Developing Metacognition: Engaging students in scaffolded self-assessment
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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

1. Forethought phase
2. Performance phase
3. Self-reflection phase
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?

<table>
<thead>
<tr>
<th>Learning outcomes: What am I trying to do?</th>
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<tbody>
<tr>
<td>Bond 3</td>
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<tr>
<td>Text &amp; audience</td>
</tr>
<tr>
<td>Structure</td>
</tr>
<tr>
<td>Strategies</td>
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</tbody>
</table>
Forethought section 2: Considering suggestions

- Which text type will I choose for my writing? How is it structured?
- What description will I use to make my reader understand what I am trying to say?
- How can I engage my reader? Should I use fantasy, humour, suspense, contrasting arguments, etc.?
- 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?

Forethought section 3: Selecting Text type & Audience

- 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 power
  - People in Darwin
  - People in power
  - Other:

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

Assessment checklist: These are the things I will focus on

Text and Audience:
Simple language.
Teach them a lesson never to lie.
Exciting voices.

Structure:
Fantasy
Animal characters

Strategies:
Keep the audience entertained.
Get characters to talk to audience.
Get audience to do stuff.

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)

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**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.
References