

Leading in a good way

Making Sense of the Numbers: Thoughtfully engaging with big data

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Manitoba Association of School
Superintendents (MASS)

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Our critical challenges

- Commit to **principles** that will guide your decisions in relation to data
- Identify steps, actions, and practices that you will **affirm**, **refine**, **adopt**, or **abandon** to lead in a good way this year, with a focus on using data to guide your decision making.

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Leadership Team *Thoughtbook*

Critical challenges:

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1. Potential principles to guide our decisions in relation to data

We commit to...

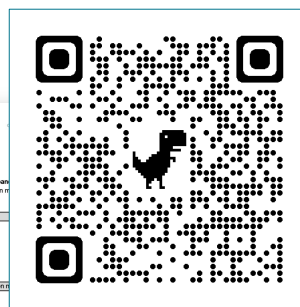
Steps, actions and practices that might support the use of data to guide our decision making

We will affirm (continue):

We will refine:

We will adopt:

We will abandon:

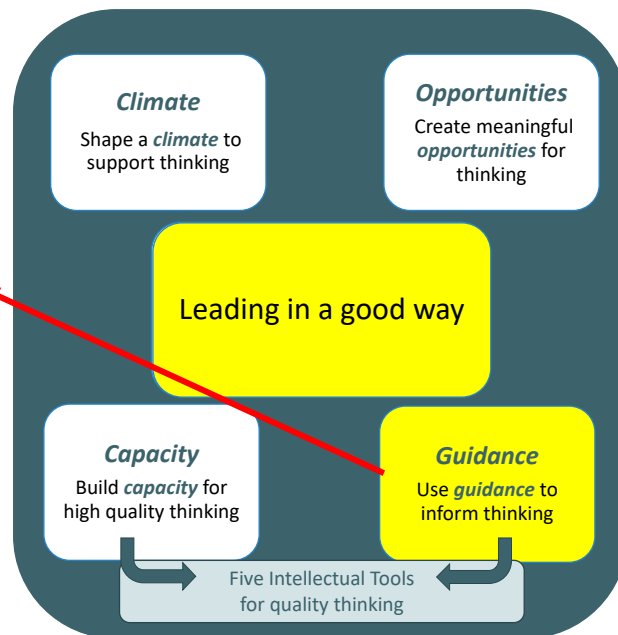


Revisit your Thoughtbook: What might you add or change?



Use guidance to inform thinking

- Determine what data will inform your plan
 - What data do you already have?
 - What data do you need to gather?
- Effectively gather data from different members of the educational community
- Thoughtfully examine and analyze different sources of data
- Interpret data and critically reflect on the conclusions we draw from it



The path of our inquiry

Which questions are most intriguing for you?

- What are you learning about your division from your data?
- What are the most important strengths, weaknesses, opportunities and threats presented by satellite data?
- What are the data literacy competencies required to thoughtfully engage with satellite data?
- Who in your division needs to develop the requisite data literacy competencies? What is your plan to support their development?



What are you learning about your division from your data?

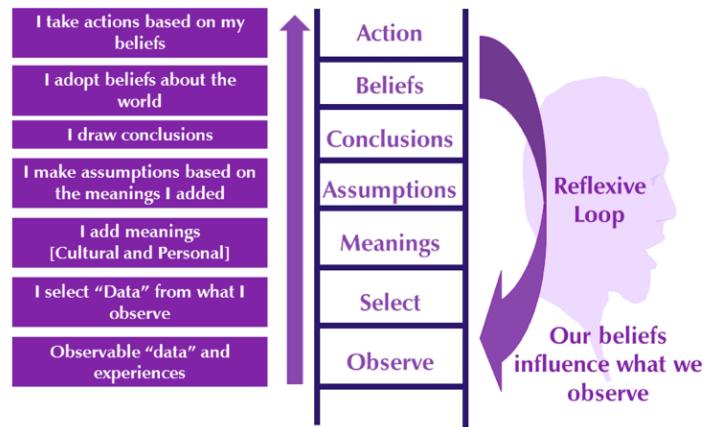
We invited you to bring your most compelling and informative data to the summer institute...

Type of data	Helps you understand...	Answers the questions:	What did you bring and why?
Demographic Data	WHO you are as a community	Who do we serve? What is important to our community? What social identities are reflected in our community? Who in our community represents groups of historically marginalized peoples?	
Perception Data	CLIMATE of your district and the well-being of students and staff	What are the lived experiences of members of our community, particularly those who are marginalized? What do students/ families identify as strengths of the district? Weaknesses?	
Learning/ Achievement Data	HOW students are doing academically	What academic outcomes are students experiencing? What are the patterns of academic success—for whom is this a pattern? What are the patterns of academic underachievement —for whom is this a pattern?	
Programs and Process Data	WHAT you are doing or not doing that is contributing to results	Where are is bias and oppression within our ways of doing business? What structures and practices that support or impede students' experiences and outcomes?	

Examining your data

- Take time with your team to examine and describe the data
- What questions do you have?

The Ladder of Inference



+
○

What are the most important strengths, weaknesses, opportunities and threats presented by "big data"?

+
○

Algorithmic Illusions: Hidden Biases in Big Data, Kate Crawford, 2013

What connections might
you make to satellite data
in education?



What are the data literacy
competencies required to
thoughtfully engage with
“big data”?





The greatest concern regarding race-based data is its potential to be misunderstood as validation for biological concepts about race.

- Confronting Racism with Data: Why Canada Needs Disaggregated Race-Based Data, Edmonton Social Planning Council, Feb 2021



"Race-based data collection must acknowledge that race is a social construction. Failure to do so runs the risk of presenting race as the cause of perceived trends, when in fact these trends are the result of racist systems that produce, and then act upon, race. The different outcomes between racial groups can easily be painted as proof of biologically-based racial differences to the untrained—or ill-intentioned—eye. It is therefore essential that data collection efforts are pre-empted by the understanding that race in and of itself holds no explanatory power."

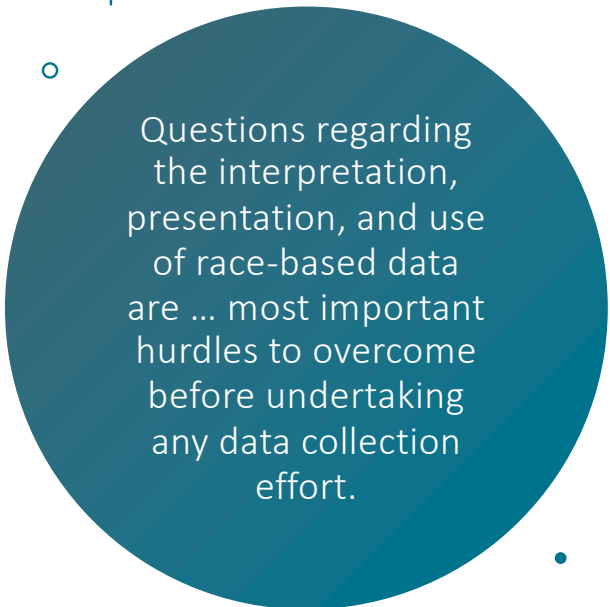
Confronting Racism with Data: Why Canada Needs Disaggregated Race-Based Data, Edmonton Social Planning Council, Feb 2021



Many modern research practices came out of the same racist systems that compel us to collect race-based data

- [We] must be willing to abandon traditional research methods in favour of approaches that emphasize collaboration, as well as racialized communities' autonomy, ownership, and control. This is especially vital here in Canada as we embrace reconciliation with Indigenous peoples.

Confronting Racism with Data: Why Canada Needs Disaggregated Race-Based Data, Edmonton Social Planning Council, Feb 2021



Questions regarding the interpretation, presentation, and use of race-based data are ... most important hurdles to overcome before undertaking any data collection effort.

- Race-based data collection with no clear objective can lead to the continuation of harmful practices and ultimately work to the detriment of racialized communities. ...Race-based data may expose part of the story, but it seldom ever provides a complete explanation.

Confronting Racism with Data: Why Canada Needs Disaggregated Race-Based Data, Edmonton Social Planning Council, Feb 2021

Making connections

- What connections might you make to other types of identity data?
- What connections might you make to your efforts to better understand your students?



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Potential principles to guide our decisions in relation to data

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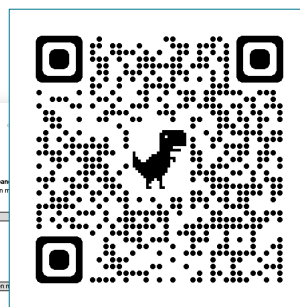
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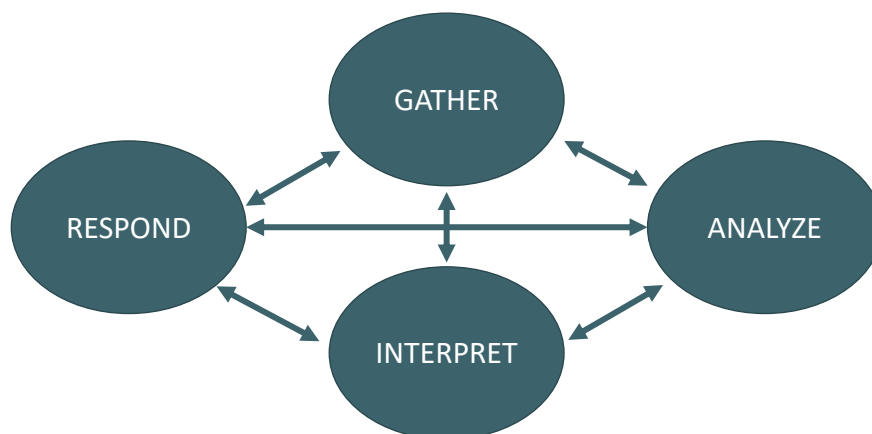
We will abandon:



Revisit your Thoughtbook: What might you add or change?

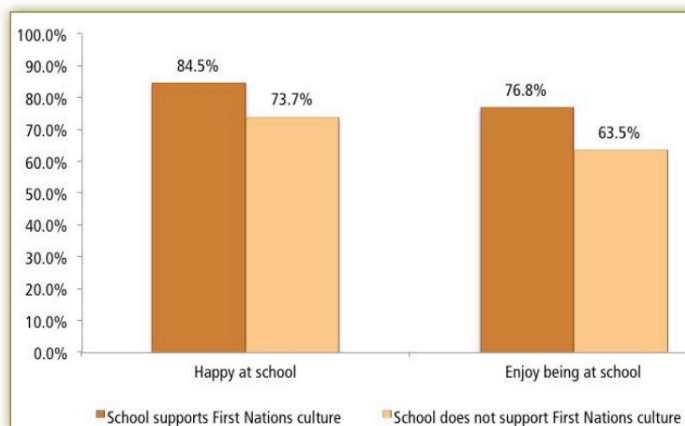


Data literacy competencies



Describe
the data
as best
you can

Figure 3.1. Happiness and enjoyment of school among First Nations youth based on perceived support for First Nations culture at school

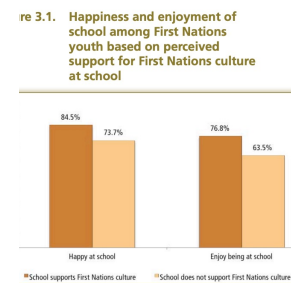


First Nations Information Governance Centre, Our Data, Our Stories, Our Future: The National Report of the First Nations Regional Early Childhood, Education and Employment Survey, (Ottawa: 2016). 104 pages. Published in July 2016.

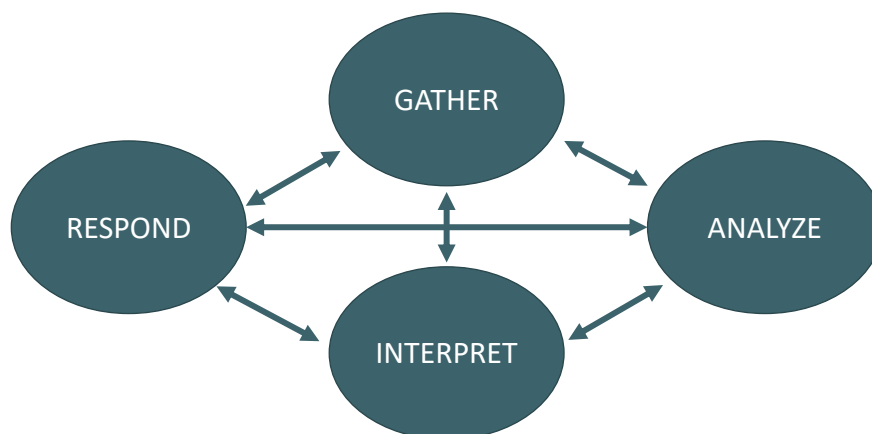


Compare your description

- Among First Nations youth who agreed or strongly agreed that their school supports First Nations culture, the majority (84.5%, 95% CI [81.7, 87.0]) agreed or strongly agreed that they felt happy at school, compared to 73.7% (95% CI [67.1, 79.4]) of those who did not think that their school was supportive of First Nations culture. Similarly, among First Nations youth who agreed or strongly agreed that their school supports First Nations culture, more than three-quarters (76.8%, 95% CI [73.1, 80.1]) agreed or strongly agreed that students at their school enjoyed being there, compared to one-third (63.5%, 95% CI [56.3, 70.1]) of those who did not think that their school was supportive of First Nations culture (See Figure 3.1).



What competencies are required?



School performance of First Nations youth, by emotional factors

Describe the data as best you can

Emotional Factors	Currently attending	Repeated a grade	Learning problems
	Yes	Yes	Yes
Feel lonely			
Not at all/a little	88.2%	32.0%	36.5%
Moderate	91.7%	42.9%	48.9%
Quite a bit	83.0%	48.9%	56.3%
Feel loved			
Not at all/ a little	81.5%	42.8%E	47.8%
Moderate	85.4%	29.9%	46.1%
Quite a bit	88.7%	33.1%	37.0%
Feel stressed			
Not at all/a little	88.1%	32.6%	35.9%
Moderate	92.5%	31.7%	46.5%
Quite a bit	84.6%	41.9%	51.3%



School performance of First Nations youth, by emotional factors

- The proportion of youth who were currently attending school was higher among those who reported feeling more loved, less lonely, and less stressed, while the proportion of youth who repeated a grade or reported learning problems was lower.

Emotional Factors	Currently attending	Repeated a grade	Learning problems
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Reasons for dropping out among First Nations youth

- How might your staff react to this data?
- What might resonate?
- What might surprise?
- What might be the cause of various reactions?

Reasons	%
Bored / Not interested	32.8
Peers / School climate (bullying)	22.7
Problems with teachers	22.4
Problems with school work	21.4
Kicked out / Expelled / Suspended	19.0
Problems at home	12.0 E
Alcohol / Drug problems / Addictions	11.4 E
Moved	6.7 E
Missing a few credits / Not worth continuing	4.8 E
Own health	4.6 E
Mental health issues	4.3 E
Prejudice / Racism	3.8 E
Pregnant / Caring for own child	F
Accident / Injury	F
Disability	F
Had to work / Money problems	F
Wanted to work	F
To help with traditional activities	F
Reasons	%

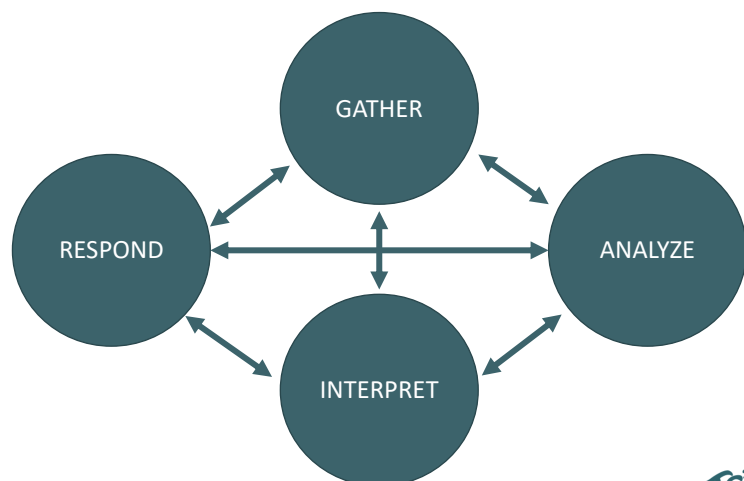
Showing 1 to 18 of 18 entries

Note: Respondents could choose more than one response. E = High sampling variability, interpret with caution. F = Suppressed due to low cell count or very high sampling variability.



Data literacy competencies

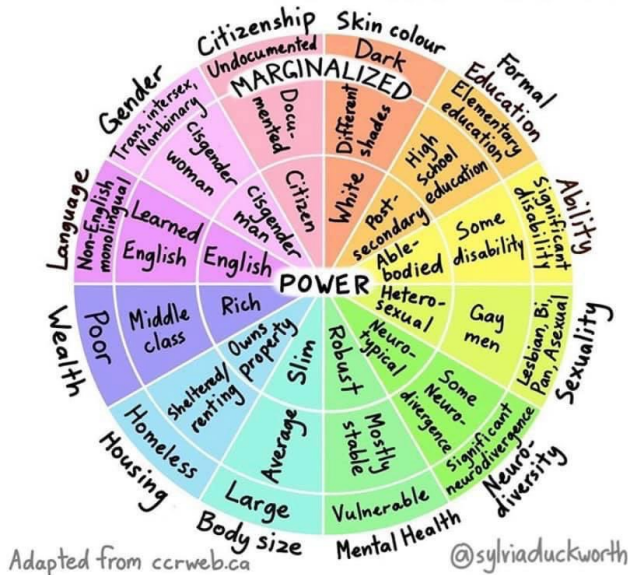
How might our own identities, lived experiences, biases, assumptions and worldviews influence how we engage with data at each stage?



Growing our thinking

- Where do you locate yourself on the Wheel of Power/Privilege?
- How might our identities impact how we engage with data? How we lead?

WHEEL OF POWER/PRIVILEGE



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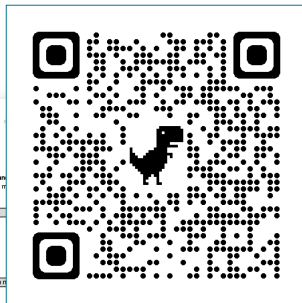
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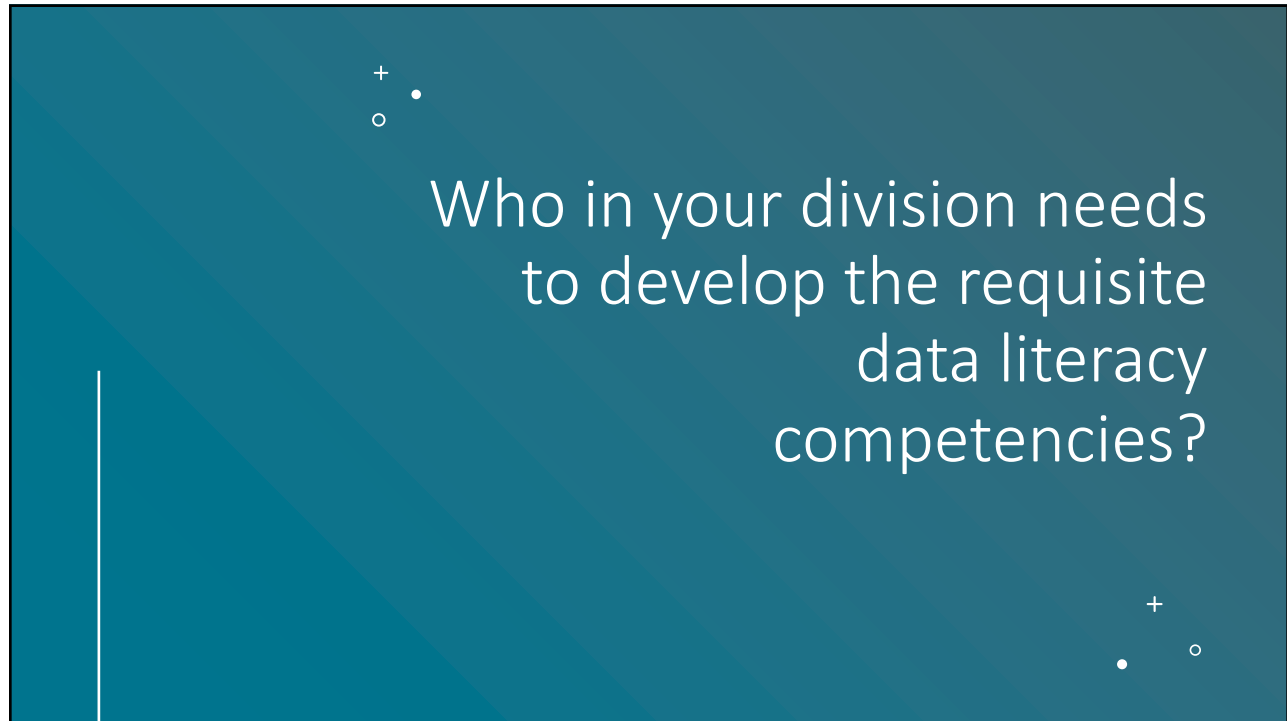
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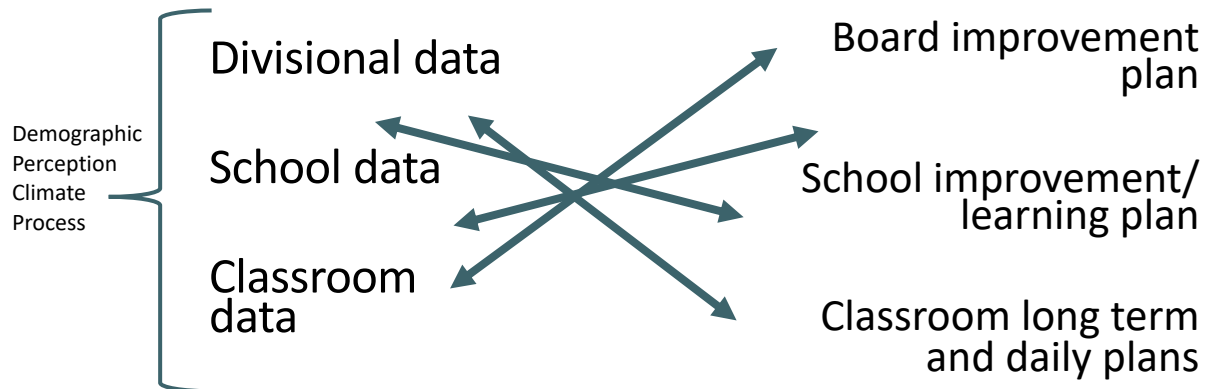


Revisit your Thoughtbook: What might you add or change?



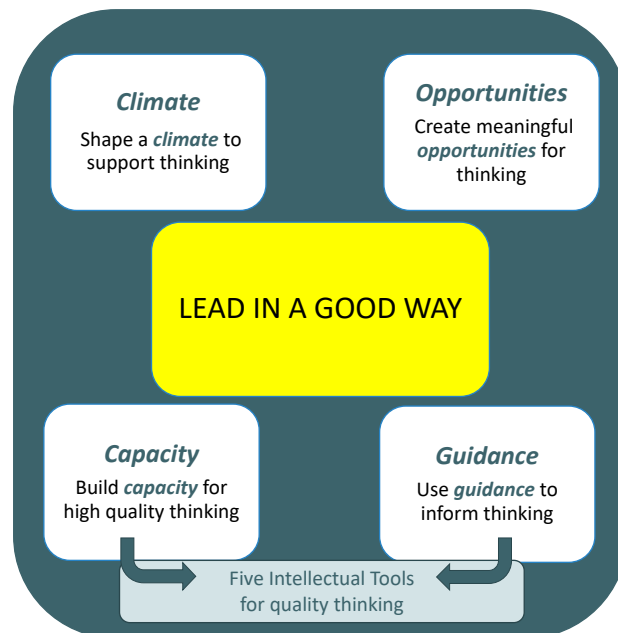


What are the relationships you hope for?

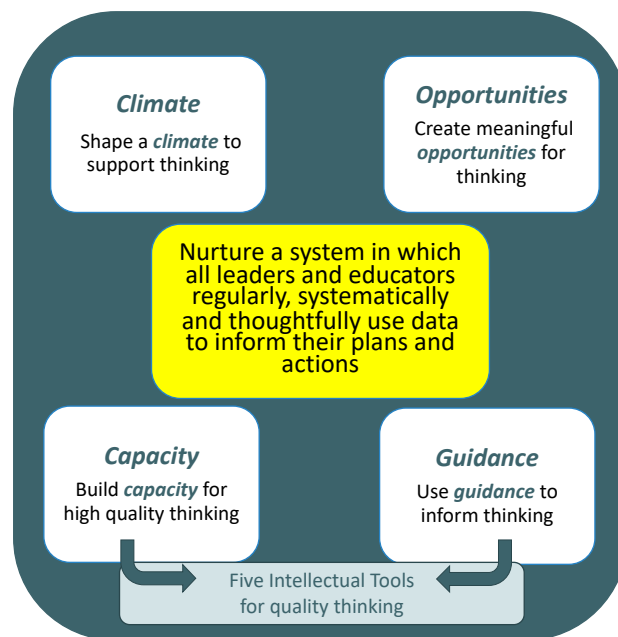


Reminder

TC²'s framework to ensure a critically thoughtful approach to teaching, learning and leadership

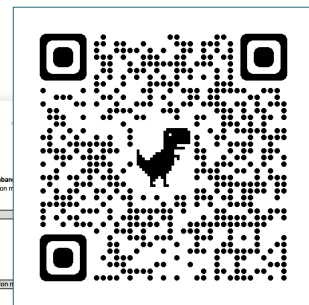


TC²'s framework to ensure a critically thoughtful approach to teaching, learning and leadership



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Share a principle and/or a corresponding step, action or practice



Next steps on our path of inquiry

- How and what are you learning from families and communities?
- What do we mean by “truly collaborative partnerships”?
- What principles might guide us in working with families and communities to better understand students?
- What might it look like and sound like to learn from and think collaboratively with families and communities?
- What are the data literacy competencies required to thoughtfully engage with data gathered with families and communities?
- How might you nurture a system in which every leader and educators actively seeks, values and meaningfully uses guidance and feedback from families and communities?



Thank you!

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