Reflection & Metacognition

DrJeni Wilson, Auckland, 2009
A Thought for the Day

A well developed mind, a passion to learn, and the ability to put knowledge to work are the new keys for the future.

SCANS Report, US Labour Secretary’s Commission on Achieving Necessary Skills

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Session Overview

Thinking & effective pedagogy
NZ curriculum & the competencies
Competent thinkers
Reflection and metacognition
Independent learning centres
What the…?

- What’s happening? (describe the situation)
- What might have led to this?
- What might happen as a result?
- What does it make you wonder?

What sort of thinking were you using?

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Effective Pedagogy  (p34)

Create a supportive **environment**
Encourage **reflective** thought & action
Enhance the **relevance** of new learning*
Facilitate **shared** learning*
Make **connections**
Provide sufficient **opportunities** to learn
**Inquire** (T-L relationship)
Key Competencies

• Thinking
• Using language & symbols
• Managing self
• Relating to others
• Participating & contributing

• Goals are means to other learning goals
Effective Pedagogy
Encouraging Reflective Thought & Action

Reflective learners assimilate new learning, relate to what they already know, adapt it for their own purposes & translate thought into action.

Overtime learners develop creativity, think critically & use metacognition.
Effective Pedagogy
Making Connections

Students learn best when they are able to integrate new learning with what they already understand.

Teachers role is important: connect to learning needs, plan for gaps, connect to community.
5 Whys OR 2 plus 2 = 2

• Why is it important to think about thinking?
Why is it good to think about our own thinking?

- You learn stuff
- Because you learn a lot
- You get smarter
- So I can make the right move
- You can learn information about the world
- So I can be a better person
- You can change the way you behave
- You can change the way you think about your learning
Competent Thinkers: What do they do?

Tuning In: Who do you know?

What do we want our students to be able to do cognitively?
Competent Thinkers…

‘Actively seek, use and create knowledge. Reflect on their own learning, draw on personal knowledge and intuitions, ask questions and challenge assumptions and perceptions’ (p12 NZ Curriculum)
Thinking Dispositions - the gap between ability & action

• Be precise and systematic
• Be openminded & curious
• Be reflective & metacognitive

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My thinking is like….

- A rubics cube *because*… I like a challenge
- Keys *because*… I can unlock ideas
- A vortex *because*… my mind spins with lots of ideas
- Glasses *because*… when I put them on I can see things in different ways

Apollo Parkways, Jacinta Kayll, Gr 3

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There’s an old saying…You learn from experience

NOT TRUE

‘We learn from reflecting on experience’
(Mc Gahey, 1999)

‘Experience plus reflection equals growth’
(Dewey 1933)
Defining Reflection & Metacognition

• No matter what model of professional learning/student learning you use—reflection, metacognition & deep understanding are important

• So what are they??????

Secret Envelopes

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Is it *Reflection*???

- ‘Systematic, rigorous thinking used to resolve states of doubt, a question or a perplexity’ Dewey (1933)

- Reflective thinking involves a range of thinking skills (eg, critical and creative) in active and persistent ways.

- Reflection is used to get a **broader** and more **reasoned** point of view of the whole issue/big picture (seek perspectives and omissions & remove ambiguities & assumptions)…..

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Put simply......The Process of Reflection involves (p122)

- Looking back
- Unravelling questions
- Pulling apart
- Considering alternate perspectives
- Making connections
- Drawing conclusions
- Reasoning and making judgements
- ...and *can* lead to goal setting

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Defining Metacognition

• Metacognition refers to an individual’s Awareness of, their Evaluation of and their ability to Regulate their own thinking.

NB: Flavell: task, strategy & person variables
• **Awareness of**: where they are at in the learning process, what needs to be done, specific content knowledge & personal learning strategies.

• **Evaluation**: Own judgements about one’s thinking, capacities & limitations.

• **Regulation**: Use of metacognitive skills to control own thinking. Reflection on self & strategies (how & why) & use of executive skills (planning, self-correcting & goal setting) to optimise cognition.
Competency: Managing self

- Integral to self-assessment.
- Student who self manage set personal goals & make plans. They have strategies to meet challenges.
When Reflecting, students use questions to:


- Make connections between information
- Clarify, review, compare
- Focus their thinking
- Improve their understandings, explanations
- Consider consequences
- Understand other perspectives
- Analyse and draw conclusions
- Reason and make judgements

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When using Metacognition, students use questions to focus on:

- Focus on their own thinking processes, strategy use, capacities, limitations
- Think more deeply about their own understandings
- Content specific knowledge
- How to approach a task, what needs to be done
- Monitor their own thinking/progress
- Make connections between ideas
- Factors that impact on their own thinking, eg feelings

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Choose your own Adventure

Independent Learning Centres

Targeted teaching session
  • Metacognition

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Targetted Teaching Session
Metacognition or not?

1. I knew my plan wasn’t working so I used another strategy
2. I made sure I knew what to do
3. I hope the food is good
4. I realise I need more time to understand the difference between reflection & metacognition
5. Today’s PD has caused me to think about the way I think
6. I like my new office
7. I wonder what my colleague is thinking?
“I don’t know what to do…”

• Individually list 5 possible responses to the student comment (or 2 mins whatever comes 1st)

• Share with a partner

• Choose your *best shot* & be ready to share

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Thoughtful Classrooms & Thoughtful Teachers

• Focus on ‘big ideas’ & process
• Attend to classroom environment-model, practice, explicit, expectations, encourage and celebrate
• Enhance student involvement & engagement (intellectual & emotional) eg, choices
• Allow adequate time for deep thinking and multi-layered learning
• Teachers & students understand their own thinking

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Reflection

Secret Envelopes

Stars & Wishes

Stars (achievements)

Wishes (goals & plans)

Q Cards & Little Marks

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