Personalising Learning for the Gifted in a Mixed-Ability Classroom

Graham Watts
Teacher & Consultant
UK & NZ
What is Personalising Learning?

- From a ‘one size fits’ all model of education to a needs-led model
- From a predetermined content to a student selected content
- From teacher-led pedagogy to student-led learning
- From teacher-led summative assessment to student-led feed forward & formative assessment
How can G & T students manage their own thinking? What skills suit the G & T independent learner?
Thinker’s Toolbox
Student designed toolboxes

- Toolbox 1
- Toolbox 2
- Toolbox 3
G&T Learner’s Toolbox
Your mission is to manage your own effective learning involving...

<table>
<thead>
<tr>
<th>Thinking</th>
<th>Literacy</th>
<th>Working with others</th>
<th>Myself as a learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOT Maps</td>
<td>Writing tripletts</td>
<td>Class Charter</td>
<td>Habits of Mind</td>
</tr>
<tr>
<td>Reflective Questions</td>
<td>Metaphors, Similes, Onomatopoeia</td>
<td>6 Hats</td>
<td>Plan, Do, Review</td>
</tr>
<tr>
<td>Blooming questions</td>
<td>Sentence patterns</td>
<td>Problem Solving</td>
<td>Time Mgt</td>
</tr>
<tr>
<td>Ideas Box</td>
<td>Skim &amp; scan</td>
<td>Knowing me, Knowing you (conflict resolution)</td>
<td>Target Setting Days</td>
</tr>
<tr>
<td>Thinking Wheel</td>
<td>CAMPER</td>
<td>Community of Enquiry</td>
<td>Enough is enough</td>
</tr>
</tbody>
</table>

Speaking and listening

...leading you to becoming an autonomous lifelong learner
HOT Maps  
*(Higher Order Thinking Maps)*

1. Direct instruction in use of a map

2. Infusion of HOT Map into the curriculum

3. Challenge to select and deploy HOT Maps independently

4. Students using HOT Maps without prompting
Describing and Defining Tool

3 PIGS
Describing and Defining Tool

L shape

- HAS STRAIGHT EDGES
- HAS RIGHT ANGLES
- SYMMETRY
- 2 RECTANGLES
- PERIMETER
- AREA
- PARTS CAN BE MOVED SEPARATELY
Knowing Frame:
How do we know this? Why does it matter?

- HAS STRAIGHT EDGES
- 2 RECTANGLES
- HAS RIGHT ANGLES
- SYMMETRY
- PERIMETER
- AREA
- PARTS CAN BE MOVED SEPARATELY
- Bathroom tiles
- Fabric patterns
- Patio slabs
- My teacher
- Previous lesson

Where else could we go to find out more? Who else could we ask?
Adding the Knowing Frame: How do we know this? Why does it matter?
Adding the Knowing Frame:
How do we know this? Why does it matter?

- houses
- characters
- 3
- pigs
- wolf
- cunning
- patience
- hunger
- straw
- weak
- moderate
- wood
- strong
- brick
-的房子
- 三只小猪
- 母亲
- 被驱逐
- 草
- 砖
- 砖
- 强
- 中
- 软
- 木
- 耐心
- 贪婪
- 狼
- 聪明
- 三只小猪
## Creative thinking

<table>
<thead>
<tr>
<th>Elements of creative thinking</th>
<th>Classroom instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>How many ideas can you come up with?</td>
</tr>
<tr>
<td>Originality</td>
<td>Can you come up with an idea that no one else has?</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Can you change an idea after listening to advice?</td>
</tr>
<tr>
<td>Elaboration</td>
<td>Can you add to someone else’s idea?</td>
</tr>
</tbody>
</table>
Reflective Questions

● What was I trying to do?
● What worked well? Why?
● What didn’t work well? Why?
● How could I do it better next time?
● How could I help someone else to do this?
Plan
Do
Review

The Thinking Sandwich

STOP and think before you start!

GET READY
Take time to
... pause and clear your mind.
... remember what you did the last time.
... imagine what you will do this time.

Now do the task.

MAKE CONNECTIONS
... to other things you know about.
... to other things that you do.
... to other things you are studying.

THINK ABOUT THINKING
Ask yourself:
• What went well?
• What was hard?
• What can be improved?

And think some more after the task.
Thinking and Learning like a subject specialist
16 Habits of Mind  
(Costa & Kallick 2000)

- Persisting
- Thinking & communicating with clarity & precision
- Managing impulsivity
- Gathering data through all senses
- Listening with understanding and empathy
- Creating, imagining, innovating
- Thinking flexibly
- Responding with wonderment & awe
16 Habits of Mind continued

- Thinking about thinking (metacognition)
- Taking responsible risks
- Striving for accuracy
- Finding humour
- Questioning and posing problems
- Thinking interdependently
- Applying past knowledge to new situations
- Remaining open to continuous learning
Thinking and Learning like a Mathematician

Selection of Habits of Mind

Problem solving approaches

Reflective questions and journals
How can G & T students engage in higher order thinking in class?
Pre-test /starting point

1. Identify learning objectives and expected outcomes
2. Select or design the pre-test (objective reference or performance-based tasks)
3. Identify students to test
4. Run pre-test to assess ability
5. Reduce time, practise, stages where appropriate
6. Plan enrichment, extension where appropriate
7. Document the process to enable evaluation
A Presentation: The Origins of World War Two
Please answer the following questions as fully as possible.

**World War One:**
When did World War One start and finish?
Who fought on each side?

**Treaty of Versailles:**
Who set the terms of the Treaty?
What are reparations?
What is unlimited indemnity?
In the film there are photos of three politicians. Who are they and which countries do they represent?
What was agreed in the Treaty?

**Period of Hope - Peace at last?**
What was The League of Nations? What was its aim? Who was a member and who wasn't?
What were The Dawes and The Young Plans?
Who was Mussolini?
Why did he invade Abyssinia?
Where is Manchuria?
Why did the Japanese invade it?
Why did Germany become involved in the Spanish Civil War?
Treffinger’s Hopscotch Contract

**AFFECTIVE**

7. How do you feel about dinosaurs? (tape, draw, write)

8. Do you believe it was inevitable that dinosaurs would become extinct? Why? (write, debate)

**ANALYSIS**

4. Compare the characteristics of the dinosaurs you have studied. (write, chart, table, Venn diagram)

5. Show which parts of the world dinosaurs lived in. (map, globe)

3. Make a timeline of when dinosaurs lived. (pictures, words, model)

2. What are five interesting facts you’ve found out? (tape, write, draw)

1. Find information and read about at least five species of dinosaur.

**EVALUATION**

6. Create a dinosaur which could survive today. (draw, model, diagram)

**SYNTHESIS**

**APPLICATION**

**COMPREHENSION**

**KNOWLEDGE**

**INFORMATION**
Prepare a report to the League of Nations explaining the reasons behind the Treaty of Versailles from the point of view of the ‘Big Three’. or

Write a diary entry for a member of the German delegation who was not allowed to attend the Paris Peace Conference. or

What evidence is there that the Treaty of Versailles was a ‘Diktat’?

What are the terms of the 1919 Treaty of Versailles?

Which nations were represented at the Treaty of Versailles? Who represented them?
Explain the feeling and emotion felt by Germans when hearing the terms of the Treaty of Versailles. Why would they feel that way? What might their emotional response be?

If you had access to all resources, how would you deal with the search for peace and security in the inter-war period.

Do you think that the Germans should have taken sole responsibility for causing the war and subsequent loss, damage and expense it caused? Explain.
<table>
<thead>
<tr>
<th>LEVEL OF THINKING AND QUESTIONING</th>
<th>DESCRIPTION</th>
<th>THINKING TOOL</th>
<th>QUESTION STARTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EVALUATION</strong></td>
<td>Making judgements and assessments and coming to conclusions</td>
<td>Rank Evaluate Decide Assess</td>
<td>What is the best...? Why should we...? What do you prefer?</td>
</tr>
<tr>
<td><strong>SYNTHESIS</strong></td>
<td>Combining information to create something new</td>
<td>Invent Design Compose Produce Improve</td>
<td>How could we...? Could we link...? What would happen if...?</td>
</tr>
<tr>
<td><strong>ANALYSIS</strong></td>
<td>Break into parts to examine more closely and understand relationships</td>
<td>Compare Classify Examine Contrast Order</td>
<td>How are they similar? How does it work? Is it the same as...?</td>
</tr>
<tr>
<td><strong>APPLICATION</strong></td>
<td>Applying knowledge to a new situation or experience</td>
<td>Show Apply Illustrate Use Construct</td>
<td>Could we apply this to...? How can we use it? Is this an example of...?</td>
</tr>
<tr>
<td><strong>COMPREHENSION</strong></td>
<td>Rephrasing, and interpreting information to show understanding</td>
<td>Restate Interpret Summarise Explain Translate</td>
<td>What does it mean? What is the basic point? Can you explain...?</td>
</tr>
<tr>
<td><strong>KNOWLEDGE</strong></td>
<td>Factual answers, recall and recognition</td>
<td>Repeat Recall List Name State</td>
<td>What are...? Who is...? How many...?</td>
</tr>
</tbody>
</table>
BLOOM’S TAXONOMY (adapted)
The Three-Story Intellect

EVALUATE
GENERALIZE
IMAGINE
JUDGE
PREDICT
SPECULATE
IF/THEN
APPLY A PRINCIPLE
HYPOTHESIZE
FORECAST
IDEALIZE

COMPARE
CONTRAST
CLASSIFY
SORT
DISTINGUISH
EXPLAIN (WHY)
INFER
SEQUENCE
ANALYZE
SYNTHESIZE
MAKE ANALOGIES
REASON

COMPLETE
COUNT
DEFINE
DESCRIBE
IDENTIFY
LIST
MATCH
NAME
 OBSERVE
RECYCLE
SELECT
SCAN
**YEAR 12 HISTORY : BLACK CIVIL RIGHTS IN THE U.S. : Focus Question A**

<table>
<thead>
<tr>
<th>Remembering</th>
<th>What term was used for laws that segregated Blacks and Whites in southern American states?</th>
<th>What jobs and type of education is only available to White Americans?</th>
<th>Why did Blacks fear Whites?</th>
<th>List the main areas of segregation in America in the mid 1950s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>What is segregation? Give three examples, from your Focus Question A notes.</td>
<td>What evidence is there that Blacks were being disadvantaged by Whites?</td>
<td>Why do you think that Blacks did not retaliate against the KKK?</td>
<td>What have we learnt about the position of Blacks in the 1950s?</td>
</tr>
<tr>
<td>Applying</td>
<td>What are some jobs that could be done equally by Blacks and Whites? How can this be achieved?</td>
<td>Draw an illustration of a scene that has captured your imagination.</td>
<td>Discuss what make an ‘equal status society’? ‘List some things that would improve the status of Blacks.</td>
<td>Write a diary entry for a Black in Alabama, upon one of their family members being lynched.</td>
</tr>
<tr>
<td>Analysing</td>
<td>Compare and contrast the status of Blacks and Whites. What is the problem with having an inferior status?</td>
<td>Draw a graph to illustrate the inferior status of Blacks in either the area of employment, income, education or politics.</td>
<td>Prepare a report to the U.S. Senate about the status of Black Americans in the mid-1950s.</td>
<td>What influence has Jim Crow laws had on black status, in particular their education and job choice?</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Do you think that blacks and whites should have been segregated? Give reasons for your answer.</td>
<td>Give specific evidence from your notes and readings, that indicates the relationship between Blacks and Whites.</td>
<td>How would you feel if you were denied the same rights as a Black was? Explain.</td>
<td>Investigate Jim Crow laws which segregated society in the southern states. Why do you think these laws were created?</td>
</tr>
<tr>
<td>Creating</td>
<td>What would happen if Blacks had the same status and opportunities that Whites had?</td>
<td>Produce and present a plan to show how a White, would treat a Black in the southern state of Mississippi.</td>
<td>Compose a rap that encourages Blacks to change their situation and/or status in the mid-1950s.</td>
<td>If you had access to all resources, how would you deal with the problem of an inferior Black status?</td>
</tr>
</tbody>
</table>
Personalised Learning Pathways

Year 7 Social Studies

Year 10 Science
The Parallel Curriculum: Four Facets of Qualitatively Differentiated Curriculum

- **Core**: The essential nature of a discipline
- **Connections**: The relationships among knowledge
- **Practice**: The applications of facts, concepts, principles, skills, and methods as scholars, researchers, developers, or practitioners
- **Identity**: Developing students’ interests and expertise, strengths, values, and character

Carol Ann Tomlinson et al 2002, Corwin Press, USA
<table>
<thead>
<tr>
<th>Core Curriculum</th>
<th>Connections</th>
<th>Practice</th>
<th>Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What?</strong></td>
<td><strong>How?</strong></td>
<td><strong>How?</strong></td>
<td><strong>Why?</strong></td>
</tr>
</tbody>
</table>
| Knowledge and understanding. Knowing the work.  
 Blake's World: Innocence vs. Experience,  
 Imagery patterns: freedom vs. constraint, growth vs. decay, light vs. dark, natural vs. manmade, community vs. isolation etc.  
 Role of spirituality and organised religion,  
 Use of sound devices: metre, rhyme, euphony, cacophony | Defining in context:  
 • No formal education: taught by his mother. He in turn taught his sister and his wife to read and write.  
 • During Blake's time, London became the centre of the industrial revolution. Factories increasingly became the primary means of wealth creation. No laws governing working hours, child slavery etc.  
 • Urbanisation: overcrowded housing, breakdown in parish law due to increased population.  
 • French revolution: a civilised society crumbled into bloodshed and slaughter in the streets. (1792 was one of the bloodiest years.) The French monarchy showed no compassion for its people ('Let them eat cake.' - Marie Antoinette)  
 • The death of Blake's mother (1792) | The work of the author: what is the motive of the writer? What is the writer's background? What influences impacted on the author growing up or later in life? How did commercial factors compromise/shape the work? What societal and cultural influences show through in the author's work?  
 • The books were prepared by hand, using a printing method given to Blake by God in a vision.  
 • A lot of imagery is used because the poems were designed to be seen as much as read.  
 • They were designed as 'songs' for children so rely heavily on sound devices. Euphony for the lullabies, cacophony for the cautionary tales.  
 • Blake believed he was a prophet, so the narrative is authoritative and increasingly didactic[1] in the Experience poems. | How does this work affect your mood/thought/attitude?  
 Can you see any link/applications used today?  
 Have these issues got better? Worse? Not relevant? Are the examples the same nowadays?  
 • The connections Blake’s world has with ours.  
 • Coming of age/loss of innocence  
 • The environmental, socio-economic[2], geo-political[3] changes occurring in our world. Are they just?  
 • Blake died in poverty and obscurity. Genius is not always recognised by the people around it. Who deserves greater recognition today? |

---

[1] designed or intended to teach
[3] concerning countries, geographical borders, political systems etc.
<table>
<thead>
<tr>
<th>Core Curriculum</th>
<th>Connections</th>
<th>Practice</th>
<th>Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and understanding about the tourism industry in New Zealand, the South Pacific and internationally.</td>
<td>Defining in context:</td>
<td>Relating to the workplace:</td>
<td>How does your learning affect your mood/thought/attitude and ambitions?</td>
</tr>
<tr>
<td>Knowledge and understanding of ICTs, their use and application in relation to the travel and tourism industry.</td>
<td>What the reasons for the combination of tourism and ICT in to one course? How is this reflected in the work place?</td>
<td>How the skills you have learnt used in the workplace?</td>
<td>Which skills are your strengths?</td>
</tr>
<tr>
<td>Development of skills required to work in the travel and tourism industry and ICT skills required to maximize employee effectiveness.</td>
<td>Will this relationship change over time? If so how do you think it will alter?</td>
<td>How have you applied the knowledge and understanding you have gained used in the workplace?</td>
<td>Which are your weaknesses? How has this reality effected your performance in the workplace?</td>
</tr>
<tr>
<td>Work experience in a relevant field of employment and completion of journal of learning experiences.</td>
<td>What aspects of your earlier studies have you used? Have you identified areas for further developments?</td>
<td>What further areas for development do you feel are necessary for you growth in this field?</td>
<td>Do you have the skills and knowledge and understanding you need for your chosen job/s?</td>
</tr>
<tr>
<td></td>
<td>Are there key themes/skill sets/qualifications/cultural understandings that run throughout the jobs you have observed? Are you fully competent in these domains?</td>
<td>What are the skills and qualifications required for these jobs? How are the skills taught on this course balance din each of these job?</td>
<td>Have you completed a job profile study on your chosen jobs? How well do these profiles match your ambitions?</td>
</tr>
<tr>
<td></td>
<td>How will changes in economic trends effect tourism? How might it effect your chosen areas?</td>
<td>What aspects of professional practice have you found surprising? Challenging? Uncomfortable?</td>
<td>Have you completed your Ethics in the Workplace Assignment? What do you feel should form the core of your personal values and ethics in your chosen job/s?</td>
</tr>
</tbody>
</table>

...
The journey so far...

grahamwatts@habitsofmind.co.uk