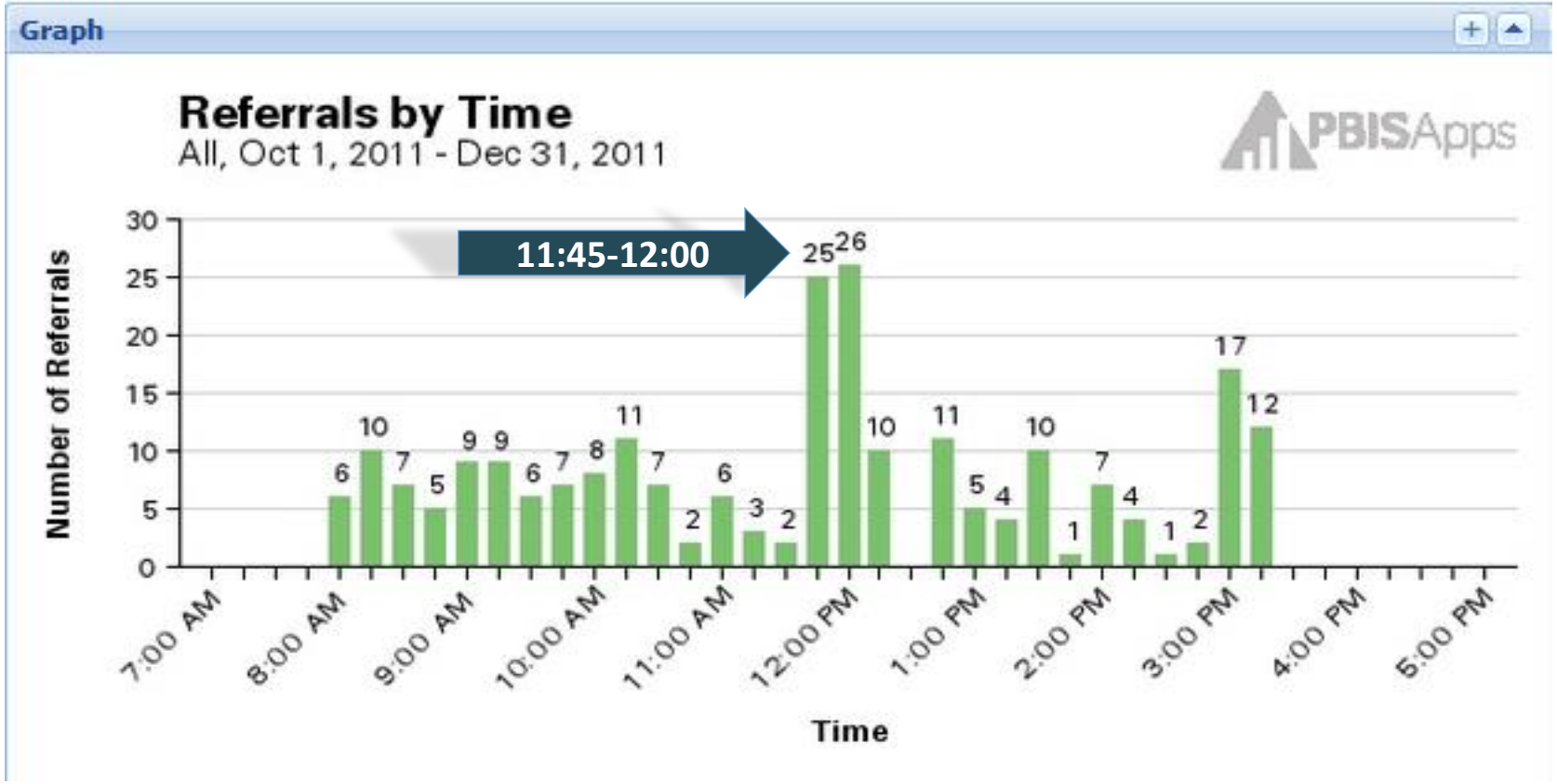
Question:

1. Are there many, a few, or one student associated with the problem?

Who


Referrals by Student
All, Sep 1, 2011 - Oct 31, 2011, At Least 1 Referrals
PBISApps
Number of Referrals
16
12
8
4
0
182098
215540
191530
227052
217455
242662
234087
234100
244197
214631
252073
248753
239517
239501
244117
247275
251747
252519
230028
227347
244824
241820
248619
251233
234910
251307
243252
239511
239511
232995
215404
238482
Students

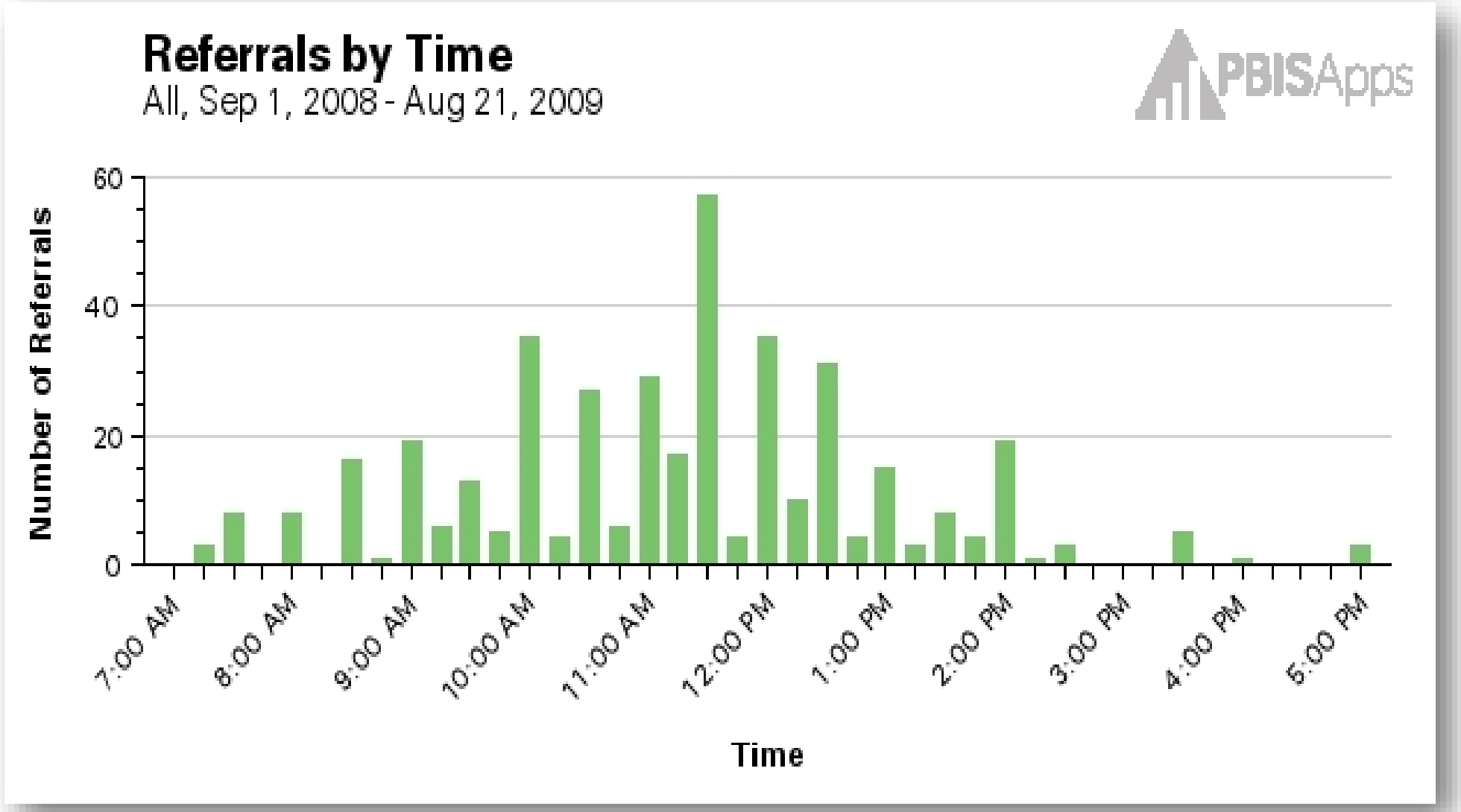
When?



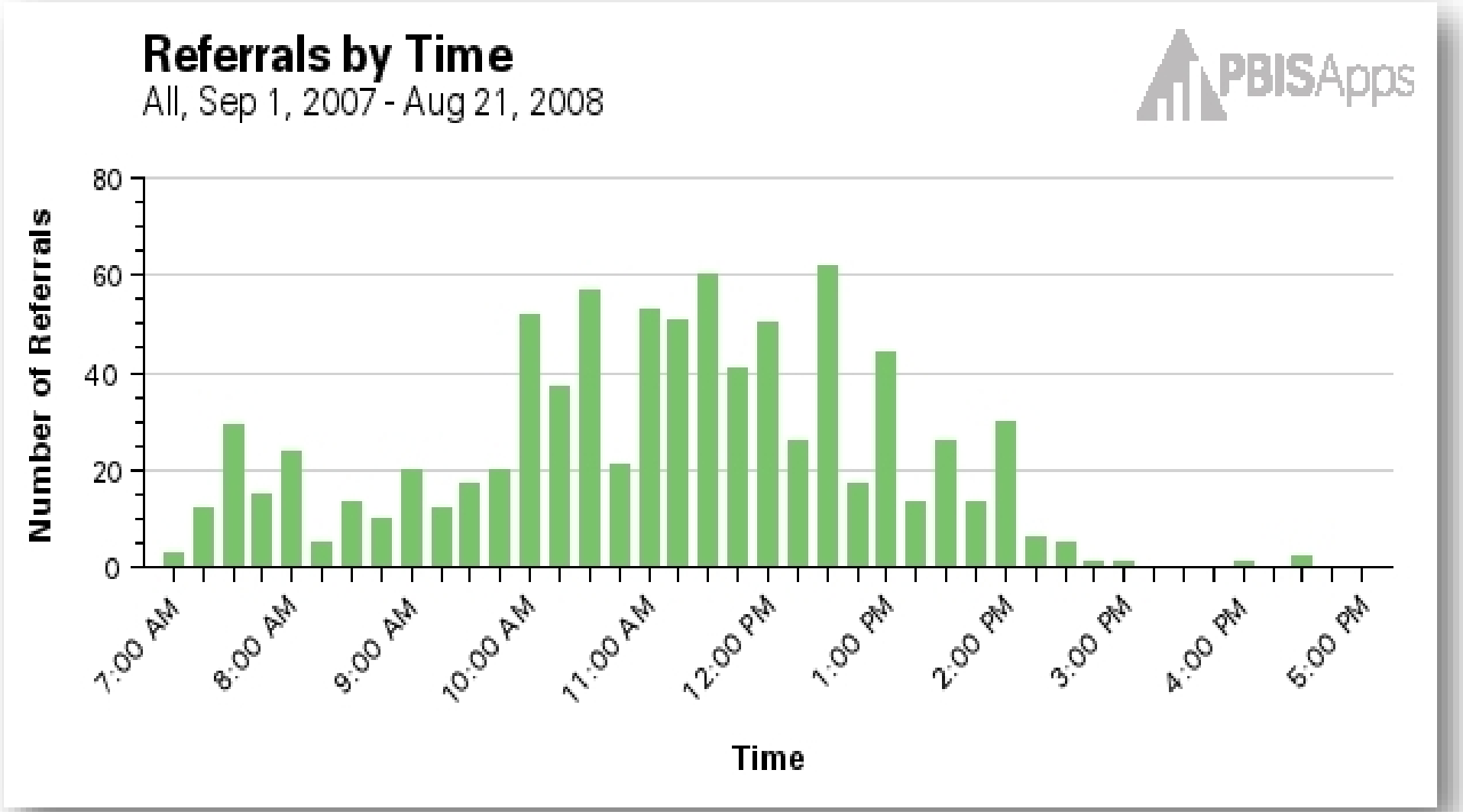
Questions:

1. Are problem behaviors more likely at some times of the day?
2. What is happening during periods when problems are most likely?

When

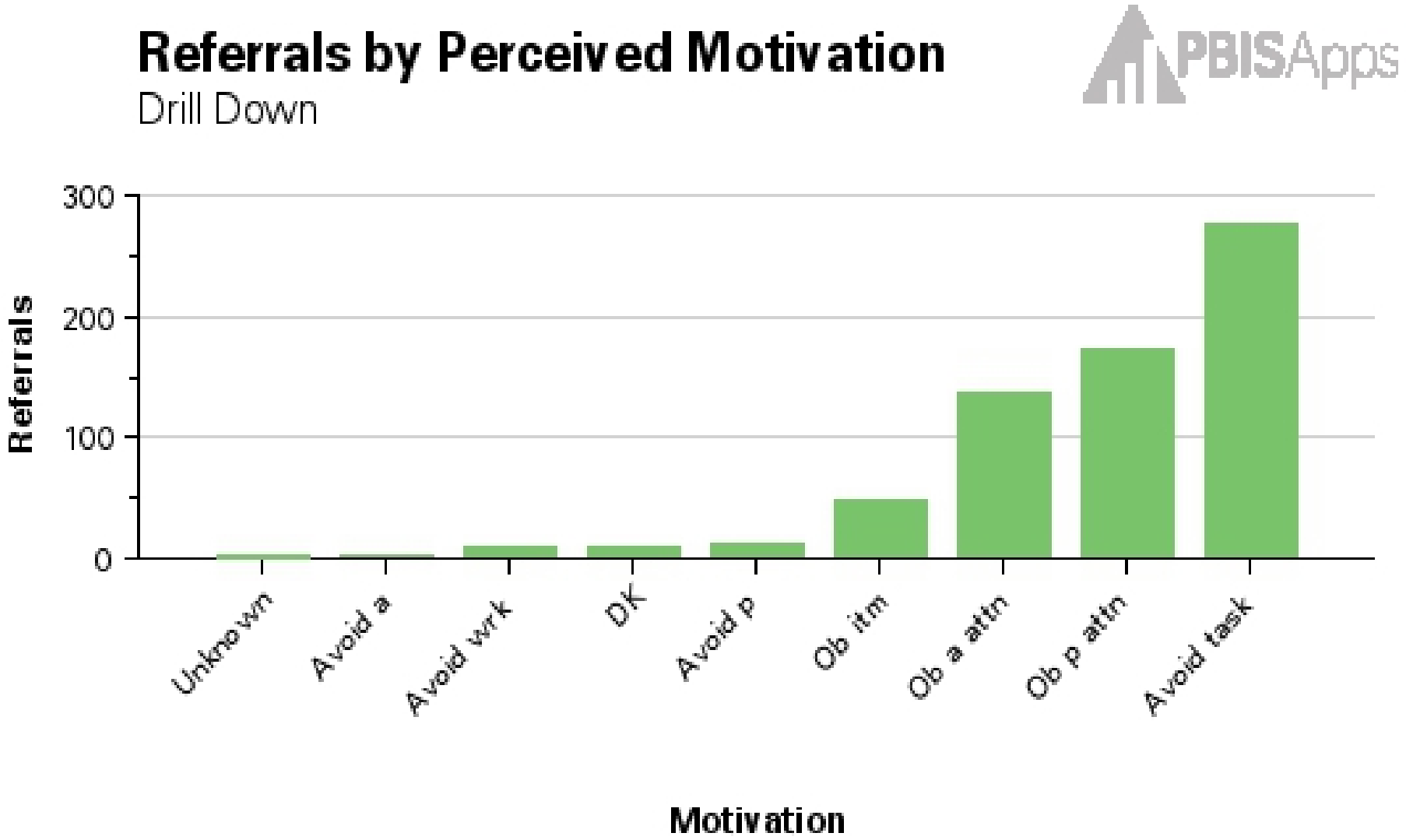

Referrals by Time
All, Sep 1, 2008 - Aug 21, 2009
PBISApps
Number of Referrals
60
40
20
0
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
Time

When


Referrals by Time
All, Sep 1, 2007 - Aug 21, 2008
PBISApps
Number of Referrals
80
60
40
20
0
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
Time

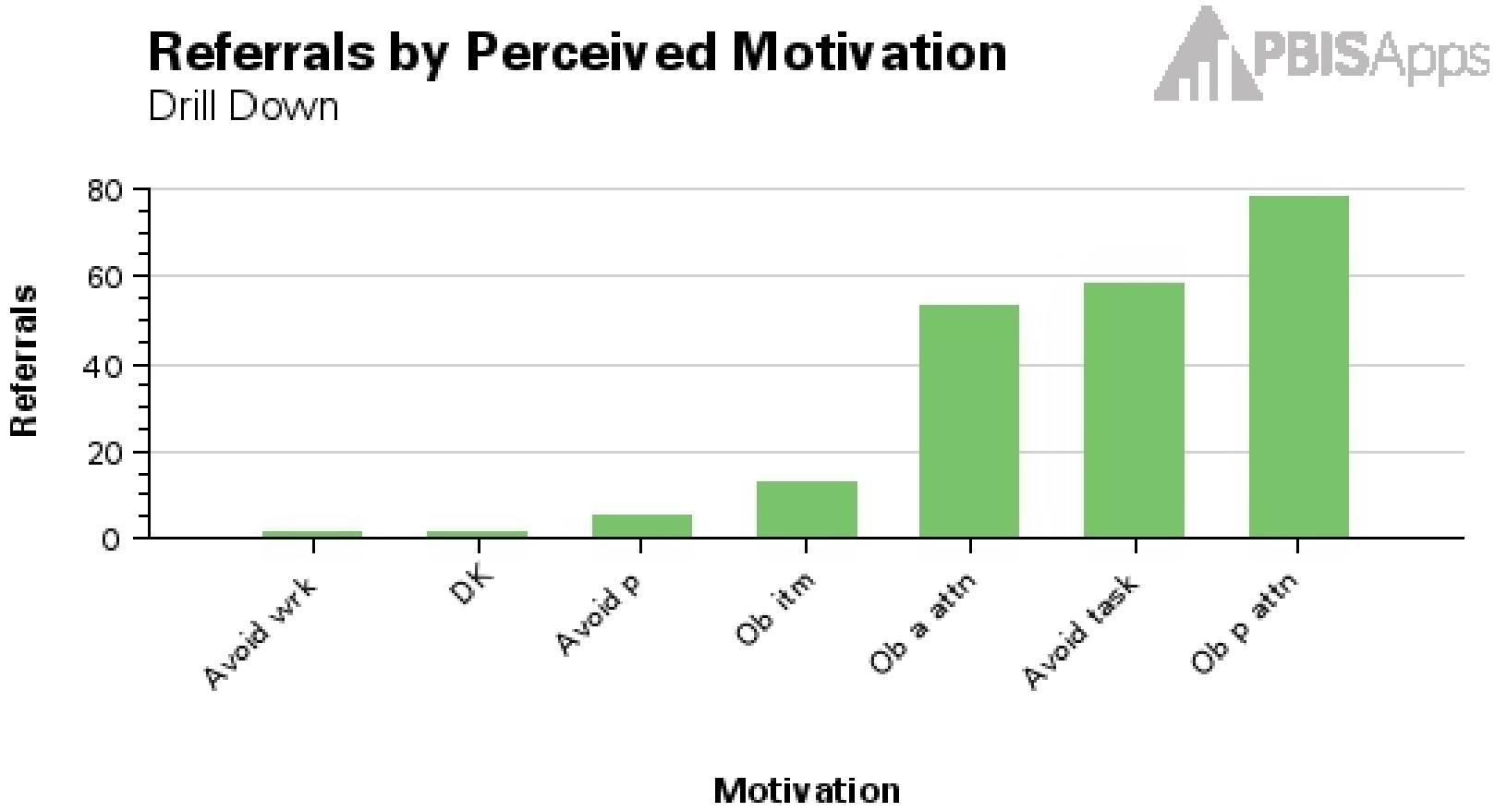
Why?

ODR from Classroom ONLY

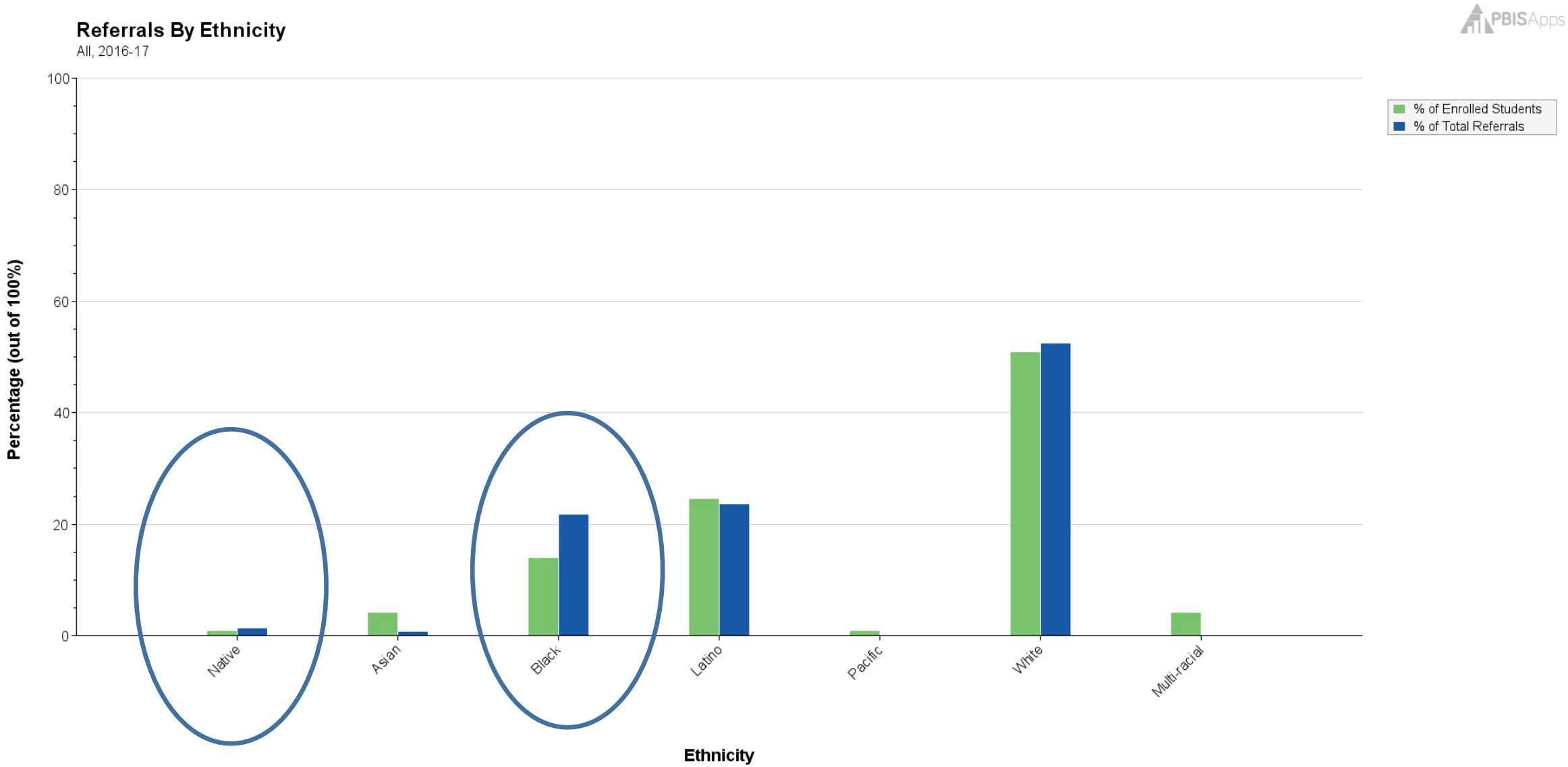


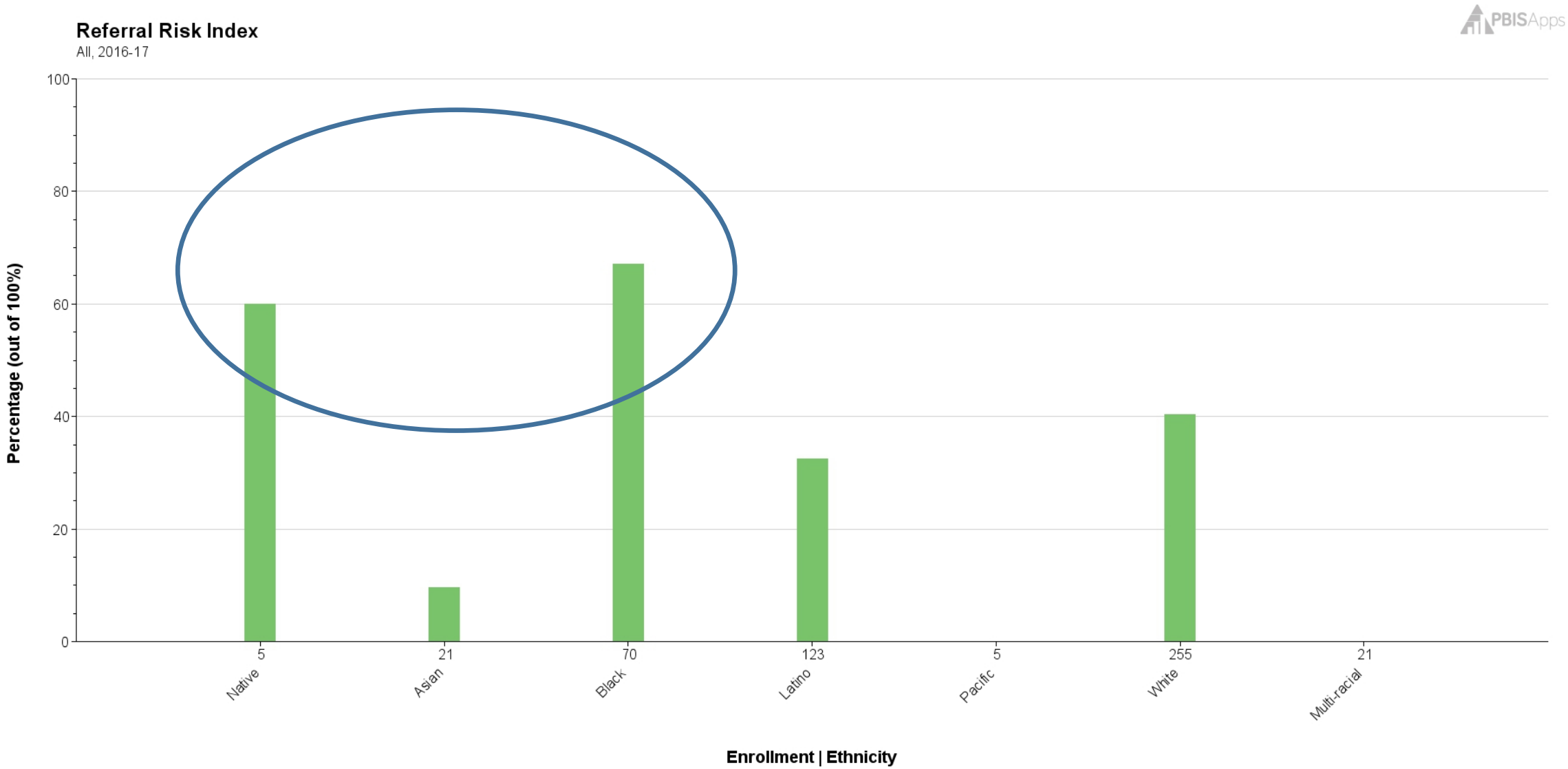
Why ?

ODR from Playground ONLY



Ethnicity


Referrals By Ethnicity
All, 2016-17
PBISApps
% of Enrolled Students
% of Total Referrals
Percentage (out of 100%)
100
80
60
40
20
0
Native
Asian
Black
Latino
Pacific
White
Multi-racial
Ethnicity


Referral Risk Index
All, 2016-17
PBISApps
Percentage (out of 100%)
100
80
60
40
20
0
5
21
70
123
5
255
21
Native
Asian
Black
Latino
Pacific
White
Multi-racial
Enrollment | Ethnicity

SWIFT DataWall

- Decision Making

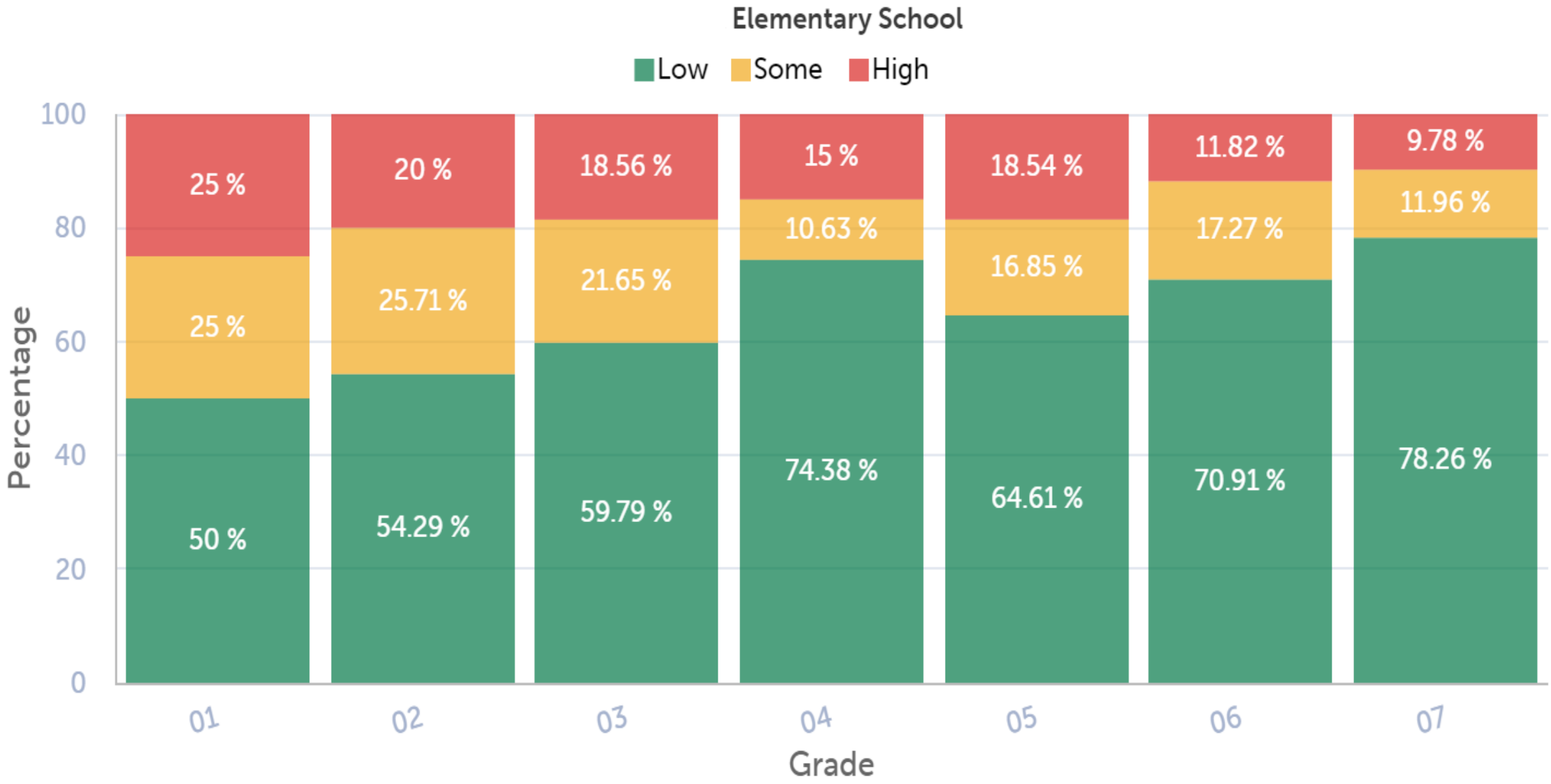
Are we Implementing with Fidelity?

Are Students Engaging in Problem Behavior?

Are Students Meeting Reading Expectations

Are Students Meeting Math Expectations?

Passage Reading Fluency by Grade - Risk

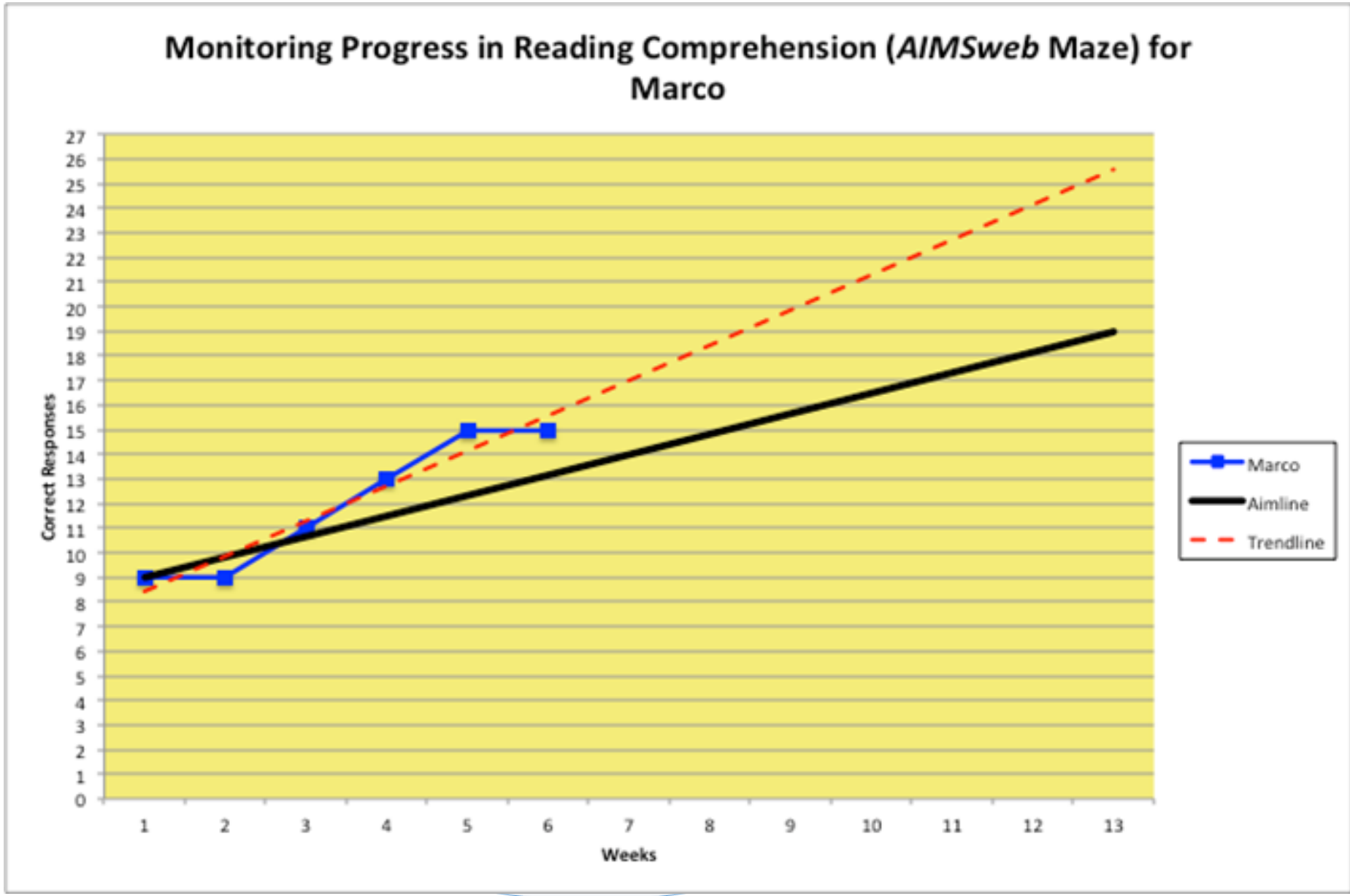


Academics

- Decision Making

Use the same decision-making logic for academics

Define the problem with precision before making a decision



Name: Johnson Nora
ID:
Class: Garcia
Grade: Third
Year: 2003-2004
School: ThompsonElementary
District: Greenlee Public Schools

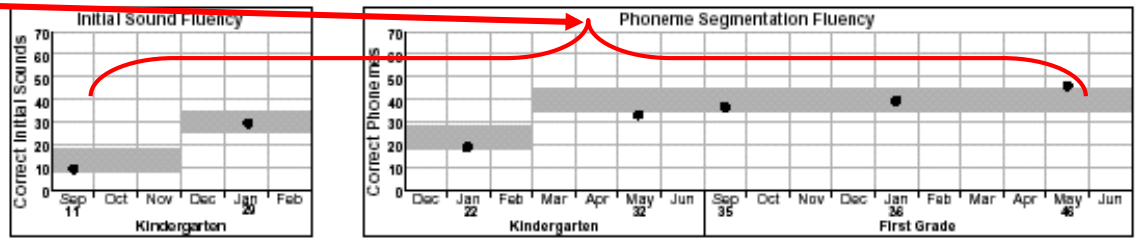
Dynamic Indicators of Basic Early Literacy Skills

Student Report

Legend
Target Goal
Benchmark Assessment
Progress Monitoring Assessment
Score Above Graph Bounds
Score Above Graph Bounds

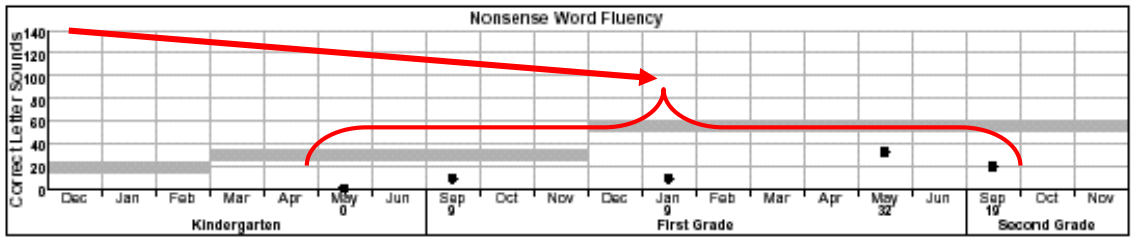
At or Above Goal

PHONEMIC AWARENESS



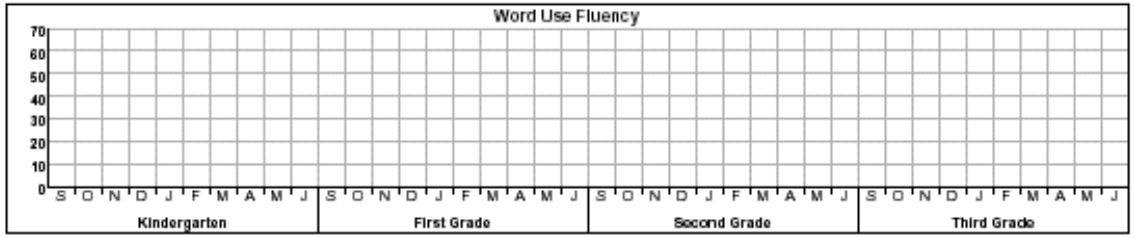
Below Goal

ALPHABETIC PRINCIPLE



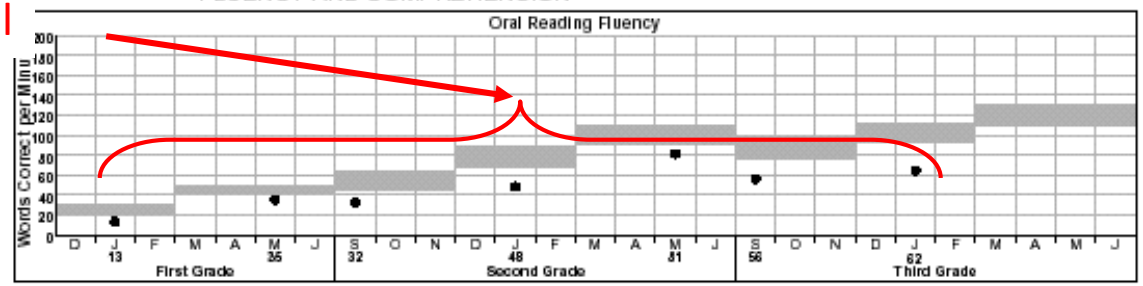
<u>Suggestion</u>:
Provide supplemental alphabetic instruction

VOCABULARY



Below Goal

FLUENCY AND COMPREHENSION



Individual Student Report

Steve Goodman

Name: Wilson, Jamenson
ID:
Class: Garcia
Grade: Third
Year: 2003-2004
School: Thompson Elementary
District: Geenlee Public Schools

Dynamic Indicators of Basic Early Literacy Skills

Student Report

Legend
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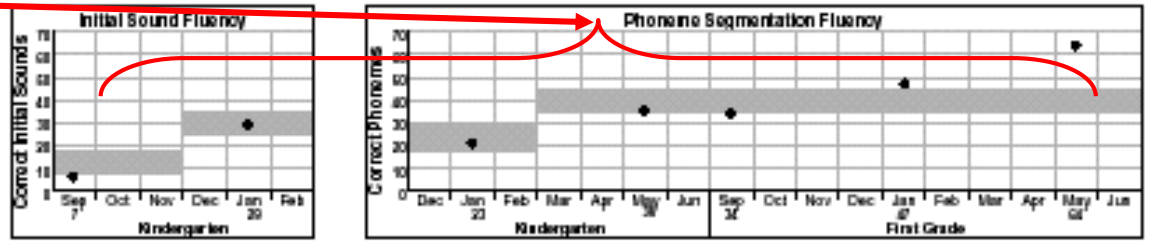
Progress Monitoring Assessment
Score Above Graph Bounds
Score Above Graph Bounds

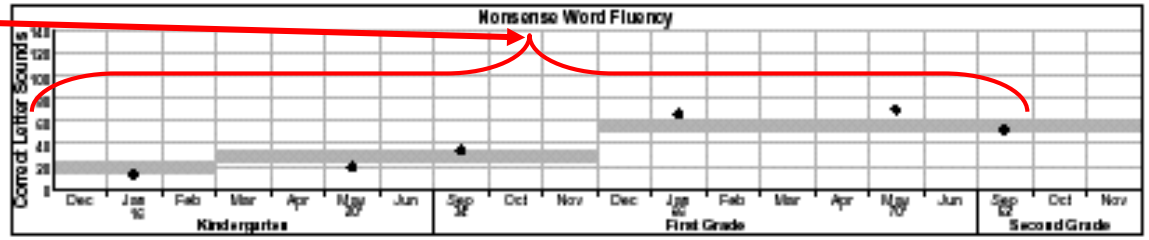
At or Above Goal

PHONEMIC AWARENESS



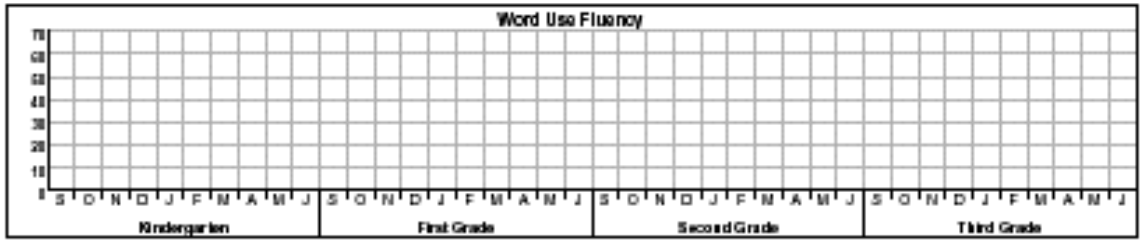
At or Above Goal

ALPHABETIC PRINCIPLE



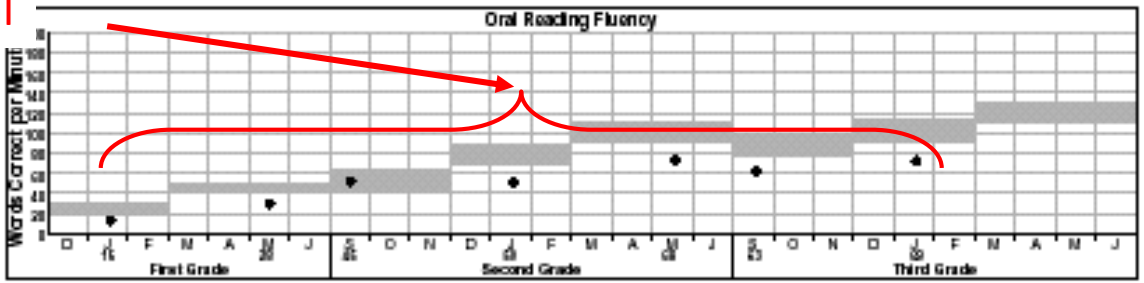
Suggestion:
Provide supplemental fluency instruction

VOCABULARY



Below Goal

FLUENCY AND COMPREHENSION



Individual Student Report

Steve Goodman

Building Solutions

Go to 73

Solutions

- Key Features
  - ***Technically Sound***
    - Solution is based on “precise” problem statement
    - Solution involves building competence, not just removing problem
    - Solution is logically associated with **removing** rewards for problem
    - Uses “evidence-based” practices
  - ***Contextual Fit***
    - Practical, doable, efficient
    - Consistent with values of those who must perform the solution
    - Administrative support

Solution Development

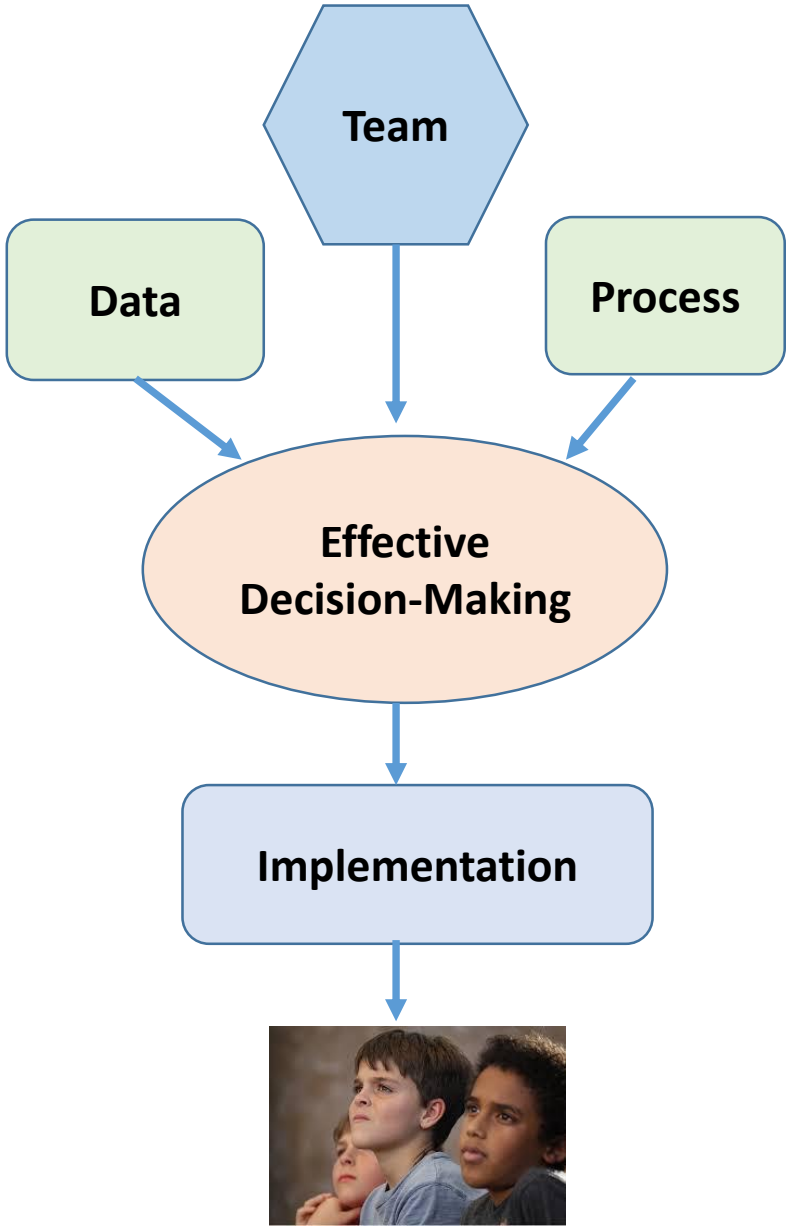
Elements of an Effective Solution

Safety

Solution Component	Action Step(s)
Prevention	
Teaching	
Recognition	
Extinction	
Corrective Consequence (only if needed)	
Data collection	

Self Assess

- Effective Decision-making



Student Outcomes

1. Do we have **teams** with:
   - The right people, clear responsibility, adequate authority, regular meeting schedule and time to perform?

2. Do we have the **data** we need to make effective decisions?

3. Do we have a clear **process** for defining problems, building solutions, and building action plans

4. Do we actually **implement** solutions / plans? And do we use data to adapt over time?