Empowering Excellence: Leading the Way for Gifted Students

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1

What does ‘excellence’ mean in gifted education?

In gifted ed excellence refer to actual high performance or achievement in a field, often as an outcome. It is often a synonym for talented outcomes.

Excellence as a concept became a key aspect of talent models in the 2000s–2010s

Gagné –DMGT

Gagné uses “outstanding performance” or “high-level mastery” to refer to the outcome of talent development — this aligns conceptually with excellence

Subotnik, Olszewski-Kubilius, & Worrell – Talent Development Mega-Model (TDM)

Developmental perspective. Key phases:
- early - Potential (giftedness)
- Competency (talent)
- Expertise
- Eminence (excellence) in adulthood as an outcome

Renzulli – Three-Ring Conception of Giftedness

Renzulli uses productive giftedness, which results in real-world accomplishments.

Ziegler’s Actiotope Model of Giftedness

Excellence = a developed, high-level outcome of talent development.

2

What does empowering excellence look like?

What does excellence look like in the formal education context?

The consistent generation of excellent outcomes in one or more domains

- High grades, test scores, or academic awards.
- Mastery of advanced curriculum topics
- Advanced, Creative problem-solving, innovative solutions
- Original productions in arts, science, technology

Where do excellent outcomes come from?

Not random

Students advanced learning capacity + teaching in the domain

To empower excellence in a school, empowerment at the classroom level is necessary

Educational provision does the empowering, Through differentiated curriculum, teaching and classroom culture and climate.

3

Pathway

Leading to empower excellence

What does gifted learning, in its multiple forms, 'look like' in the classroom?

Starting point for empowered provision

What practices are used to identify excellent outcomes for the multiple types of gifted learning profiles?

decisions about how it will identify instances of gifted learning and thinking.

How is educational provision differentiated in the classroom?

Provision to facilitate gifted learning and to optimise excellent learning outcomes

4

Session 1: The gifted learning profiles that underpin excellent outcomes

5

Our pathway: Session 1

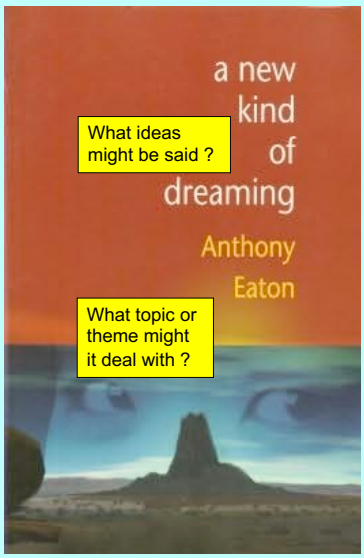
What gifted learning look like in the classroom: Some anecdotes.

The characteristics of gifted learning

The multiple ways of being gifted

6

Year 8 boys' impressions of a novel from the cover prior to reading it.



What ideas might be said ?

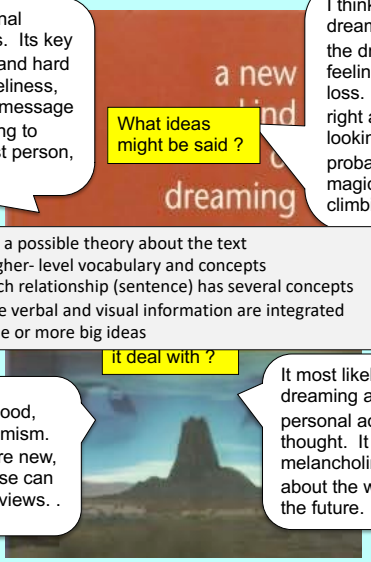
What topic or theme might it deal with ?

7

Year 8 boys' impressions of a novel from the cover prior to reading it.

It will probably have an aboriginal theme about dreamtime stories. Its key ideas will be working together and hard times. The feelings will be loneliness, desolation and emptiness. Its message will be working hard and aspiring to something better. It will use first person, inclusive language.

I think it's about aboriginal life, their dreaming in the modern day and how the dreaming has changed. The feelings might be calmness, fear and loss. Its message is a clear sense of right and wrong (good and bad) looking back into the past. It is probably a true adventure, almost magical and includes the landscape, climbing, an obelisk.



What ideas might be said ?

Each is a possible theory about the text
- Higher- level vocabulary and concepts
- Each relationship (sentence) has several concepts
- The verbal and visual information are integrated
- One or more big ideas

it deal with ?

It will probably have a surreal mood, with hope for the future and optimism. Its message is probably there are new, different ways to dream and these can change peoples' lives and their views. .

It most likely possesses elements of dreaming and thinking. It seems likely to be a personal adventure full of reflection and deep thought. It will be thought provoking, with melancholiness and confusion, sadness about the world, going between the past and the future.

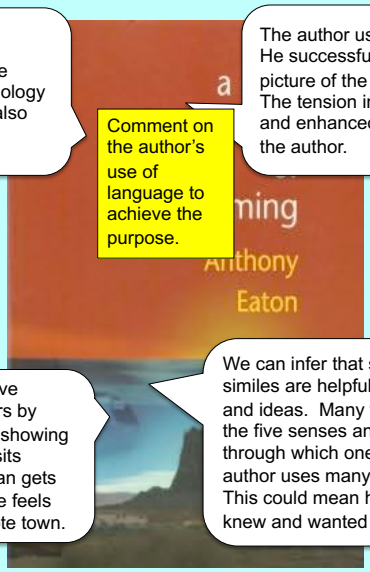
8

Year 8 boys' impressions of a novel having read the first chapter.

The author uses a range of highly emotive and expressive language, designed to draw the reader into the novel. He uses professional terminology to accentuate his authenticity. He also uses personification and similes to explain difficult situations.

The author uses very descriptive language. He successfully used imagery to paint a picture of the setting and the characters. The tension in the prologue was created and enhanced by the descriptions used by the author.

Comment on the author's use of language to achieve the purpose.



The author uses a very descriptive vocabulary to build the characters by putting them through things and showing us how they react. He also revisits certain phrases like when the man gets sick on the boat and then how he feels sick when he arrives in the remote town.

We can infer that several adjectives and similes are helpful for describing landscapes and ideas. Many words are used to describe the five senses and these help in the picture through which one imagines the story. The author uses many words to do with a ship. This could mean he researched this or already knew and wanted to show his knowledge.

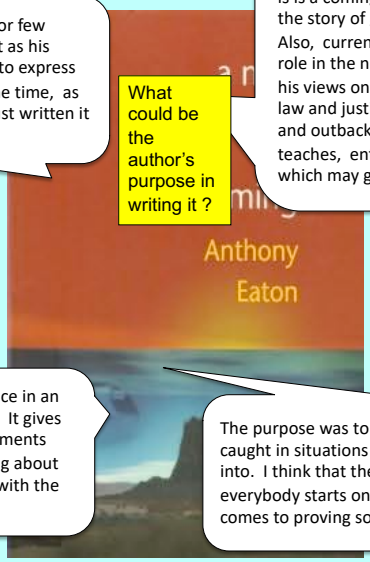
9

Year 8 boys' impressions of a novel having read the first ch

The author could have had many or few motives for writing the piece, just as his characters do, I think he wrote it to express his personal mixed emotions at the time, as many authors do. He may have just written it to supply good literature.

The first chapter leads to the thought that is is a coming-of-age novel written to tell the story of growing up and maturing. Also, current issues and events played a role in the novel as the author has included his views on some issues. These included law and justice, asylum seekers, pirates and outback towns. The author also teaches, entertains, intrigues readers which may give joy to the writer

What could be the author's purpose in writing it ?



To bring up ideas such as social justice in an entertaining way for young readers. It gives the reader ideas and brings up arguments that makes the reader think. Writing about this could also help the writer deal with the issues in the chapter.

The purpose was to show how people can get caught in situations they had no intention of getting into. I think that they are also showing us that not everybody starts on a fair playing field when it comes to proving something.

10

A talented understanding of Mungo Lakes living

Historical Concepts and Skills, Levels 5 and 6, *Continuity and Change:* Identify and describe patterns of continuity and change in daily life for Aboriginal and Torres Strait Islander peoples, 'native born' and migrants in the Australian colonies (VCHHC085).

Look at this country. What is it like? What does it remind you of?

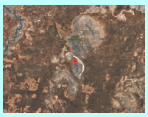
re pictur
Willandra

Where are Willandra Lakes on map of Australia

11

Dr Jim Bowler researching Mungo Lakes living

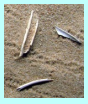
In the 1960s Dr Jim Bowler was looking at photographs of this land. He is a scientist who studies rocks and the earth. He was very interested in what Australia's landscape and climate might have been like a long time ago (in the Pleistocene epoch, between 1.8 million and 10,000 years ago) and how it had changed.



As he was he looking at pictures taken from above the land he thought that he could see areas on the ground that could have been a large number of lakes.
If they had been lakes, he knew that sand and dirt on the bottom of the lakes would build up, in layers. These layers could contain things that were living there at the time.

He started to explore areas of these lakes where the wind had blown away the sand. He found freshwater mussel shells and what looked like stone tools from deep down in the sand.

Then he found bones that looked like human bones.



It were part of the skeleton of a woman who had lived there about 40,000 years ago. She became known as Mungo Woman, or Mungo Lady.

Imagine you were living at Lake Mungo 40,000 years ago. What would it have been like?

What do you think people would have done to live there .

Assess student responses in terms of
- Number of concepts they mentioned - fluency
- The extent of their inference

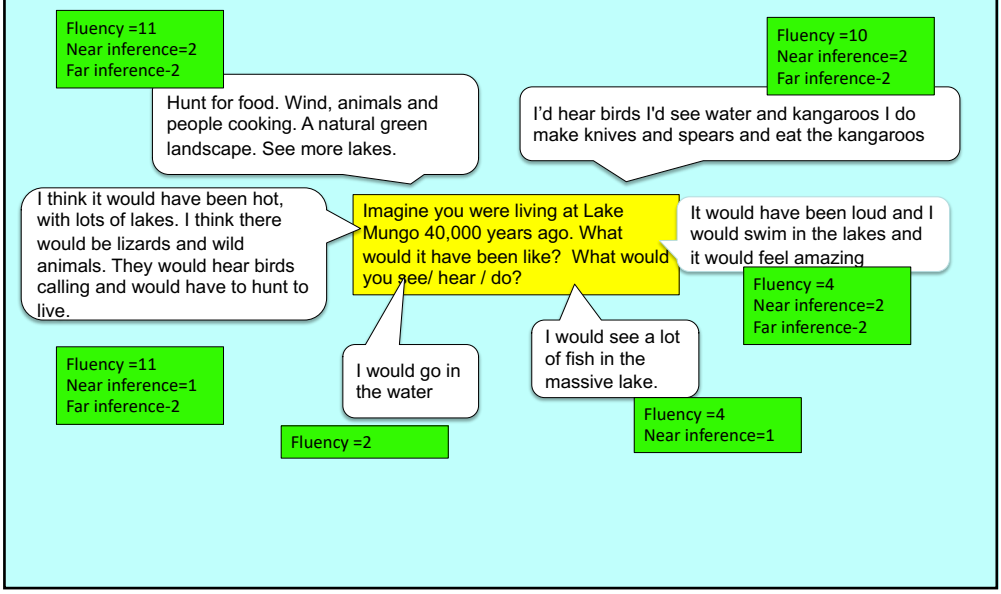
Largely what was given – literal

Stayed within context- near inferential

Stayed outside context- far inferential

12

An example of each student's response to each of the questions



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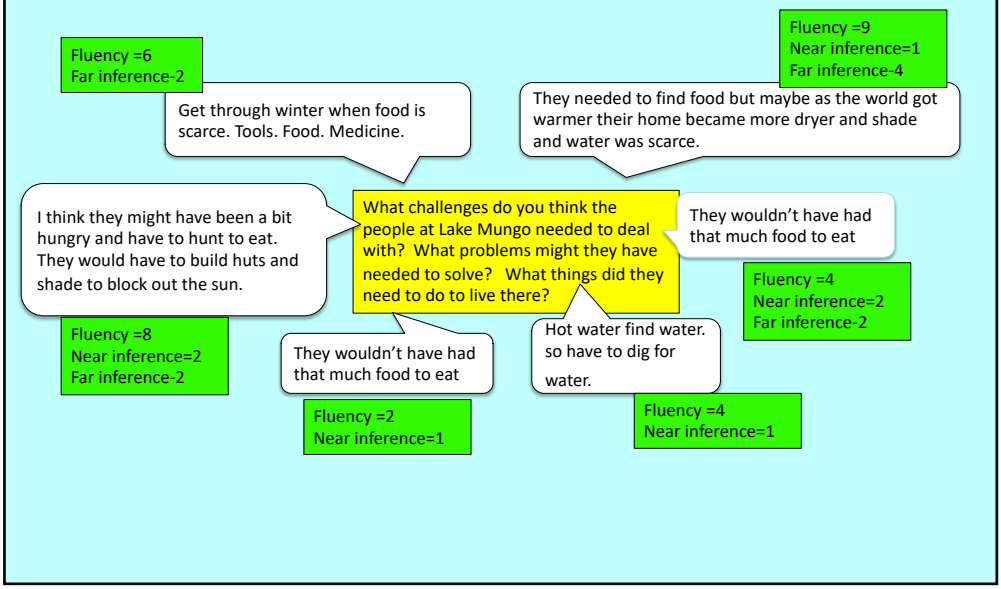
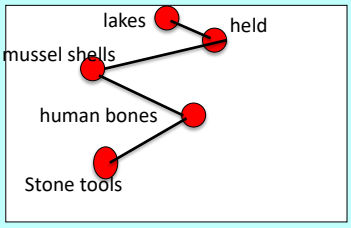
An example of each student's response to each of the questions



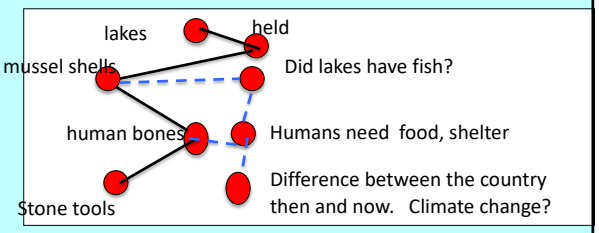
14

Describing the change in understanding of Mungo Lakes

Regular learners are programmed by teaching.



Gifted learner extends the knowledge from the teaching



They form an essentially literal understanding of the teaching information.

They may infer and extend spontaneously what they have learnt beyond the teaching but their inferences are usually low level.

Excellent responses comprise both links from the information and links made by the student. They

- analyse and extend the teaching information. Their responses show evidence of two or more inferences; they infer patterns that extend their knowledge
- synthesize the inferences into a big idea. They form a 'personal intuitive theory' about the information.

15

The characteristics of the understanding underpinning excellence

Big picture understanding

A human and animal community lived around lakes in the Willandra district 40.000 years ago

This understanding is at least in part an intuitive, personal theory about how the Moon moves when it is first developed

Extend idea : Integrate patterns infer a big idea

The area around the lakes may have been green and supported other animals

They needed tools to hunt, cook, build shelter, deal with health and illness

Climate change may have lead to change in country

Infer further from the inferred a pattern

The lakes may have had fish and you could swim in it

Humans need food, water, shelter to survive. They needed to hunt, build shelter, cook

The country in this region has changed

Extend idea : Infer a pattern

The teaching: Professor Bowler believed there could have been lakes and then found mussel shells, stone tools and human bones in the layers of sand

16

High ability interpretations : some anecdotes

Learning about insects: Grade 3

Regular learners learn what I teach: insects have three pairs of legs. They move fast.

Insects

How many toes does a slater have ?

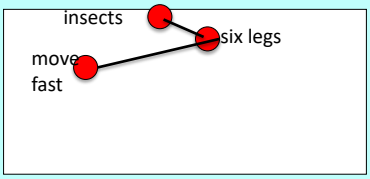
They can move so fast when they are so small. They must be able to push off with their feet really well.

5/21/25 17

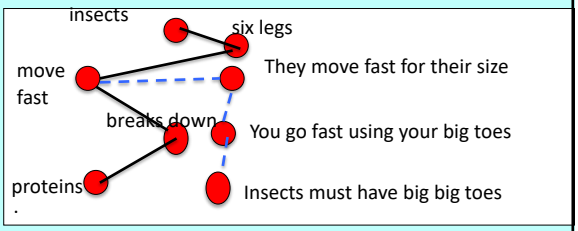
17

Describe change in understanding of insects

Regular learners are programmed by teaching.



Gifted learner extends the knowledge from the teaching



They form an essentially literal understanding of the teaching information.

They may infer and extend spontaneously what they have learnt beyond the teaching but their inferences are usually low level.

Gifted learner infer an intuitive theory by making richer links.

Gifted responses comprise both links from the information and links made by the student. They

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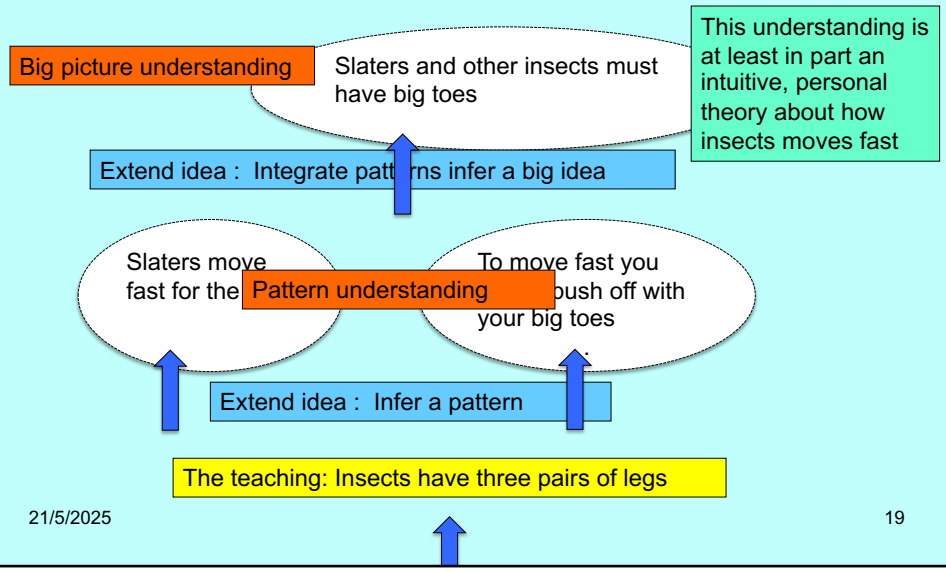
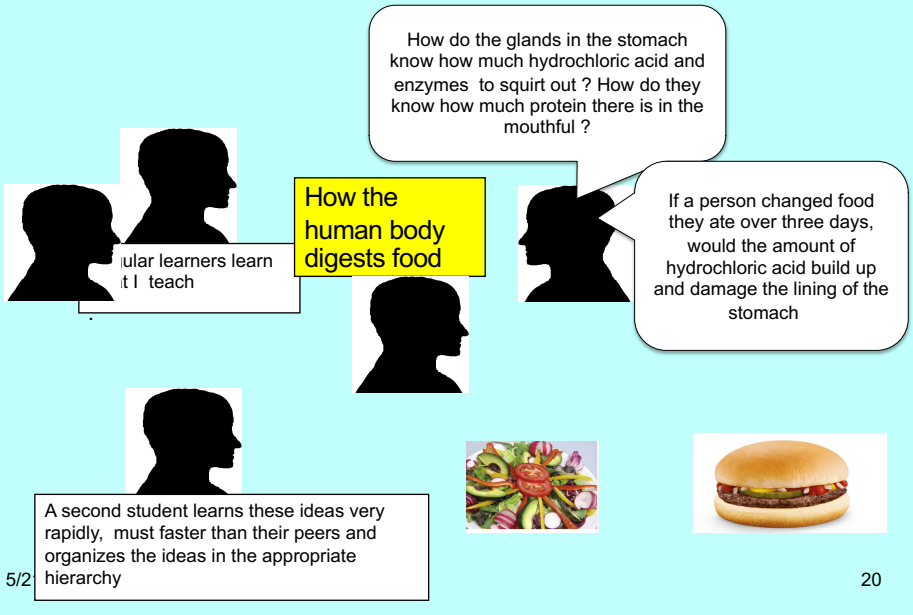
18

The characteristics of the gifted understanding



19

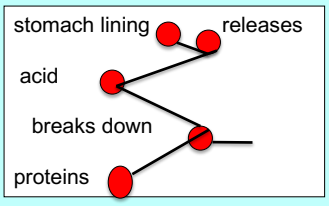
High ability interpretations of teaching



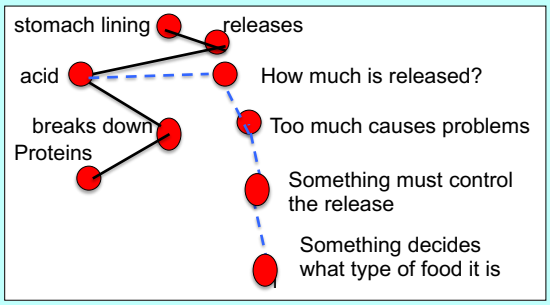
20

Use microscopic model to describe change in understanding of digestion

Regular learner programmed by teaching



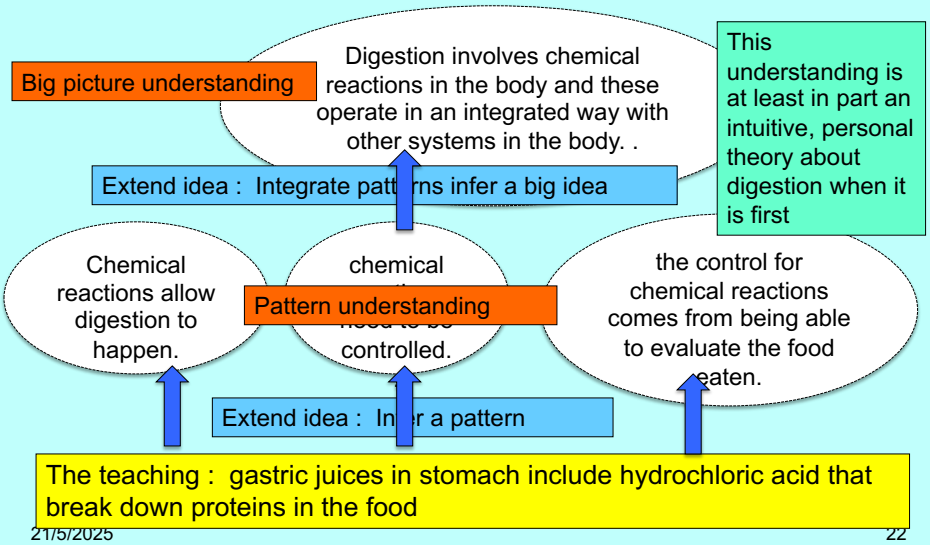
Gifted learner



Gifted learner extends the knowledge from the teaching; infers an intuitive theory by making richer links

21

The characteristics of the gifted understanding

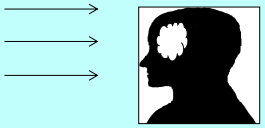


The teaching : gastric juices in stomach include hydrochloric acid that break down proteins in the food

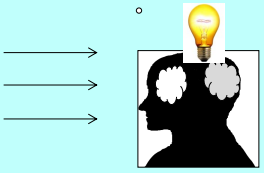
22

Where talent begins : ITA

Purpose of differentiation: to help gifted learners optimize their learning and achieve talented outcomes



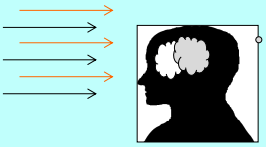
regular learners



ITA about the teaching

can lead to talented outcome

gifted learners



gifted learners

infer in various ways

re-organise, re-link

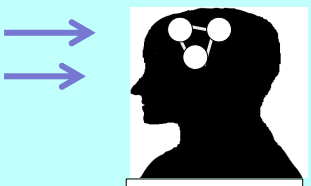
evaluate

synthesize

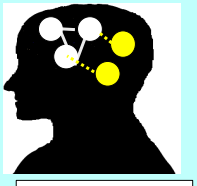
this is the thinking the differentiated teaching needs to scaffold and cue

23

What do gifted interpretations of the teaching look like?



Regular students



Gifted students

The interpretation of the teaching is in the networks' of linked meaning units'

Gifted students can form these interpretation of the teaching in all domains of learning

5/21/25

24

Your turn 1 : Analysis of the content

Empowering excellence: What does your school think gifted learning looks like in the classroom?

- How would you describe how the gifted students are learning? What does their learning activity 'look like'? What similar instances of gifted learning have you witnessed in your teaching?
- To what extent does this fit with what you already knew about gifted learning? How does it differ?
- How does this model of gifted learning help you to recognise instances of gifted learning as part of your teaching?

25

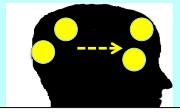
Part 2

What are the multiple ways of being a gifted learner?

Multiple types of giftedness

26

Multiple ways of being gifted by inferring and synthesizing

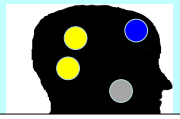


Convergent, verbally gifted: gifted in text comprehension.

more elaborated abstract conceptual and propositional knowledge –verbal or math gifted

the teaching → they 'jump ahead'.

school-house giftedness, 'consumers of knowledge', 'analytical intelligence', academic giftedness.



Divergent, creative, nonverbal, visuo-spatial, creative intellectual giftedness

infer patterns and 'intuitive theories' about ideas in time and s

more elaborated experiential or episodic knowledge- visual spatial gifted

- in … ave
- w… texts),
- how, why and when and where the ideas move.

Nonverbally gifted, creative gifted, knowledge producers

Practical giftedness, problem solving giftedness.

Think in actions, Infer new action sequences through far transfer that may solve problems and lead to creative outcomes. By creating new motor sequences they

- see ho…
- combi… sequences

more elaborated procedural knowledge or skills –practical or performance gifted

- show gifted knowing by producing, demonstrating.

Innovators, successful giftedness

Convergent or verbal gifted

Verbally gifted knowing: gifted in text comprehension.

Form intuitive theories that have the properties of text : high level text comprehension, production and use.

What do we mean by a text?

Each text

- has a topic and a genre, details and discourse or section meanings

uses abstract meanings and symbols, for example, $V=pr^2h$, $x^2-5x+6=0$), music and in gestures. Different symbolic systems are handled by different parts of the brain. A person may show 'verbal gifted ability' for maths or music symbolism but not for oral language.

2x+3= 17
2x+3-3= 17-3
2x= 14

- was designed for a purpose

- has rules and conventions for linking the ideas. These come from the culture/s.

Convergent, intellectual or verbal gifted in the classroom

Learn faster than their peers. in a given time they can form more knowledge and are ready to explore it sooner than peers. They don't wait to be programmed in a 'bit by bit' way.

Use their more elaborated and differentiated concept networks to learn in larger chunks and deal with more information at a time.

Use high level text- type thinking. They infer spontaneously the topic, details, section meanings and the intended purposes.

This allows them to 'jump ahead'. They make link with other texts, add ideas not mentioned in the text. They form more elaborated and extensive interpretations.

verbally gifted students In the classroom

Organise and fit together the ideas in their own ways and check their interpretations against the information. Their initial interpretations are likely to be intuitive.

Analyse spontaneously aspects of a text at a high level,
- evaluate, contrast themes in two or more texts,
- compare texts within and across genres to find common elements,
- interpret characterization in imaginative text, make within- and between text links.

Want to be self-programming and to manage their own learning.
- They learn rapidly the rules and conventions for a text.
- They use them to organize the ideas in the intended ways.

29

Noticing verbal or textual giftedness in the classroom

Verbally gifted students are easy to identify in the classroom. They learn what is taught at a higher level. They show high level outcomes on conventional achievement tests and tasks in the domain of their gifted learning. They also do well on tests of reasoning ability (that is, the 'general ability' or intelligence tests).

recall ideas easily, hold more ideas at once in their thinking space and comprehend them in more complex ways.

learn quickly and are 'one step ahead' of their teachers. They don't wait to be programmed 'bit by bit'

Infer rapidly its topic, the direction in which it is going

Verbal gifted' = inferring and synthesizing rapidly

Their inferring is in the general direction of the information

I wonder if X could lead to /means the same as Y ….

link it with

need

question id
extend the
and play with ideas in the domain

entiated
eir giftedness

plausible

s and tasks

learn and apply the rules and conventions for communicating easily and quickly and use this to organize their understanding.

show 'self-drive' and intrinsic motivation to 'want to know'.

30

Multiple ways of being gifted: Nonverbal or divergent gifted knowing

Nonverbal or Divergent gifted knowing

Nonverbal giftedness. Nonverbal thinking is in time and space, noting the outcomes, inferring patterns, possible 'big ideas' and then 'intuitive theories' about what is possible in time and space. You can imagine ideas changing in

- their attributes or properties; they imagine items in a context changing in what they look/sound like, what they do, the effect they have, their size or shape
- where they are (they transfer them to other contexts),
-
- how, why and when and where the ideas move, alternative actions they could take,
- the contents of the context; they imagine what would happen if the contents changed, for example, new entities entered the context, entities were removed,
- the sequence or order in which events in the context occur.

Visual –spatial gifted

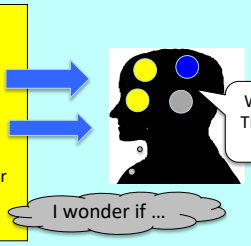
Creative intellectual gifted

31

Noticing nonverbal, creativity or imagery giftedness

Nonverbally gifted students in the classroom spontaneously 'go beyond' the teaching to form their intuitive theories of it by inferring using mental imagery in 'time and place'.

Their interpretations and understanding is often unusual, unexpected and often catch teachers 'off guard' and may question the teaching. They may bring in an idea that can challenge the context, the direction or the content. The teacher may not make the same analogistic links as this student and won't see where they are coming from.



In the classroom these gifted students form outcomes that are different, lateral or creative. They

- think about the ideas in time and space contexts at a high level, infer patterns by linking with other sets of images. They see shared features that others don't see'. They use what they've been taught and their unique experiences.
- synthesize the inferred patterns into 'big ideas' and form interpretations that are based on dynamic time-space thinking. These are creative and novel, often unexpected or unusual- time-place thinking is unique to an individual.
- engage in 'possibilistic thinking'. Their theories are about what is possible. Parts may be inaccurate or illogical, because the student has not yet tested it. They can test them and see how well they are supported.
- may have difficulty sharing their unusual ideas in words and 'show' them in drawings, act them out or make models. Examples are the Feynmann diagrams in modern physics.

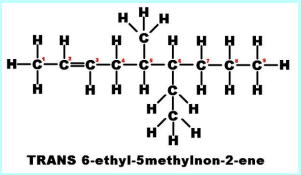
Rather than using what they've been taught by their cultures, these individuals are using their experiential or episodic knowledge. This is unique to them.

32

Kekule : the father of aromatic organic chemistry

What was known in the 1860s

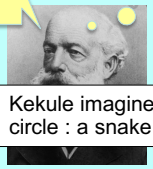
Carbon atoms linked in chains to make organic compounds

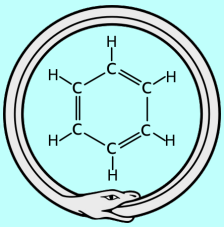


Benzene, the basic organic chemical, had the formula C_6H_6 and that didn't fit a chain format

The carbon atoms in a chain

don't match benzene





Kekule imagined a chain becoming a circle : a snake biting its tail.

33

Nonverbal , creativity or imagery giftedness in the classroom

Use whole-part learning strategies rather than going from simple to complex ideas in step-by-step way, learn in larger 'steps', may skip "steps" miss details.

Use imagery in time and space to form ideas by combining disparate elements. They synthesize several concepts in a 'big picture' way.

Nonverbally gifted students In the classroom

Create personal interpretation of the teaching vs learning the taught interpretation, generate their own ways of organizing ideas and solve problems intuitively to generate unusual solutions. They may not show 'steps on the way'.

perform better in untimed situations vs perform well in timed tests

show advanced outcomes on nonverbal intelligence tasks that assess the skill to infer visual and spatial patterns.

Learn by identifying meaningful relationships vs rote memorization, learn difficult concepts easily but struggle with easy skills

Can be identified using open-ended tasks that permit them to show all that they know about a topic or issue, open-ended speculations, curriculum-based projects, creations and innovative productions.

34

Nonverbally giftedness may not learn conventions.

These students frequently do not learn academic or social conventions well.

They need to learn how to learn academic and social conventions

You use academic conventions to speak and listen, read, write and spell. Some have difficulty learning these conventions and have difficulty sharing their unexpected or unusual ideas.

learning how to behave socially and interact interpersonally requires the use of social contentions. These students often show antisocial, unacceptable classroom behaviours.

They need to have the opportunity to display what they know and receive positive feedback for it.

To learn these conventions, a student needs to be 'programmed by their culture'. These students are often not programmed easily externally; they are more self-programming; they are often twice exceptional.

Teachers can modify the conditions under which the students show their understanding. Use multimodal approaches to show their knowledge. Students 'show' it by drawing them, acting them out 'in situ', or making models.

As well, teachers can ask: "I'd like to know what you can see in your mind. Could you tell me what you see? Say what it looks like? Could you draw it /act it out?"

35

Multiple ways of being gifted: Procedural or action giftedness.

Some students learn new motor sequences very easily and rapidly, automatize these and modify them in novel ways to achieve creative outcomes- practical and innovative giftedness.

a new musical improvisation

ways to improve internet, IT capacities and to solve problems

a new musical improvisation

actions for growing vegetables using less water

The action sequence can be used to produce,

a new way of cutting grass

set of or actions for kicking goals in football

a new art style

new gestures to show 'being a schemer

a new way of solving a maths task

Any action sequence comprises a set of component actions that achieves a particular purpose or outcome such as a production.

doing the components in a different sequence or simultaneously

You can get a different outcome by

combining actions from different sequences

changing the duration for each components

21/5/2025 36

36

Procedural or action giftedness in the classroom.

In the classroom these gifted students show their gifted learning capacity by doing or acting in novel ways to form outcomes that are different, lateral, original or creative productions or ways of solving problems. They are the 'problem-solving innovators'.

Think, know in actions, learn new action or motor sequences very easily, integrate action sequences to form 'big idea' action sequences

Show their talent is in the quality, complexity and sophistication of the action sequences they perform, particularly in solving real life problems in everyday contexts.

infer how a set of actions that works in one type of situation can be modified to work in a different type of situation → creative, innovative or talented outcomes

modify their action sequences to match new or changed contexts,. do component actions in a different sequence or simultaneously, change duration of components.

Integrate actions used in multiple domains, combine actions from different sequences, make 'fluid analogies' or 'far transfer' between action sequences

create novel action sequences, and can see new ways of achieving a goal or an outcome, skilled at interpreting a situation as a problem and acting to solve it.

Practically gifted = inferring through actions

Inferring is in directions unexpected by others

I wonder if I do it that way will I.....?

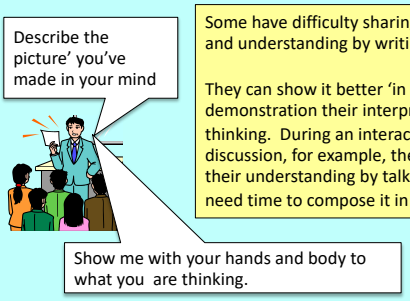
37

Noticing procedural or practical giftedness

Procedurally gifted students have their understanding in an action form.

Classrooms value abstract knowledge. They usually do not foster learning by acting or doing or by solving self-defined problems.

Problems and challenges in teaching are usually formulated by others, clearly defined and presented with all the necessary information needed to solve them. They usually have a single correct solution pathway. They are often removed from everyday experiences.



Some have difficulty sharing their knowledge and understanding by writing or speaking.

They can show it better 'in situ' through demonstration their interpretations and thinking. During an interactive class discussion, for example, they may not share their understanding by talking. and they need time to compose it in a verbal way.

These students show their advanced thinking and understanding when the classroom is in a practical, everyday context such as an excursion, a drama, 'hands-on' activities in science, art or technology, or a school camp. They are creative mechanically and technologically.

These students have advanced problem solving ability in practical, everyday contexts. They understand their world in unique ways and use their knowledge in culturally 'street wise' ways, to adapt to, shape and construct their environment and solve real life problems. This matches Sternberg's practical or 'street wise intelligence'.

38

Multiple ways of being gifted in the classroom

Convergent, verbally gifted: gifted in text comprehension.

The multiple ways of being gifted

Divergent, creative, nonverbal, visuo-spatial, creative intellectual giftedness

Practical giftedness, problem solving giftedness.

Which of these ways of being gifted are more likely to be accommodated by regular teaching?

39

39

Your turn 2 : Analysis of the content

Empowering excellence: What does your school think gifted learning looks like in the classroom?

- How well does practice in your school take account of the multiple ways of being gifted? What are the implications of this for identification and teaching?

21/5/2025 40

40

Review : Session 1

What gifted learning look like in the classroom: Some anecdotes.

The characteristics of gifted learning

The multiple ways of being gifted

41

Which types of gifted learning are more likely to be identified in classrooms in your school?

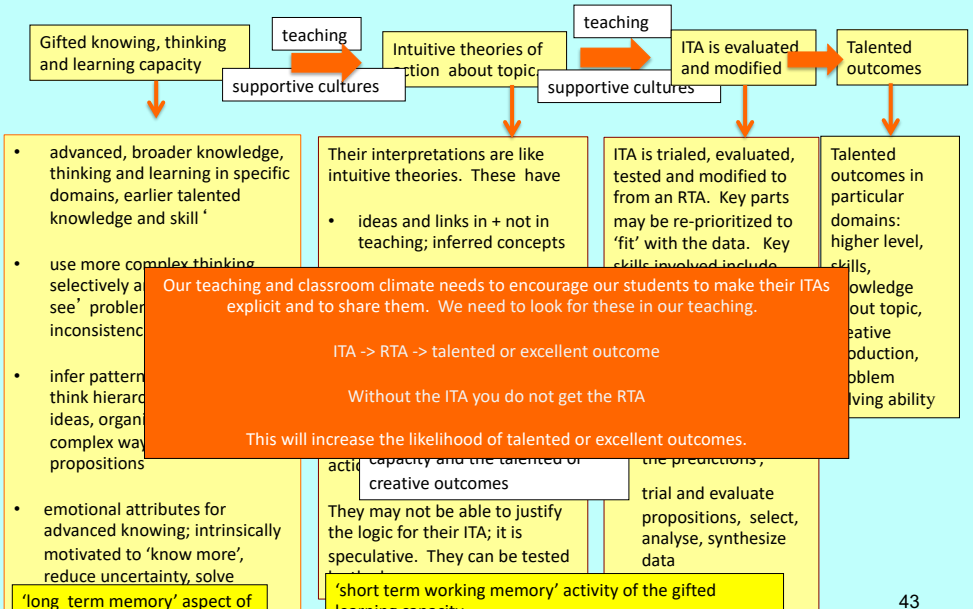
A range of factors can affect how well we notice or identify instances of each type of gifted learning in the classroom. We need to be aware of the factors that can mask each type of gifted learning, so that we reduce the likelihood that they will restrict/prevent gifted students from being noticed in the classroom.

The factors may include the following

- Teachers may not be sure about what each type of giftedness 'looks like' in the classroom. Which type/s are we more/less likely to notice?
- When we plan to teach a topic or an activity, how often do we think about how each type of giftedness might interpret the topic or activity? How often do we build inferential tasks into our teaching that match each type? How often do we demonstrate a valuing of each type? How do we typically respond to the lateral, unexpected, quirky responses of many nonverbally gifted students to the teaching are often dismissed as irrelevant. How often do we probe their unusual interpretations and ask them to unpack their thinking or look for the intuitive theories that underpinned their responses in our classrooms?
- How often do our assessment tasks work for the multiple ways of being gifted and invite all students explicitly to tell us all that they now know and believe about a topic they've been learning?
- How often do we invite students to share and unpack their interpretations of the teaching? How often do we provide a window of opportunity for this?
- How often do we recognize the factors that can mask the outcomes of their gifted learning in the classroom? How often do we analyse instances of 'laziness', 'boredom', 'classroom management issues'.

42

Building talent from the intuitive theory in the classroom



43

Intuitive theories in the classroom ?

Intuitive theories about the topics we teach provides a knowledge or knowing focus on giftedness.

We can identify gifted learning in its multiple forms through the topics we teach.

We infer the higher level more complex thinking strategies from the interpretations students make

How does this fit with 'IQ' approach to gifted identification?

IQ measures student's knowledge at any time and their ability to form intuitive theories about the tasks.

Some students have higher IQ because they form intuitive theories about information.

Very best wishes with your work in this area

44

44

Your turn 3 : Infer from the content

Padlet Activity - https://padlet.com/markeoliver/ibofht9af44a2gwz

- How might this content influence your teaching in the future?
- What sources of evidence can you use to recognise possible instances of gifted learning in the classroom?
- How might your teaching invite gifted students to tell you 'all that they know' about a topic?
- How often do we invite students to share and unpack their interpretations of the teaching?
- How often do we provide a window of opportunity for this?

Mentimeter Question (Slide 3)

- How does this model of gifted knowing and learning explain high IQ?

45

Very best wishes with your important work in this area in the future

46