

Developing Metacognition: Engaging students in scaffolded self- assessment

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PeCALE Symposium

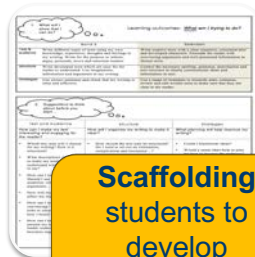
Federation University, 10 December, 2018



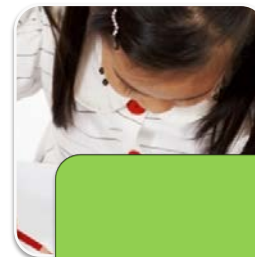
Overview



Clarifying key concepts: *Self-assessment; agentic engagement and self-efficacy*



Scaffolding students to develop **metacognition:** Assessment as a 3-phase process



Insider accounts

Metacognition & self-assessment

Metacognition: the knowledge and skills that enable students to:

- identify
 - describe
 - understand
 - practice
 - develop; and
 - manage
- ... their own learning processes

(Victorian curriculum)

Self-assessment: a self-regulated learning (SRL) competence that entails the skills of:

- reflection
 - task analysis
 - goal setting; and
 - monitoring
- ... one's learning progress

(Andrade & Brookhart, 2016; Andrade & Brown, 2016; Brown & Harris, 2013; Harris & Brown, 2018)

Students as critically reflective connectors

To effectively integrate SRL within classroom practice, teachers need to explicitly scaffold key elements of both, including:



- Explicit clarification of learning intentions and success criteria (Hattie, 2012; Wiliam, 2011)
- Provision of specific and timely feedback (Hattie & Timperley, 2007)
- Helps learners know *how* to improve (Black, Harrison, Lee, Marshall, & Wiliam, 2003)

Students as agents in the learning process

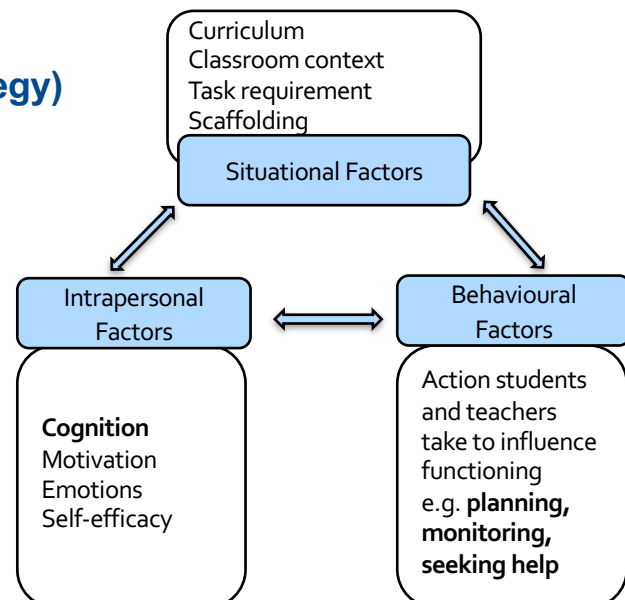
Scaffolding key elements of SRL as part of AaL makes students' *agentic engagement* (Reeve & Tseng, 2011) possible.



- Students making a proactive, intentional and constructive contribution to the flow of instruction
- Students actively adapting tasks to make them meaningful to themselves

Self-assessment (a metacognitive learning strategy)

- requires learners to engage cognitively in the learning process by **identifying what** they need help with, and **where** or **whom** to **seek help from**
- developing skill to self-regulate learning



About the study

Aim: *How does primary students' scaffolded planning, as part of the forethought phase in the self-assessment process, shape students' development of metacognitive and self-regulated learning skills?*

Design:

- Writing project, conducted at one-setting, as a cross-sectional form of practitioner research

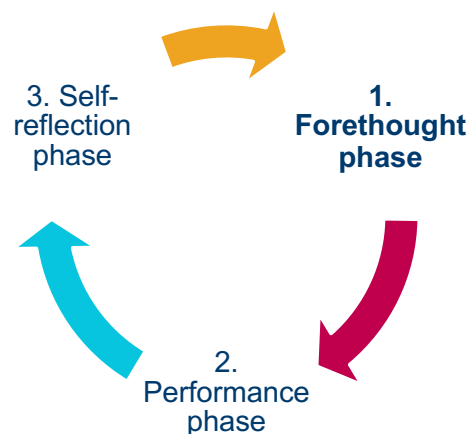
Sample:

- 256 students from school years 2, 4 and 6 (aged 7, 9 and 11 years)
- 16 teachers at an independent (co-educational, non-religious) primary school in Darwin in the Northern Territory, Australia (ICSEA slightly above average)

Data collection:

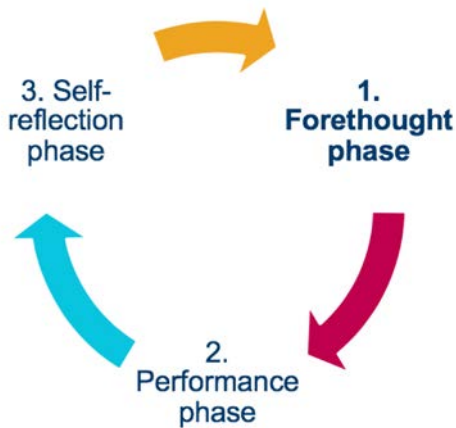
- Students' planning templates ($n = 126$)
- Students' writing samples ($n = 220$)
- Interviews with students ($n = 16$) and teachers ($n = 10$)
- Regular semi-structured emails to teachers

Three phases of scaffolding & learning



Scaffolding feedback to be sought

(Fletcher, 2018, adapted from Zimmerman, 2011)



Forethought phase

Students...

- analyse relevant curriculum learning outcomes
- split overall curriculum outcomes into partial, task-related goals
- explore possible learning strategies to employ
- create a checklist of strategies and partial goals to meet during the performance/drafting phase
- determine timelines for partial goals
- engage cognitively in the learning process by **identifying what they need help with, and where or whom to seek help from.**

Scaffolding Forethought in the planning template

Section 1: Clarifying aim

1. What will I show that I can do?

Learning outcomes: What am I trying to do?

	Band 3	Extension
Text & audience	Write different types of texts using my own knowledge, experience, thoughts and feelings in my writing. Write for the purpose to inform, argue, persuade, move and entertain readers.	Write creative texts with a clear sequence, consistent plot and developed characters. Persuade the reader with convincing arguments and well-presented information in factual texts.
Structure	Write developed texts which are easy for the reader to understand. Use imagination, information and arguments in my writing.	Control the necessary spelling, grammar, punctuation and text structure to clearly communicate ideas and information in text.
Strategies	Use correct grammar and check that my writing is clear and effective.	Use a range of strategies to research, plan, compose, review and edit written texts to make sure that they are clear to the reader.

Forethought section 2: Considering suggestions

2. Suggestions to think about before you start...

Text and Audience	Structure	Strategies
<p><i>How can I make my text interesting and engaging for the reader?</i></p> <ul style="list-style-type: none"> Which text type will I choose for my writing? How is it structured? What descriptions will I use to make my reader understand what I am trying to say? How can I engage the reader? Should I use fantasy, humour, suspense, convincing arguments...? How will my choice of words affect my reader? How can I make my text convincing? Do I need to refer to other texts or show how I found my information? How can I be creative and present my work so my reader understands and becomes engaged in the text? 	<p><i>How will I organise my writing to make it clear?</i></p> <ul style="list-style-type: none"> How should the text type be structured? Do I need to set out an orientation, complication and resolution...? What content should I choose to include? What is important? Does my writing make sense? Have I used clear sentences, correct spelling and punctuation? Have I started my sentences in different ways? Do I need to use a range of punctuation (.,? , ")? Is it clear who is speaking in my text? What sounds better – dialogue or a narrator? Should I use quotes? Is time clear in my writing? Have I used verbs in the correct form? (<i>I walked, he asked...</i>) Have I organised the text into paragraphs? Have I used graphics to improve meaning? 	<p><i>What planning will help improve my writing?</i></p> <ul style="list-style-type: none"> Could I brainstorm ideas? Would a sense chart help to plan for how to involve the audience? Is there a style of writing I can imitate to improve my writing? How can I make sure my draft is proofread and checked for spelling, punctuation etc.? Should I make a checklist for myself, work with a friend or use another strategy? What tools can I access to improve my writing? Dictionaries? Thesauruses? Computers? Have I written down the sources where I found my information? Could I use a template as an exemplar to check my writing against?

Learning outcomes: What am I trying to do?

What will I know that I can do?

What will I be able to do?

What will I be able to do?

1. Suggestions to think about before you start

Text and Audience	Structure	Strategies
<p><i>How can I make my text interesting and engaging for the reader?</i></p> <ul style="list-style-type: none"> Which text type will I choose for my writing? How is it structured? What descriptions will I use to make my reader understand what I am trying to say? How can I engage the reader? Should I use fantasy, humour, suspense, convincing arguments...? How will my choice of words affect my reader? How can I make my text convincing? Do I need to refer to other texts or show how I found my information? How can I be creative and present my work so my reader understands and becomes engaged in the text? 	<p><i>How will I organise my writing to make it clear?</i></p> <ul style="list-style-type: none"> How should the text type be structured? Do I need to set out an orientation, complication and resolution...? What content should I choose to include? What is important? Does my writing make sense? Have I used clear sentences, correct spelling and punctuation? Have I started my sentences in different ways? Do I need to use a range of punctuation (.,? , ")? Is it clear who is speaking in my text? What sounds better – dialogue or a narrator? Should I use quotes? Is time clear in my writing? Have I used verbs in the correct form? (<i>I walked, he asked...</i>) Have I organised the text into paragraphs? Have I used graphics to improve meaning? 	<p><i>What planning will help improve my writing?</i></p> <ul style="list-style-type: none"> Could I brainstorm ideas? Would a sense chart help to plan for how to involve the audience? Is there a style of writing I can imitate to improve my writing? How can I make sure my draft is proofread and checked for spelling, punctuation etc.? Should I make a checklist for myself, work with a friend or use another strategy? What tools can I access to improve my writing? Dictionaries? Thesauruses? Computers? Have I written down the sources where I found my information? Could I use a template as an exemplar to check my writing against?

Forethought section 3: Selecting Text type & Audience

2. Think about what you start planning your work

Text type: What sort of text will I write?

Narrative	Explanation	Recount	Report
Poetry	Procedure	Other: _____	

Audience: Who is the text meant to engage?

Children	Teenagers	Parents	Teachers
People in Darwin	People in power	Other: _____	

3. Think about this as you start planning your work

Text type: What sort of text will I write?

Narrative	Explanation	Recount	Report
Poetry	Procedure	Other: _____	

Audience: Who is the text meant to engage?

Children	Teenagers	Parents	Teachers
People in Darwin	People in power	Other: _____	

4. Check off as you work

Assessment checks: These are the things I will focus on

Text and Audience: _____ My progress: _____

Structure: _____

Strategies: _____

Example from 'Leon', Year 6, whose planning template identified 'play' for 'children aged 3 to 6' as the intended text and audience.

Forethought section 4: Setting partial goals

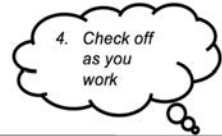
3. Think about this as you start planning your work

Text type: What sort of text will I write?

Narrative	Explanation	Recount	Report
Funny	Procedure	Other: _____	

Audience: Who is the text meant to engage?

Children	Teenagers	Parents	Teachers
People in Darwin	People in power	Other: _____	



Assessment checklist: These are the things I will focus on

4. Check off as you work

Assessment checklist: These are the things I will focus on

Text and Audience:	My progress
Structure:	
Strategies:	

<p>Text and Audience:</p> <p>Simple language. Teach them a lesson never to lie. Exciting voices.</p> <p>Structure:</p> <p>Fantasy Animal characters</p> <p>Strategies:</p> <p>Keep the audience entertained. Get characters to talk to audience. Get audience to do stuff.</p>	<p>My progress</p>
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Example from 'Leon', Year 6, whose planning template identified 'play' for 'children aged 3 to 6' as the intended text and audience.

Scaffolding feedback to be sought (Fletcher 2018, adapted from Zimmerman, 2011)



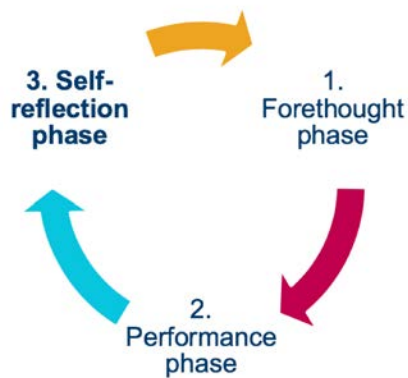
Performance phase

Students...

- monitor their understanding and seek help
- check performance against partial goals to monitor progress
- seek feedback

3 phases of scaffolding feedback to be sought

(Fletcher 2018, adapted from Zimmerman, 2011)



Self-reflection phase

Students...

- identify strengths and areas to improve for next time
- attribute reasons for success and challenges

Findings: Driving your learning is both challenging and rewarding



Q: How did you find the whole writing experience?

Clive:

It was kind of tricky and fun. The tricky bit was that you had to think of your own story. And the fun bit was that you've got to make a problem and how they, like, solve it and what's the beginning and so on. So, yes, that was fun about it

Interview with Clive, Year 2 student

Exceeding expectations



In this study, students were given the opportunity and support to exercise agentic engagement.

In particular, students who were identified by their teachers as low-achieving and/or with poor motivation, were perceived as exceeding expectations by demonstrating more **greater motivation, persistence, effort** and **pride** in their work than normal.

(Fletcher, 2016)

Insider account: Monica

Students really surprised me and worked well on their writing activity. [Jack] said that this was the first time he had written such a long story. Students like [Charlie], who are normally weak in writing skills, did well and never complained about having to write a recount. It really helped to have the assessment criteria (outcomes) that they had written themselves to refer back to.

I regularly check that the students have referred back to their outcomes. I said at the beginning that we would work on the project for three weeks, but I have found that in two weeks the majority of the kids have only done their planning and their written copy.

Follow-up email sent from Monica, Year 6 teacher, during the project

Insider account: Elle's impressions

I felt that they understood what they were writing it for. [...] They didn't just show me that they understood the structural 'how to do it'. It wasn't so mechanical. It was more... they just gripped on to it. It was like, Right, there is a meaning for this, I know whom I'm writing it to, and for; and why I'm writing it. So I'm going to do the best I can do.

Follow-up interview with Elle, Year 6 teacher

Insider account: Lisa's reflection

I chose 'Elvish' as my topic after watching the movie, 'The Lord of the Rings'. In 'The Lord of the Rings', the Elves speak quite a lot of Elvish. I thought that I could listen carefully and try to understand what they were saying. [...]

My reason for choosing this topic was because I thought it would be interesting to research. I thought that this was my chance to talk about my favourite language. I enjoyed being able to choose my topic. I can't stop reading my own work because I think it's really interesting and I didn't think that I'll do really good and I didn't think that I'll be able to write this much because when I chose to do Elvish, I didn't know that much about it. Now I know quite a few things about Elvish language and J. R. R. Tolkien.

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