Analytics for Learning
A Whole School Approach to Developing a Data Culture
Workshop 3B
Workshop 3B: Creating a whole school approach to developing a data culture.

This workshop will give attendees the opportunity to consider the practical steps involved in developing a whole school approach to educational data use.

Over the past eight years, Phillip has assisted schools of all shapes and sizes make better use of educational data. During this workshop, Phillip will outline the eight steps he considers vital for developing a school wide data culture – from the importance of establishing a clear vision, to how you can ensuring buy-in, commitment, and trust, to the best format for establishing data meetings.

Attendees will leave with practical ideas for their school and will have the opportunity to discuss approaches with staff from other schools.
Australian Professional Standards for Teachers
The Learning Analytics Suite assists teacher in relation to **Professional Standard 5: Assess, provide feedback and report on student learning** particularly Professional Standard 5.4. **Interpret student data**

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How can we develop a whole school approach to the use, analysis, and discussion of data?
Eight steps to create a data-driven culture that enhances teaching and learning through fact-based decision making.

Adapted from: Lane B. Mills, PhD, is an Associate Professor in the Educational Leadership program at East Carolina University.
Establishing this clear vision is critical to bringing about a culture focused on data and results.

Present the vision to the teachers by providing the overarching rationale for this shift in culture and its benefits – **The Big Idea**
Establishing this clear vision is critical to bringing about a culture focused on data and results.

Present the vision to the teachers by providing the overarching rationale for this shift in culture and its benefits.

Teaching and Learning decisions informed by quality student data have the potential to improve student achievement and performance.


Developed by the Australian Council for Educational Research

Initially in collaboration with the Queensland Department of Education and Training and was used as the basis for a teaching and learning ‘audit’ of every government school in that state during the 2010 school year.

The Teaching and Learning School Improvement Framework brings together findings from research into the practices of highly effective school leaders.

Divided into eight domain – the second of which is:

**Analysis and Discussion of Data**
A high priority is given to the school-wide analysis and discussion of systematically collected data on student outcomes, including academic, attendance and behavioural outcomes.

Data analyses consider overall school performance as well as the performances of students from identified priority groups; evidence of improvement/regression over time; performances in comparison with similar schools; and, in the case of data from tests such as NAPLAN, measures of growth across the years of school.
Outstanding

The principal and other school leaders closely relate the data to student outcomes. The school has established a systematic plan for the collection, analysis, and use of student achievement data. Data in leading, monitoring, and evaluating key elements of the plan.

Data are used throughout the school to identify gaps in student learning, to monitor improvement over time, and to chart progress across the years of school. A high priority has been given to data collection, analysis, and action planning linked to teaching strategies and student learning outcomes. Data-driven discussions and targeted education strategies are informed by reliable data (e.g., class size, student achievement, student attendance).

Stakeholders are given frequent updates (e.g., PYP workshops) on the status of their school and are provided with clear, detailed, and actionable data on student learning patterns, performance, and progress, including comparisons of pre- and post-test results.

Teachers actively use data to inform their instruction and the evidence of successful teaching.

High

There is evidence that the principal and other school leaders view data, link student data to actions, and ensure that their actions are aligned with the school’s strategic plan. There is a documented school plan and protocols for the analysis and use of student achievement data.

Classroom teachers have been assigned responsibility for implementing the annual plans, aligning their goals and objectives, and monitoring, displaying, and communicating student learning outcomes for the school. The school has a system that allows for a whole-school approach to data analysis and reporting.

Time is set aside for data analysis meetings (e.g., as part of pre-service and in-service meetings) for the discussion of school data and its implications for school-level and classroom practices. Breakdowns occur at all school and team levels. The school can illustrate, through data displays and project plans, how data have been used to identify priorities, make decisions, and monitor progress.

Medium

School leaders pay close attention to data provided to them about the performance of the school (e.g., NAPLAN results, Year 12 results) and identify areas in which the school is performing relatively poorly or well.

Teachers (e.g., continually available for student data) may be used by some teachers, but generally are used as part of a whole-school approach to data analysis.

An action plan needs to be developed that reflects on the analysis, interpretation, and use of classroom data.

Data may be used for the analysis of school levels, including the performance of subgroups, and analysis can be conducted to identify areas of improvement.

School data are presented to staff in meetings, but presentations tend to be for information rather than a trigger for in-depth discussions of teaching practices and school processes.

Information about the school’s performance is communicated to the school community, but may not be communicated effectively.

Low

There is little evidence of the principal’s and their school leaders’ practical use of school or student achievement data. There is either no planned data collection or a plan for the school to collect data or be implemented in a meaningful fashion. The school has yet to show clear evidence of the data being used.

Stakeholders do not systematically analyze data to inform other data for their classes. Teachers have little or no data to reflect on their teaching. The school is unable to demonstrate how data have been used in meetings to analyze and identify trends to make informed decisions about improvement.
It is important to learn from similar schools that have successfully made the transition to being data-driven. Conversations with their key leaders and staff can provide a wealth of information. Take five minutes now to ask others at your table some of the questions below.

Do you have a dedicated data analyst?
Do you have a data management group?
Who do staff ask if they need access to data?
Where do you store your data?
Who has access to the data? How is this controlled?
How are staff expected to use data?
How do staff demonstrate this usage?
Do parents / students have access to the data?

What data do you gather?
How is the data presented?
How are staff trained to interpret the data?
How do you ensure the quality of the data?
How often is the data collected and by whom?
Who can access the data?
How is it currently used?
What reports do you generate from the data?
Creating a successful data-driven culture requires the digital, human, and assessment infrastructure to support it.


Available: Data must be there when you need it.
Complete: It must provide a whole picture of student learning.
Relevant: Data must be relevant to your needs.
Secure: It has to be safeguarded and trustworthy.
Effective: Leaders and teachers must have the skills to use data effectively.
Communicate: Data must be used to communicate how students and schools are doing
Support: It should be used to support leaders and teachers.
Improve: Data should be used to improve learning.
Examine Infrastructure for Effective Data Use

Referring to the handout – What is Educational Data.
What data do you have available now?
What is the quality of the data?
Is the current format of the data appropriate for data analysis?
How often is the data collected and by whom?
What reports are needed and do we have the information to support them?
How does your current Student Information System infrastructure support data collection?
What (if any) changes are required in the way your school data is currently stored?
**Assessment Item Name**           | **Area**       | **Targeted Year Level/s** | **Cost** | **Start Year** | **End Year** | **Internal Responsibility** | **Schedule** | **Distribution** | **Storage** |
---|---|---|---|---|---|---|---|---|
ACER PAT-R Comprehension | Literacy | 5,6,7,8,9,10 | $0.00 | 2014 | Current | HOD English | Term 4 | English Teachers, Learning Enrichment | SIS |
ACER PAT-R Vocabulary | Literacy | 5,6,7,8,9,10 | $0.00 | 2013 | 2015 | HOD English | Term 4 | English Teachers, Learning Enrichment | SIS |
ICAS English | Literacy | 7 | $0.00 | 2013 | Current | HOD English | Term 1, Term 3 | English Teachers | File System |
ACER GAT | Aptitude | 7 | $0.00 | 2015 | Current | Director of Curriculum | Term 1 | Heads of Department | SIS |

**Purpose**: Comprehension assesses retrieving directly stated information, interpreting explicit information, interpreting implied information and reflecting on texts in multiple-choice format. These skills reflect comprehension skills described in the Australian National Curriculum for English.

**Purpose**: Vocabulary assesses word knowledge through synonyms. The questions are all multiple-choice.

**Purpose**: ICAS – English assesses reading and language skills in a range of contexts. The following aspects of texts are assessed and reported: text comprehension—reading for meaning—in literary and factual texts; the writer’s craft in selecting particular text types, vocabulary and techniques; syntax; and vocabulary. The questions require students to locate, identify, sequence, explain, interpret, analyse and infer information in and about texts.
Developing a whole school approach to data requires on-going commitment from teachers and parents.

Teachers and parents need to see the benefits of using data in the classroom.

Barriers to the appropriate access and use of data need to be removed – How can data help teachers.
HOW DO DATA HELP TEACHERS?
Ensuring Buy-In, Commitment and Trust

Developing a whole school approach to data requires on-going commitment from teachers and parents.

Teachers and parents need to see the benefits of using data in the classroom.

Barriers to the appropriate access and use of data need to be removed – **How can teacher use data?**

The requirements of each area of the school will differ – create a data group and invite interested staff / key stakeholder from each area to participate.

Reinforce the benefits of data-driven decision making (anecdotal and research based).

Customise the data solution and develop components / reports which address the needs of staff from each area.

Set clear expectations on the use of data.

Faculty meetings should include at least a five minute discussion on the analysis of data relevant to that department at that time.
Leaders and teachers must be trained to interpret and use data effectively.

Various international studies show that many educators do not feel adequately prepared or confident in using assessment data for formative purposes.

The ability to:

- Discern the quality of the data,
- organise if effectively,
- consider what it means,
- and use it to make sound decisions.
Schools are inundated with data.

Leaders and teachers must be trained to interpret and use data effectively.

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### 5.4 Interpret student data

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Show Illustrations

Show Evidence
Promote the use of data based decision making through example.
Introduce the importance of data all members of the school community.

**Bring parents on board.**
How Does Empower Parents?
Data helps to start the **CONVERSATIONS** that need to happen. It doesn’t replace them.

This helps parents make connections that lead to individual paths to **SUCCESS**.
Promote the use of data based decision making through example.

Introduce the importance of data to all members of the school community.

Bring parents on board.

Continual reinforcement at staff meetings.

Presentation and discussion of school wide data.

Choose a limited number of data indicators for staff to focus on and implement into their daily work.

Encourage and emphasise successes.

Real-life stories from staff are a powerful means of showing positive outcomes.

Allow time at meetings for these discussions.
Establishing regular data meetings is essential.

These meetings should take place at all levels – not just a specific data team. For example: Heads of Year, Heads of House, Heads of Department, Academic Advisors, Subject Teachers.

The focus of these data meetings is to:
- assess current levels of student performance,
- identify students at all levels of achievement, and most importantly set teaching goals and strategies.

These meetings reinforce the importance of data-driven decision making and provide opportunities to monitor student, class, and school progress.

Leadership staff must define the parameters for what is considered “good”, “average” or “needs improvement” and what indicators are being targeted for change.

Goals set in previous meetings need to be reviewed as do the strategies put in place to achieve those goals.
The biggest obstacle to developing a whole school approach to data is the inability for staff to access quality data when and where it is needed.

Making the shift to a data-driven culture often necessitate the realignment of staff and resources, and changes in policies or procedures.

Is access to information stores blocked because departments or manage their “own” information?

Do policies exist which allow only senior-level staff to access certain reports related to school wide performance?

You will encounter informal gatekeepers of information (and resulting power struggles over data access).

Often, as new processes or practices that relate to data access are implemented, there is a resultant shift in who controls the information.
Establish a Clear Vision

Research and Learn from Others’ Success

Examine Infrastructure for Effective Data Use

Ensure Buy-In, Commitment and Trust

Foster Professional Development

Lead by Example and Encourage Data Utilization

Establish Data Meetings

Remove or Modify Barriers to Effective Data Use
Questions and Discussion
Thank You!