The Starpath Project

Data Teams
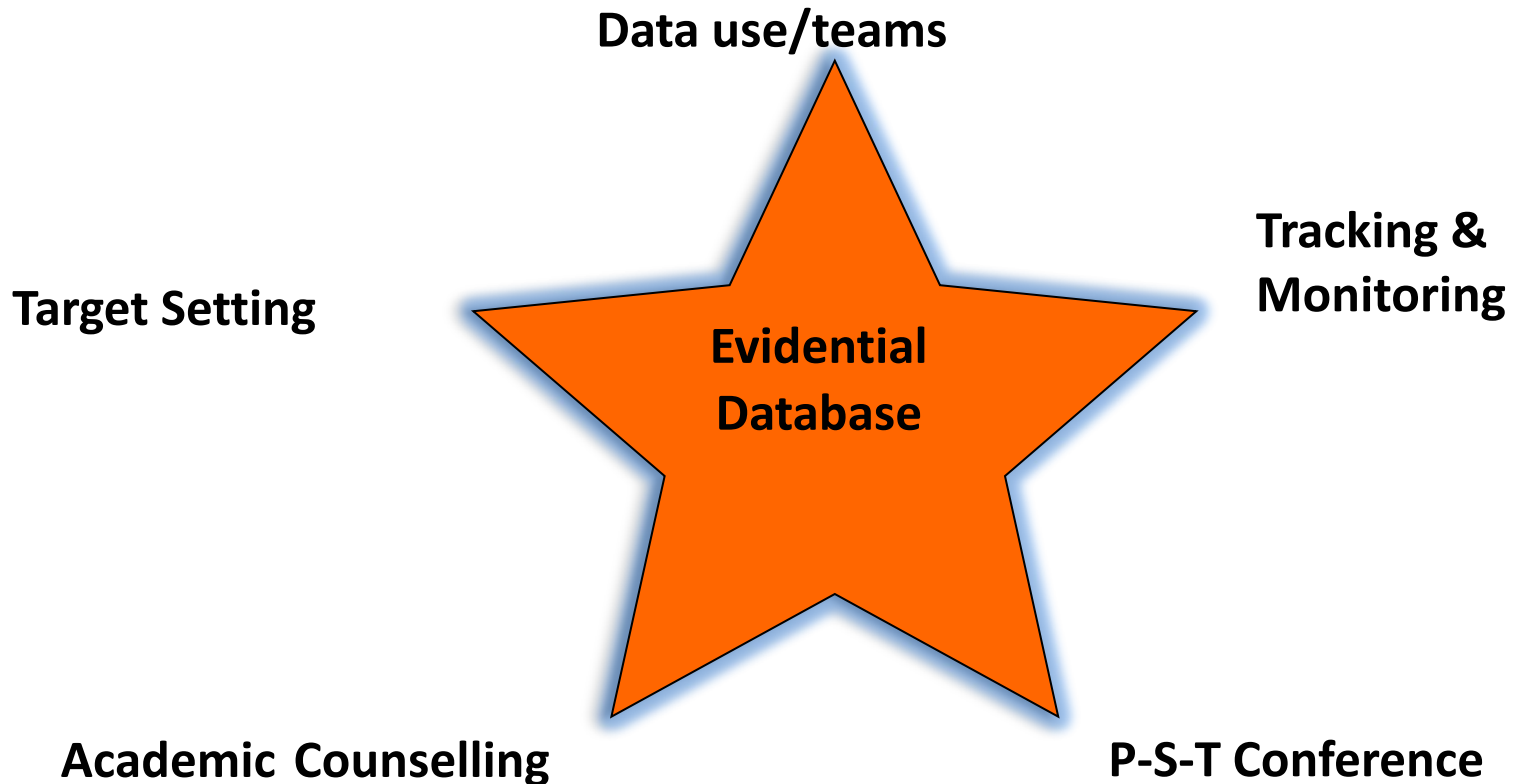
Data – Why?

'Until you have data as a backup, you're just another person with an opinion.'

Dr Perry Gluckman

Data can help schools to

- Promote inquiry and generate questions into how well students and the school are doing.

- Confirm or refute hypotheses that we may have about students and their learning.

- Clarify the gap between where we are and where we want to be.

- Identify the underlying causes of those gaps.

- Understand the impact of various initiatives the school has undertaken.

- Provide information about effective or ineffective practices, and help decide whether to retain or eliminate.

- Provide evidence that can be used to continuously improve the school as a learning organisation.

- Give an indication of whether resources (personnel, materials, finances) are being used wisely.

- Show if the school and departmental goals/objectives are being met.

- Assess needs to help target services on the important issues and problems.

Student achievement data is..

- Used by students as they self-manage and monitor their own progress towards their study and career goals.

- Used by parents when discussing their child's progress with the student and teacher.

- Used by academic counsellors to support students monitoring of progress toward goals.

- Analysed regularly by year level deans, heads of learning and senior leaders to identify trends for various groups, to monitor progress towards individual and whole cohort targets, to identify which students are slipping behind or require extension and areas for targeted intervention.

- Used by individual subject teachers as a feature of teaching as inquiry similarly to identify trends in patterns of achievement as well as determining which students are achieving and which are not, and who need more targeted support.

- Used by senior leaders to set annual achievement targets which are reported to the Ministry of Education as part of annual reporting requirements. This includes the aggregation of data by year level and disaggregation by ethnicity to be able to show trends and patterns of achievement for these students in relation to the whole year level cohort.

Data and School Improvement

Effective schools **frequently monitor** progress

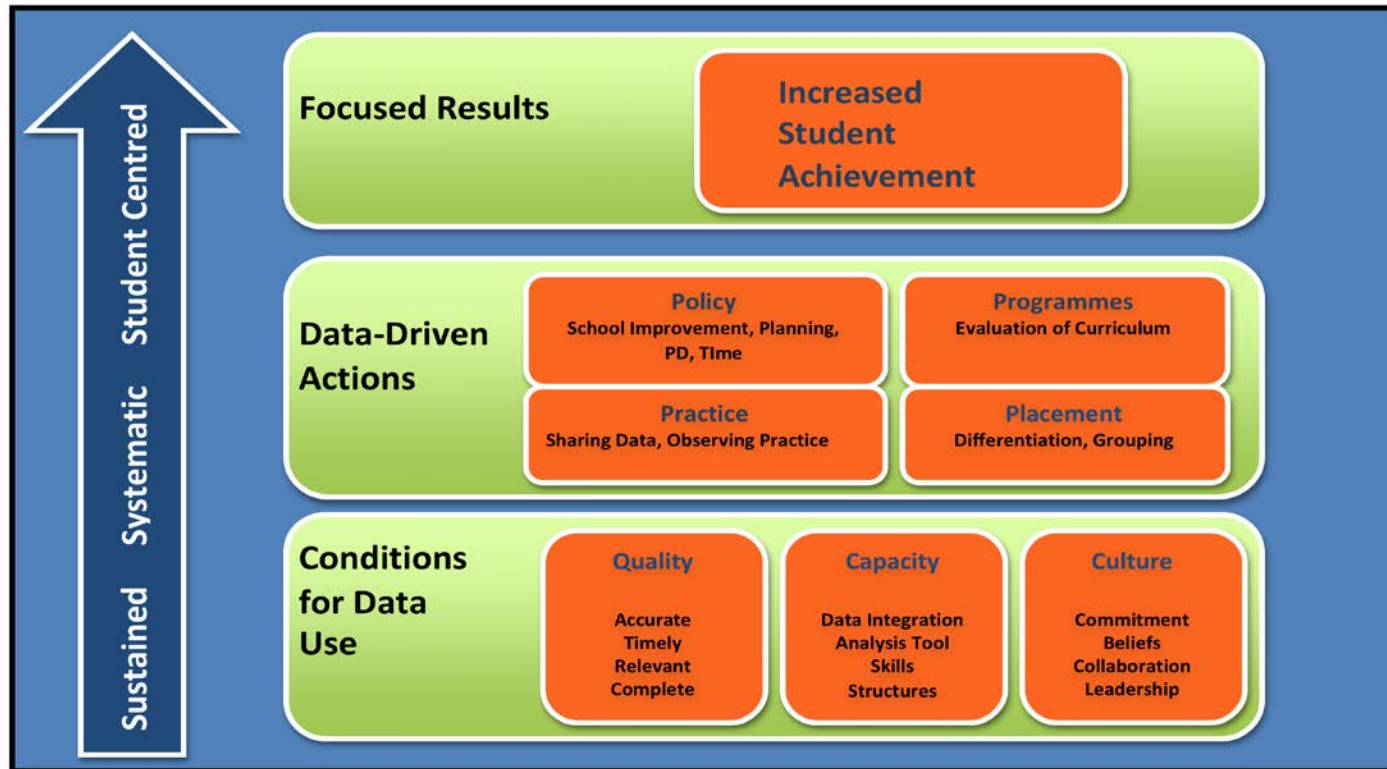Schools need to be results focused and **data informed**

School Boards **need accurate data** on what is happening at the school to make decisions

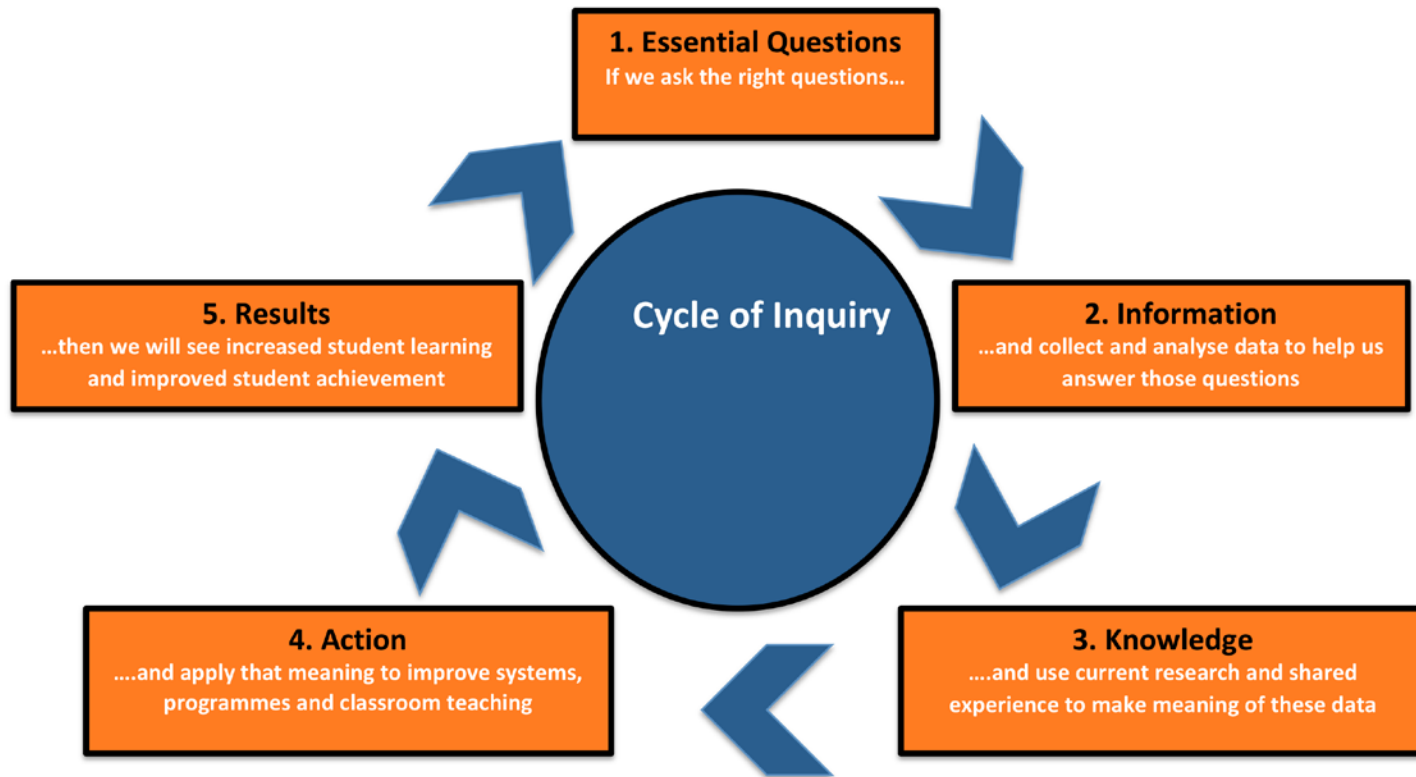Schools must have a **systematic way** of collecting, organizing, analysing, and using data

All staff must be collectors and interpreters of data

Theory of Data Use

Data Use- Theory of Action

The Data-Driven Inquiry and Action Cycle

1. Essential Questions
If we ask the right questions…

Cycle of Inquiry

2. Information
…and collect and analyse data to help us answer those questions

3. Knowledge
….and use current research and shared experience to make meaning of these data

4. Action
….and apply that meaning to improve systems, programmes and classroom teaching

5. Results
…then we will see increased student learning and improved student achievement

The Inquiry Cycle

Data Dilemma

- Mistrust

- Fear

- No escaping it

- Lacking in skills to use data wisely and effectively

- Data is a political football invoked to

- Support narrow and parochial causes

- Fight turf wars

- Impede change

- Justify a programme

- Tie achievement to someone's leadership

Educators feel the pressure to demonstrate results

Why do we avoid data?

The reason is fear— of data's capacity to reveal strength and weakness, failure and success. Education seems to maintain a tacit bargain among constituents at every level not to gather or use information that will reveal a clear need for improvement: where we need to do better, where we need to make changes.

Data almost always point to action— they are the enemy of comfortable routines. By ignoring data, we promote inaction and inefficiency.

(From Schmoker, 1999, p. 39)

Nine Truths about Data Analysis- (adapted from Thomas-2011)

- We don't need "data driven" schools. We need "knowledge driven" schools.

- Data analysis not about numbers. It is about improving instruction

- Data are not best analysed alone, but most effectively with other teachers.

- "Data dialogues" should be held for 45 mins at least every two weeks

- The most productive data teams follow established protocols and norms

- The most important questions are not "how many passed", but "What did they learn?", "What don't they know?", & "What are we going to do about it?"

- For significant long-term impact, we have to change what **we** do.

- Need to build capacity to reflect on our work and make on-going instructional adjustments.

- None of the above will work unless there are clearly articulated reasons why we should invest time and effort to achieve these goals.

Nine Truths about Data Analysis-
(adapted from Thomas- 2011)

The **most important questions** are not …
"How many passed?"
"What did the student score?"

<p style="text-align:center;color:red;">**BUT**</p>

"What did they learn?"
"What don't they know?"
"What are we going to do about it?"

Assessing your data quality and culture

- Fill in the questionnaire on your school's quality, capacity and culture individually

- Take time to compare with other school members results on hand out 1 in your folder

Data Teams

"Data Teams adhere to continuous improvement cycles, examine patterns and trends, and establish specific timelines, roles, and responsibilities to facilitate analysis that results in action."

(S. White, Beyond the Numbers, 2005, p. 18)

The Data Team Process

- Step 1—Collect and chart data (cause and effect)

- Step 2—Analyse strengths and obstacles

- Step 3—Establish goals: set, review, revise

- Step 4—Select instructional strategies

- Step 5—Determine results indicators to determine if:

– If strategy is being implemented

– If strategy is having intended effect on student learning and improved performance

The Collaborative Inquiry Process
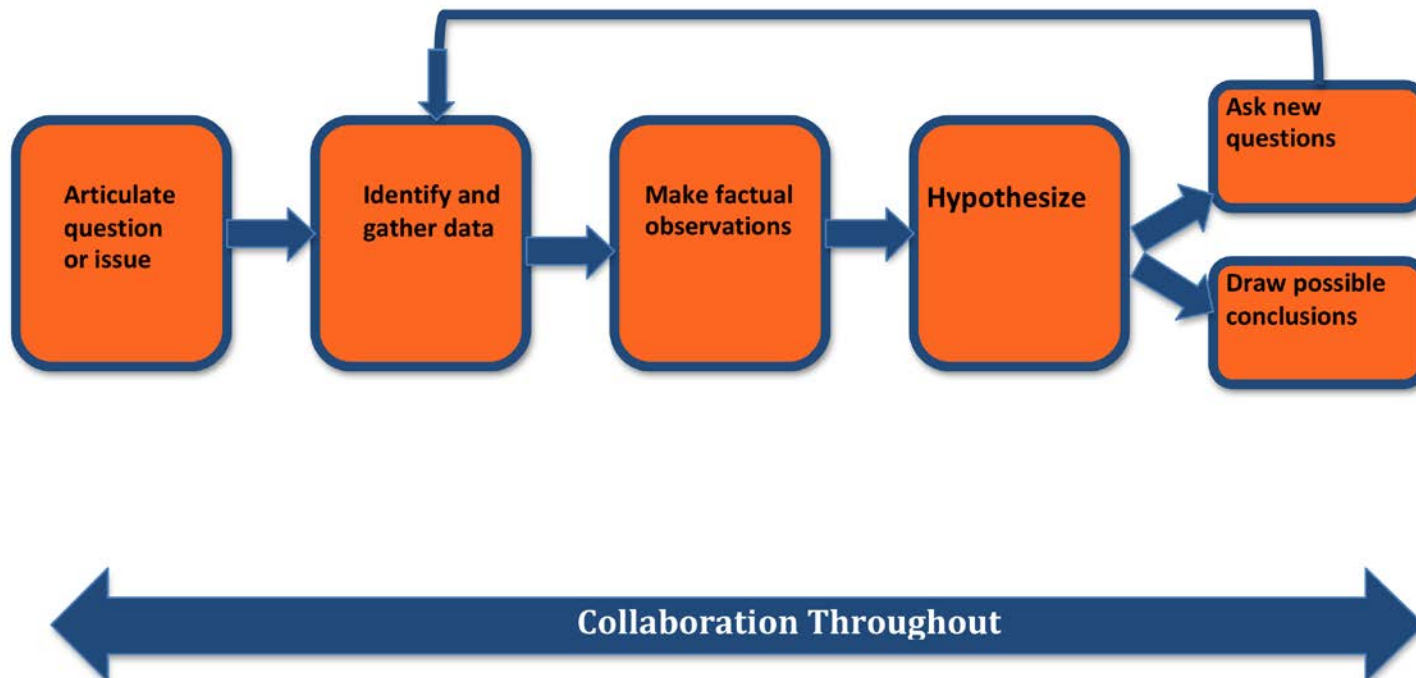
Three Types of Questions to Interrogate Data for problems

Discovery
What is the issue or problem?

How did the students do in...?
In which specific areas...?
Which students....?

Diagnosis
What is it's root cause?

Why did the students ...?
Why aren't our teachers..?
Why aren't our parents..?

Doing
What are we doing about it?

How do we fix ...?
What do we do about..?
Do we need..?

Looking at data - questions to consider

- What explanations do you have for the differences between last year's and this year's results?

- How have your students performed in the externals? Who sat them? Who achieved them?

- Who are the students between 60 & 80 credits, and therefore missed a level? What are your plans for them this year?

- Who are the high achievers (on entry) who failed? Why?

- Who are the low achievers (on entry) who succeeded? Why?

- How do the UE and NCEA Level 3 results compare? Is there a stumbling block(s)?

Types of Analysis

Type of question

Type of analysis

- How are patterns of results changing over time?

  Longitudinal analysis

- What are the particular areas of strength and/or

  Intra-subject analysis

  weaknesses in a teaching programme?

- How can the particular strengths of different

  Inter-staff analysis

  teachers in a department or school be used

  to assist one another to improve teaching practice?

- What are the particular areas of academic strength

  Inter-department

  and/or weakness within a school?

  analysis

- How does a school compare with other similar schools

  in the performance of its students on the NQF?

  Inter-school analysis