

ACER 2023 Conference – Research Showcase

Title: *Developing a learning progression for teachers to support effective thinking and self-regulation*

Presenters:

Dr Hannah Campos Remon (Director of Organisational Learning)

hannah.camposremon@brisbanegrammar.com

Adam Kuss (Research Associate): adam.kuss@brisbanegrammar.com

Learning Organisation Team, Brisbane Grammar School.

Display option: physical

Abstract:

Brisbane Grammar School has undertaken four years of systematic research to develop a learning progression to support teachers in the development of their students' capacity for learning, including self-regulation.

The research team used available learning theory and local data to develop a practical but theoretically-grounded framework to describe the components of thinking that transcend contexts and curricula, and instead focus on the range of thinking necessary to support optimal progress learning. The *Effective Thinking Framework* is elaborated in an empirically and theory-driven learning progression. In addition to range, the *Effective Thinking Learning Progression* describes the qualities of effective thinking in terms of what it looks like when practiced by learners in increasingly sophisticated ways. Four levels of development are described for each of the 12 indicators in the construct, from *superficial, general or dependent* (Level 1), through *specific and appropriate* (Level 2), moving towards *independent, transferrable or adaptable* (Level 3), and finally *to strategic and reflexive* (Level 4).

The research process worked inductively and deductively between local data and learning theory to develop the construct. In partnership with the Assessment Research Centre at Melbourne University, a draft of the progression was validated through psychometric testing of data points gathered for 130 students across 6 subject areas. This testing revealed the areas of the construct requiring refinement before it was implemented to support teachers' planning and critical reflection.

The learning progression offers a comprehensive, learning-focused tool for teachers to consider how their students are developing as learners over time. Whilst it is not intended to be prescriptive or exhaustive, or to produce a grade for 'learning', it offers a purposeful sampling of important components of effective thinking. Our research has shown it supports teachers' and students' own understanding of their:

- Areas of strength and weakness
- Adaptability of thinking
- Transferability of thinking
- Strategies for learning and self-regulation

Implementation by teachers reveals the rigour and power if the learning progression for generating important insights into student learning and how it may progress and develop. It has also served to broaden, deepen and calibrate our teachers' pedagogical improvement focus.

Relevance: *improving the practice and quality of assessment and diagnosis of student/child learning.*

This research synthesises a range of important issues from learning theory about how learning can be developed over time, irrespective of context and curricula. It provides students, teachers and pedagogical leaders with an important tool for diagnosing, describing and targeting the progression of students' capacity for learning and self-regulation. It can be implemented in teacher professional learning in ways that positively influence day-to-day practice. These affordances offer a practical approach to help schools and teachers address the development of learning itself, and therefore improve the continuity of learning as students transition through the educational system.

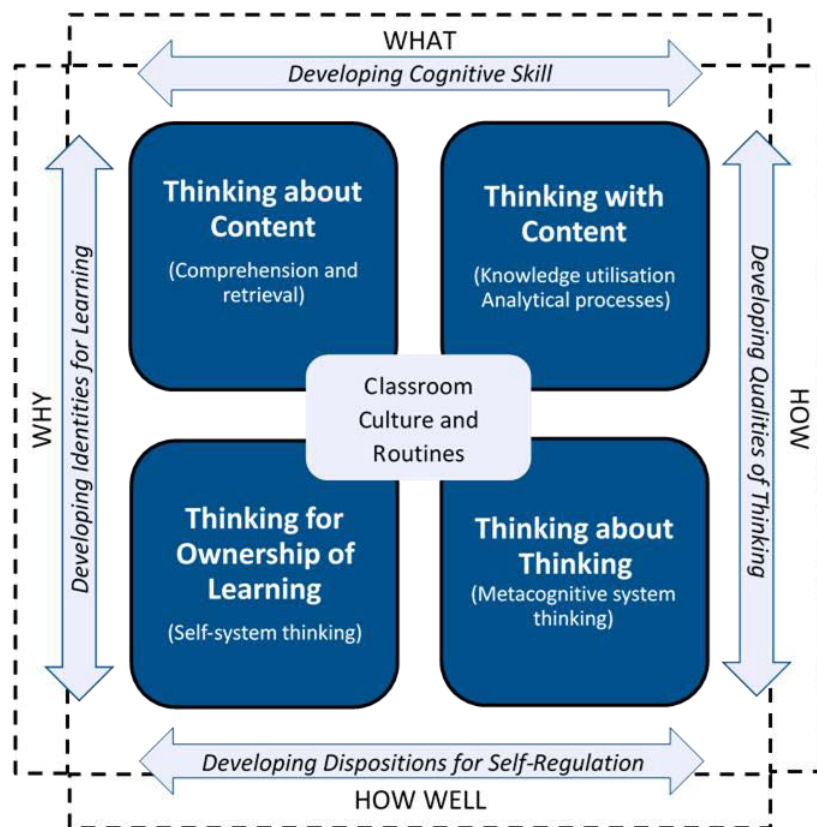


Figure 1 - The BGS Effective Thinking Framework

Effective Thinking Learning Progression – Version 1 - 2023

Effective Thinking refers to the quality and scope of thinking necessary to achieve optimal progress with learning

At this level, individuals' responses are strategic or reflexive	1.4 I make links with existing information to create a coherent "whole"	2.4 I use my broader understanding to help me recall detailed information	3.4 I explore general rules, concepts, or principles for what I am learning	4.4 I reflect on the outcomes of my own application to help me draw conclusions	5.4 I integrate conceptual with procedural thinking to do this subject well	6.4 I identify ways to pursue my own goals for learning through the task	7.4 I select knowledge or strategies to achieve my own goals	8.4 I adapt my thinking to achieve the qualities of what I want to create	9.4 I assess how to use what I learn from the task to become a better learner	10.4 I manage emotions and motivations during learning	11.4 I proactively assess how I might grow as a learner	12.4 I manage my choices to develop as a learner
At this level, individuals' responses are independent, transferrable, or adaptable beyond the present context for thinking	1.3 I organise subject matter (for example by deciding what categories of information might apply)	2.3 I practise accurately recalling information	3.3 I create categories, structures, or patterns within subject matter to build my understanding	4.3 I explore or experiment with ways to apply subject matter	5.3 I adapt knowledge processes in specific ways to do this subject well	6.3 I identify what bigger picture goals the task may help me to achieve	7.3 I analyse the best knowledge or strategies to apply	8.3 I analyse the qualities of what I am creating	9.3 I assess how to use what I learn from the task at other times	10.3 I maintain awareness of my emotions or motivations throughout my learning	11.3 I identify my strengths as a learner that can help me with a task	12.3 I take action when my choices affect my learning negatively
At this level, individuals' responses are specific and appropriate to the features and demands of context	1.2 I identify what I see as important elements in information	2.2 I recall most important aspects of information	3.2 I focus on achieving a feeling of familiarity with new subject matter	4.2 I focus on relevant rules, concepts, or principles to apply	5.2 I practise some aspects of discipline-specific thinking for this subject	6.2 I identify specific goals that are relevant to the task	7.2 I apply knowledge or strategies that could be useful	8.2 I assess the quality of what I am creating	9.2 I can identify how the task is useful for my learning	10.2 I identify how emotions or motivations are affecting me in the moment	11.2 I identify reasons to engage based on what I think I can do or achieve	12.2 I identify how my choices are affecting me in the moment
At this level, individuals' responses are superficial, general or dependent on support from context, task or teacher	1.1 I comprehend information when it is explained to me	2.1 I recall some information with support	3.1 I depend on the support I am given to try to understand something new	4.1 I rely on given instructions or procedures to apply subject matter	5.1 I recognise some distinctions in thinking in this subject compared to others	6.1 I engage if told why I should	7.1 I repeat steps that have worked before	8.1 I assess if the task is complete	9.1 I accept that the task must be useful without question	10.1 I know that emotions and motivations affect my engagement	11.1 I assess my personal preferences to decide whether to engage	12.1 I identify that my preferences affect my choices for learning
At this level, indicators are not observed	1.0 <i>Insufficient evidence</i>	2.0 <i>Insufficient evidence</i>	3.0 <i>Insufficient evidence</i>	4.0 <i>Insufficient evidence</i>	5.0 <i>Insufficient evidence</i>	6.0 <i>Insufficient evidence</i>	7.0 <i>Insufficient evidence</i>	8.0 <i>Insufficient evidence</i>	9.0 <i>Insufficient evidence</i>	10.0 <i>Insufficient evidence</i>	11.0 <i>Insufficient evidence</i>	12.0 <i>Insufficient evidence</i>
Indicators	1. Comprehends subject matter	2. Recalls subject matter	3. Creates meaning with subject matter	4. Applies subject matter	5. Applies discipline-specific thinking	6. Manages goals for learning within tasks	7. Regulates use of knowledge or strategies to plan	8. Monitors thinking effectiveness	9. Assesses the usefulness of thinking being practised	10. Monitors emotions and/or motivations	11. Activates self-efficacy to engage in the learning	12. Exercises learner agency
Components	Thinking about Content		Thinking with Content			Thinking about Thinking			Thinking for Ownership of Learning			

Figure 2 - The BGS Effective Thinking Learning Progression