

Newington College: Building thinking communities

Britta Jensen

bjensen@newington.nsw.edu.au

Newington College, NSW, Australia

Kate Kennedy White

kkennedywhite@newington.nsw.edu.au

Newington College, NSW, Australia

Michael Parker

mparker@newington.nsw.edu.au

Newington College, NSW, Australia

Abstract

In the Australian context, all teachers are obliged, in accordance with the national curriculum, to engage students in critical and creative thinking in the classroom. Yet teachers often wonder 'How do we facilitate the development of (critical and creative) thinking skills in our students?' In our specific local context, a large-scale community consultation highlighted a need for a thorough, concerted strategic approach in relation to this obligation. In this paper we spell out our response to this need: the establishment of a Centre for Critical Thinking and Ethics to implement a two-pronged strategic approach. It is our contention that the best way to cater for students' growth in critical and creative thinking is to combine deliberative use of explicit critical thinking materials with the norms/tools/activities and strategies of the Philosophy in Schools pedagogy. Our innovation consists primarily in our 'detached' and 'embedded' approaches to critical thinking at Newington College. We aim to contribute to the ongoing discussion of best practice in critical and creative thinking, to improve capacity both in and beyond our own school.

Keywords

critical thinking, creative thinking, Philosophy in Schools, thinking tools, skills transfer, whole school initiative

Introduction

In this paper we present the initial phase of a practical, strategic and whole-school approach to improving critical thinking at Newington College, a K-12 independent school in Sydney, Australia. A comprehensive Newington College staff and student consultation process in 2019–2020 called out for assistance to increase rigour in the domain of critical thinking. This manuscript outlines our response to this call. We begin by reviewing the nature of critical thinking, taking care to highlight our specific context and explore the disconnect between the prevailing approach to critical thinking in our regional context and the Philosophy for Children (P4C) approach familiar to JPS readers. In Section 2, we put forward our whole school model, including our response to the familiar ‘transferability’ problem. In Section 3 we lay out the nature of our first steps in building capacity in our staff. Section 4 provides a case study of the work happening in our junior school. We conclude with some observations of the project to date and suggestions for the future.

1. Critical thinking

Schools should primarily aim at the production of persons who can reason well, have good judgment, and are disposed to think in new ways. (Lipman 1991, p. 92)

Critical thinking is agreed by most educators to be essential, and it is regularly referenced as part of a ‘skill set for the 21st century’. This idea is not new; the great educator John Dewey recognised the central importance of teaching thinking, for example in *How we Think* (1910), and throughout the twentieth century researchers and educators dedicated themselves to the study of the theory and practice of teaching the skills and applications of thinking, as well as the disposition for thinking well. In the current Australian context, in which curricular programming for the first eleven years of schooling is guided by The Australian Curriculum, Assessment and Reporting Authority (ACARA), ‘Critical and Creative Thinking’ (CCT) has been established as one of seven, mandated cross-curricular General Capabilities, with which all teachers for all ages and across all subjects are required to engage. According to ACARA,

Critical thinking is at the core of most intellectual activity that involves students learning to recognise or develop an argument, use evidence in support of that argument, draw reasoned conclusions, and use information to solve problems. (ACARA 2023)

Rightly, ACARA does not endorse any particular pedagogical approach or method for teaching CCT. Given this mandate, the goal at our school is to bring CCT to the fore to ensure not just a 'compliance approach' with these essential capabilities but to empower teachers to take a 'thinking focus' and to build capacity in nurturing the thinking skills students require to engage with genuine inquiry in their fields.

Despite overwhelming agreement on the value of critical thinking, there is considerable disagreement about (i) what (exactly) critical thinking consists in and (ii) the best way to teach critical thinking. These elements are obviously related. An unfortunate consequence of the lack of clarity about the nature of critical thinking and the efficacy of various attempts to teach it has led some educators to question the very worth and efficacy of teaching these skills (Duggan 2022; Hadley & Boon 2022).

Teaching critical thinking

Some educators claim that they teach critical thinking as part of teaching their subject content, but when pressed to identify its nature may come up with adjectives or synonyms, rather than a series of skills—for example critical thinking is 'good', 'sophisticated', 'analytic', 'sustained', 'deep', 'synthesised' thinking. Often, educators defer to the curricular guidelines but may find difficulty in linking the guidelines to their own practice. In our Australian context, ACARA offers an illustration by example: 'Examples of critical thinking skills are interpreting, analysing, evaluating, explaining, sequencing, reasoning, comparing, questioning, inferring, hypothesising, appraising, testing and generalising' (ACARA 2023). The following description is offered by the Department of Education in our state (New South Wales):

The capability of critical and creative thinking gives students the tools to examine the world they live in, analyse their findings and reach conclusions using evidence.

Students are provided with the opportunity to harness a rich knowledge of each subject and apply their critical and creative thinking skills in a way that is specific to the subject.

In learning to think broadly and deeply, students use reason and imagination to direct their thinking for different purposes. (Department of Education 2023)

To assist and guide educators in our NSW context, a white paper was recently commissioned by the Department of Education specifically to offer advice relating to the teaching of effective critical thinking (Willingham 2019). In this paper Willingham

points out that ‘scientists are somewhat divided as to whether critical thinking is best characterised as a large number of more specific skills or a smaller number of more generic skills,’ and alleges that ‘the latter is not a fruitful way to conceptualise skills in education ... as there is little theory to guide how to teach generic skills’ (Willingham 2019, p. 3). A look at the bibliography shows that Willingham draws heavily from the psychology and educational psychology research literature but does show awareness of any Philosophy in Schools literature or the canon of work from the P4C tradition. Yet the relevance of this tradition's contribution to the teaching of critical thinking should not be overlooked. Indeed, the previous iteration of this very journal, now called *Journal of Philosophy in Schools*, was aptly named *Critical and Creative Thinking*.

According to the Philosophy in Schools tradition, spear-headed decades ago by the seminal work of Matthew Lipman and Margaret Ann Sharp, the nurturing and cultivation of higher order thinking in a classroom context is best accomplished through philosophical inquiry. This is in part because philosophy as a discipline is metacognitive, which is to say that part and parcel of doing philosophy entails thinking about thinking, including systematic attending to reason and argument, and also to conceptual exploration. Our approach to critical thinking is premised on the claim made in Lipman (1991) and throughout his works that philosophy can enable both thinking in and thinking among the disciplines.

It is instructive for our purposes in an Australian context to lean on the work of Cam (2018) since, in his paper, the pattern of inquiry familiar to those working in the Lipman and Sharp tradition encompasses the ACARA model of CCT. The methods and techniques of Philosophy in Schools pedagogy can be harnessed to realise the ACARA model in the classroom. As Cam (2018) is careful to note, teaching philosophy as a subject is not enough.

... philosophy cannot be expected to promote higher-order thinking unless students actually engage in philosophical thinking. Besides introducing students to an array of philosophical subject matter, attention therefore needs to be paid to the tools and procedures of philosophical inquiry. (p. 63)

We refer the reader to Cam (2018) and Lipman (1991) to see the ‘generic aspects of higher-order thinking that philosophy is in a privileged position to supply’ (Cam 2018, p. 69). Importantly, emphasis is on the methodology that philosophy has to offer. Cam writes, ‘No other discipline has consciously and deliberately developed precision

tools for thinking conceptually to anything approaching the same extent' (p. 70). Part of the philosophical method is the use of a *generic* set of tools and procedures, a finite set of 'foundational thinking tools'. A representative sample list is shown below, drawing from *Twenty Thinking Tools* (Cam 2006):

- questions
- reasons
- distinctions
- inferences
- examples and counterexamples
- criteria

The *generic* nature of the tools means they are applicable across all subject areas; whether students are engaged in thinking about causes of the Vietnam War or the nature of morality or the impact of sport on health, they draw upon these same foundational thinking tools, often in combination with one another. This view is supported in research by Bain (2004), who reports agreement among tertiary teachers on common patterns in inventories of reasoning across disciplines (while noting that not all disciplines stress the same reasoning abilities).¹

The more complex capacity to evaluate (in history or in science or any other subject area) draws upon use of these foundational tools in conjunction with subject-specific knowledge. The subject-specific nature of evaluation, we maintain, is the reason our curricular guidelines expressly state, 'A term like 'evaluate', for example, requires a different kind of response in Mathematics from that required in History and this needs to be respected' (NESA 2024).

The structure of our initiative is premised on the idea that a basic set of *generic thinking skills* (use of the above thinking tools) underpins all conceptual work. These thinking tools can be used in conjunction with one another (within any subject area) to perform complex tasks. For instance, putting together 'a claim' plus 'a reason' is the most basic

¹ Bain (2004) and the USA college teachers he interviewed accepted that different disciplines place emphasis on different reasoning skills and abilities, they nonetheless agreed that there was a common pattern among disciplines. Bain presents 'a series of ten reasoning abilities and habits of thought' that he says summarise the content of the broad patterns that emerged in his research in the tertiary sector, which he referred to as 'inventories of reasoning'. Among the series of ten abilities and habits of thought he lists, there considerable overlap with the skills that we claim are foundational.

form of 'making an argument'. The examples of types of critical thinking noted by ACARA / NESA (NSW Education Standards Authority), Willingham (e.g. evaluating, problem solving, etc.) are comprised of one or more of these generic thinking tools, in the context of subject-specific (content) knowledge.

It is our view that teaching the basic set of thinking tools and the ways in which these combine with one another will assist students to break down 'evaluation' or 'analysis' or 'problem solving' tasks into discrete components, each of which will employ one or more of the foundational tools. Indeed, the task of being able to 'analyse findings' and 'reach conclusions using evidence' are recognised by Cam (2006) as complex tasks that require several discrete skills. Given this ontology of thinking tools, our first task is to explicitly introduce this elemental set to students (the metalanguage of thinking) and encourage students to practise using them across a range of different subject areas and learning contexts, to build not only familiarity with the tools but also fluency in their regular use.

There is robust agreement in the literature that the teaching of critical thinking ought to be explicit and involve regular and repeated practice (Cam 2006; Malin & Halpern 1998, 2011; Willingham 2019, and others), just as it is well known that explicit teaching of content is a central part of best practice in teaching. Willingham advises educators to determine for themselves the set of relevant skills to be revisited and reinforced over the course of years of schooling. Our program exceeds the advice that, 'when considering skills we hope will be retained by with students for the long term, we should plan on at least three to five years of practice (Barrick, 1984; Barrick & Hall, 1991)' (Willingham 2019, p. 12). We are developing a spirals skills progression that builds and reinforces critical thinking skills across 13 years of practice, from kindergarten to Year 12.

Reinforcing thinking skills across domains is important in light of the well-known problem of skill transfer, which evaluates how well skills transfer to new or novel problems or situations. Willingham (2019) reports that the experimental findings on skills transfer is 'decidedly mixed' (p. 5). As such, he maintains that,

[i]t is not useful to think of critical thinking skills, once acquired, as broadly applicable. Wanting students to be able to 'analyse, synthesise and evaluate' information sounds like a reasonable goal. But analysis, synthesis, and evaluation mean different things in different disciplines. Literary criticism has its own internal logic, its norms for what

constitutes good evidence and a valid argument. These norms differ from those found in mathematics. (p. 6)

A more nuanced view can be found in Sala and Gobet (2017). With regard to the transferability of skills, they indicate that distinctions are customarily made between near-transfer (where the subject areas are closely related) and far-transfer (where the areas are not closely related). Within the curriculum there are many examples of closely related areas, in which the capacity to explore concepts, make distinctions and interrogate assumptions is relevant to more than one subject area. For instance, students may focus on the concepts of freedom, fairness or justice in English, history, legal studies, and other subjects, so that transferability (or at least relevance) is obvious in these contexts. This is not to ignore the role of domain-specific knowledge in the development of expertise or competence in a particular field (Tindall-Ford, Agostinho & Sweller 2019); rather it is to recognise the occurrence of near-transfer within the school curriculum.

Whilst we recognise (together with many others in the literature) that the problem of transfer is a real concern and must be carefully considered in a whole school approach, we do not believe that it is an insurmountable barrier. Taking the generic argument for the use of philosophy for higher order thinking, the problem of transfer requires recasting. We wish to challenge Willingham's claim that '[i]t is not useful to think of critical thinking skills, once acquired, as broadly applicable.'² If the general skill 'problem solving' is not composed of one specific skill, the criticism it is not 'transferable' is considerably weakened, given that a number of interconnected specific skills may be operating in relation to the development of a particular capacity. We suggest that the same is true for analysis, synthesis, and evaluation, and others. That is, each of the general skills under consideration involve more than one distinct skill.

Note that Willingham's concern about transfer pertains to *general skills*.³ It is important not to conflate general skills or capabilities with *generic tools* or *generic skills*, a

² See Ellerton (2022) for other challenges to Willingham's claim that critical thinking is non-transferable.

³ Later in his paper, Willingham takes care to point out, 'We are not even sure the general skills exist', leading him to focus on teaching specific critical thinking skills, planfully, within each subject area, using a four-step process, summarised below: (1) 'identify a list of critical thinking skills for each subject domain', (2) select subject content, (3) sequence the teaching of knowledge and skills, and (4) plan revision across year groups of this material. In a whole-school approach, each faculty in a school going through this process potentially misses out opportunities to appreciate points of

distinction that is not always adequately made in the literature on teaching critical and creative thinking. If, as we assume with Lipman, Sharp, Cam, and others, that the foundational thinking tools/skills are generic, the problem of transfer doesn't really make sense, since these foundational tools are operative (and should be made accessible) to all cases of 'evaluate / analyse / clarify' across all subjects.

Using the lens of generic thinking skills, we can revisit and respond to challenges identified in prior research, e.g., on the problem of transfer in analogic reasoning. Referring to research conducted by Gick and Holyoak (1980), Willingham (2019) reported that 'using the analogy was not hard; the problem was thinking to use it in the first place' (p. 7). To facilitate the use of analogic reasoning so that students 'think to use it in the first place, we must assist students to practise using analogy and analogic reasoning regularly, across subject areas. This will enable the use of this sort of thinking when students encounter problems in the future that we haven't conceived of yet. In order to prepare students to tackle future critical thinking challenges, we must equip students with awareness of, fluency with, and agency to employ *all* the foundational thinking tools across many disciplines. This explicit practice across the curriculum is foundational to our approach.

Our program is strategic in that it does not merely provide opportunities for improved fluency of skill use (which may seem to look like 'transferability' to those who deny the generic nature of skills); rather it explicitly promotes and nurtures their uptake and coordinated use across subjects and contexts together with support for student agency to engage these skills in novel contexts. The benefits of this approach include better understanding across a whole teaching staff of the nature and implementation of thinking skills, and clarity for students on the nature of these skills as they grow in their use of the skillset across years of schooling. Both are critical to ensuring that, when faced with an unseen question or problem, students can gainfully employ their repertoire of critical thinking skills to be able to use them skilfully in the right context and at the right time.

2: The Newington response to 'How should we teach critical thinking?'

As stated, our approach to critical thinking leans not on the literature gleaned through psychology but instead through philosophy. The Philosophy for Children pedagogy

overlap. Further and perhaps more concerningly, students will be confused about what important skills (e.g. evaluate/build an argument) are, since they will be instructed differently in different subject areas.

originally developed by Lipman and Sharp came to Australia roughly 30 years ago.^{4,5} Since then, some Australian schools have employed philosophical inquiry in select subject areas (notably English and humanities subjects) or with select populations (such as to extend gifted and talented students). The greatest success stories emerge in cases where a whole school takes on board philosophical inquiry across all subject areas. The first junior school to embark on this process, Buranda State School in Queensland, has become a landmark case for others to follow. Buranda and subsequent school programs provide concrete evidence for the vision expressed in Cam (2010) that philosophical inquiry could become the 'connective tissue that would enable the different parts of the curriculum to form a more effective whole' (n.p.).

There is growing support from studies across the globe for the use of philosophy in the classroom to engage students' critical thinking (Jensen & Kennedy White 2014). We recognise from the international Philosophy in Schools literature the profound role that philosophy can serve in the development of critical thinking (see, for example, Cam 2006, Gardner 1995, Hand 2018, Lipman 1991, Millett & Tapper 2011, Worley & Worley 2022, and references therein.) Yet, in our local NSW context, this potential has been largely overlooked by decision makers. For example, in the NSW context, little mention is made of the P4C or Philosophy in Schools research literature or of research on the use of Community of Inquiry to facilitate and practise critical, creative, and collaborative thinking. An overview of whole-school initiatives across all of Australia concludes, '[d]espite the significant ... successes of whole-school approaches, P4C does not have a high national profile, and so it is not perceived as an obvious option when schools seek to provide teaching and learning aimed at critical and creative thinking' (Kennedy White et al. 2018, p. 182).

We wish to learn from previous whole-school P4C initiatives in order to anticipate and plan for the challenges that have been faced by others. Across multiple cases reported, key success factors include (i) commitment and leadership taken by individual principals and teachers, as well as recognition that (ii) expertise in both theory and practice are necessary (Kennedy White et al. 2018, p. 181.) Each of these guiding elements affected our initiative. To begin, we assembled a strong team to lead our Centre for Critical Thinking and Ethics, including school leaders (Headmaster, Head of Teaching and Learning, and Head of Professional Growth) and experienced

⁴ See Laverty (2014) for an exploration of the diversity in and expansion of this pedagogy and its implementation around the world as it spread and shifted in response to contextual demands.

⁵ For a full review of the Australian context, see Burgh and Thornton (2016) and Burgh and Thornton (2018).

P4C practitioners, three of whom are also FAPSA Teacher Educators.^{6,7} Collaborative leadership supplies the requisite ingredients for whole-school success: support from academic leadership, and pedagogical and curricular expertise. In recognition of the importance of expertise in both theory and practice, including external support and oversight, we sought the assistance and guidance of leaders around the world to support our venture. Our advisory board includes philosophers, authors, journalists and educators. These partnerships have been instrumental in forging and guiding our initiative. For instance, Professor AC Grayling and Dr Stephen Law have both made substantive contributions to our project as Thinkers in Residence (in 2022 and 2023 respectively) by working with our staff, our students, and the wider community around the nature and importance of critical thinking. Advisor Dr Sandra Lynch has assisted in the provision of professional learning days for staff, and advisors Hugh Mackay and Professor Toby Walsh have provided public lectures as part of our community outreach 'Critical Thinking and Ethics' lecture series, building upon the program of the earlier Newington Centre for Ethics, convened by Jeremy Hall over more than a decade.⁸

The Newington approach

At Newington College, we are fashioning a way forward that makes an optimum use of two elements, both of which situate thinking in a collaborative, dialogic model (community of inquiry) that emerged from the Philosophy in Schools tradition:

- *Detached* microlessons to teach specific generic critical thinking skills
- Reinforcing practice of critical thinking skills by *embedding* the skills in classroom activities across the curriculum⁹

The detached program is composed of bespoke critical thinking materials and microlessons to explicitly teach specific foundational (generic) skills. To date we have been focused on developing and refining the detached program. Next, we are committed to sharing our programming, scope and sequences, sample lessons, and

⁶ To learn more: [Centre for Critical Thinking and Ethics – Newington College](#)

⁷ The Federation of Asia-Pacific Philosophy in Schools Associations (FAPSA) is the peak body for philosophy teachers in the Asia-Pacific region, and the provider of professional learning in P4C pedagogy.

⁸ For a full list of past speakers, see <https://www.newington.nsw.edu.au/whats-happening/centre-for-critical-thinking/public-program/>

⁹ To those who reject the idea that thinking skills are generic, this will appear to be a matter of 'transfer' of skills from one domain to another.

classroom materials with teachers and educational institutions beyond Newington, so that they can replicate or adapt some or all of what we have built. This work is already well underway (Giles 2024, Jensen & Giles 2023). We have also made provision for teachers to develop opportunities for students to practise critical thinking by embedding generic thinking skills via classroom activities across all subject areas. Students' fluency with skills requires them to practise the use of specific skills in conjunction with one another across a range of contexts. As Lipman says: 'A[n] ... aspect of ... skills has to do with their sequencing and coordination with other skills ... It is not so much that the mechanic uses a wrench or screwdriver that much more skillfully that we do; it is that the mechanic knows how to coordinate and sequentialize and synchronize the use of tools far more effectively than we can' (Lipman 1991, pp. 35-36).¹⁰ In that sense, each teacher is a specialist of how to use the requisite tools in their own area.

The detached program

From a bird's eye perspective, the detached program consists of a working skills progression for years K to 10 and a growing set of sequenced lessons with explicit teaching resources. Across our three campuses, explicit critical thinking skills are delivered within the newly established philosophy program in the junior school. In the senior school, the detached microlessons are delivered within philosophy and religion studies (PRS) courses, which are mandatory for all Newington students in Years 7 to 10. Typically, students in Years 7 to 10 are timetabled 3 to 5 lessons a fortnight. Provision for extra time has been allocated to the PRS timetabled courses to enable them to expand to accommodate the detached microlessons.

In the secondary school, we are developing a sequenced, detached program of microlessons, each targeting a specific generic thinking skill (e.g. giving reasons, generalisation, counterexamples, criteria). Each microlesson focuses on one specific skill and takes approximately 10 minutes of class time. Though 'detached', these skills regularly serve wider lesson goals.¹¹ In a classroom context, the introduction of the microlesson may be explicit and pre-planned (e.g. explicitly identified as part of the learning intentions at the start of the lesson, as in 'This morning we will focus on giving examples'). As delivered by more advanced practitioners of the pedagogy, delivery may also be opportunistic (e.g. 'Year 9, that was a great example we've just

¹⁰ Thanks to Tim Sprod for helpful discussion of this section.

¹¹ Our detached critical thinking lessons are flexible enough to be delivered by other schools however they see fit; PRS is not a mandated subject in our state.

heard. Let's stop for a moment and think about examples for a few minutes'). The extent to which teachers identify and take up opportunities for opportunistic delivery of microlessons depends directly on the skill and capacity of teachers. Upskilling teachers is our current and ongoing focus.

In the secondary school, the highly qualified and experienced team delivering PRS is assisting the development of materials and microlesson resources. One of our newest resources as part of the detached program is the Year 7 Critical Thinking Passport, devised specifically to assist with skill development (see Jensen & Giles 2023 for some initial results).¹² Resources such as the Critical Thinking Passport are freely shared with neighbouring schools and can be adapted to other classrooms.¹³ In this sense, the project aims to start a larger discussion around best practice in teaching critical thinking skills, and we hope that the resources we develop can serve students both within and outside Newington College.

Crucially, the generic critical thinking skills are introduced using topics related to what we refer to as 'everyday content', such as planning for a trip, choosing an activity for the afternoon, or discussing who is the best soccer player. This choice ensures that the thinking skills being practised are not understood by students to be *part of the content* of the philosophy or PRS course, per se. This approach builds on the finding of the work of Malin and Halpern, that '[t]he greater the number of more personally appropriate and meaningful applications, the greater the likelihood of effective trans-contextual transfer' (as reported in Robson 2023 p. 35). Our decision to introduce the generic thinking skills using everyday content makes clear to students the relevance of these skills to 'everyday' discussions, judgements and decisions that happen outside the classroom and maximises their uptake. It also enables these resources to be utilised outside our PRS context and form part of courses in other schools.

If delivering a set of detached microlessons is all that a school did to teach critical thinking, we still think that school would be considerably ahead of most educational institutions in the delivery of these skills. However, we consider that this is just the first of two steps—and the next step is the more complex and arguably more effective. This next step is the embedding of the thinking techniques across the curriculum, to

¹² Many thanks to Phil Cam for his generous comments on our 2023 Critical Thinking Passport. The 2024 version is much improved as a consequence of his guidance.

¹³ This work is copyrighted to Newington College, but available under Creative Commons Licence 4.0. Please contact us if you wish to review, use, or adapt this resource for non-commercial purposes.

afford students maximum opportunity to practise choosing and applying the generic skills appropriately across different contexts.

Naturally, the greatest benefits to student thinking require using the two strands of our approach in conjunction with one another.

Embedding

The second prong of our approach is to *embed* critical thinking skills in all lessons, across all subjects. Having introduced specific skills in the detached microlessons, appropriate use of these skills should be reinforced throughout the school day, across all classrooms and sport fields. We are working with all staff to recognise and build in opportunities across all classrooms for embedding critical thinking skills in lessons. Critical thinking skills such as ‘use criteria, provide examples, give reasons’ will find expression in English, music, history, science, and so forth. As such, the embedding element of our initiative involves teachers from all disciplines, not just a handful of dedicated teachers. Teachers have been provided days of professional development to be introduced to the key tenets of the critical thinking initiative including the detached program materials. Our efforts to upskill our staff to recognise and cultivate these skills in their own classrooms form the core of the embedded program. Our presentation at the FAPSA Conference in 2022 highlighted cases of success in embedding in the first year of our initiative from French, geography, art, and English classrooms. We now have a growing body of evidence of the uptake of critical thinking activities across nearly all subject areas at Newington College. For ease of exposition, a few examples and a brief summary are provided below.

In one Year 7 French lesson the teacher began with the question, ‘Is language only a human thing or do animals use language to communicate with each other and/or with us?’ After mentorship with the critical thinking team, the teacher was able to recognise and sequence the critical thinking demands on the students to engage with this question including the need to ‘classify/define’ (e.g. language vs communication), then invite students’ suggestions in order to collaboratively workshop them into claims and counter claims stating various positions. Mentorship in this case assisted an experienced teacher of French to spotlight and augment the critical thinking required to engage with questions of interest to her course, and to plan for and reflect upon students’ thinking in a more concerted way. Teacher understanding of student thinking processes is essential in order for students to grow in their metacognition, including their awareness of their own thinking processes and to reflect on the quality of their thinking (Robson 2023).

To illustrate, we include a sample lesson set up embedding select critical thinking skills in a Year 7 English class. This lesson was devised and taught by a teacher who had voluntarily undertaken extra professional learning in order to facilitate communities of inquiry. Her brief lesson write up makes clear her awareness of the thinking demands on her students throughout the lesson. This task uses a relative ranking task to explore differences of degree.

Targeted skills: Make judgements: Explore how context impacts values

Reasoning and examples: Make an argument for decisions made about the values of Shakespeare's social context, as presented by French

Collaborate: Work together to agree / disagree on the final order of the 'values'

Task: In your small group, you will need to order the 'value cards' in terms of what you believe to be More important or Less important.

If your group has orange cards, you are ordering them in terms of what you know about Shakespeare's context from our study thus far and the representation by French in her novel, *The Diary of William Shakespeare, Gentlemen*.

If you have green cards, you are ordering the concepts in terms of your modern context.

Here is the reflection on the lesson by the teacher who planned and taught it the first time.

This Community of Inquiry lesson, including a Differences of Degree task, was extremely valuable in an English classroom setting, particularly for a mixed ability Year 7 class. Students developed their collaborative skills by having to work together to agree on a particular 'system' to define the order of their values. Almost all of them were able to then articulate their understanding of the impact of context on said values, with consideration of the contextual setting of the text in comparison with their own personal context. All students were able to make meaningful connections between examples in the text and their reasons for their final order. The reflections also provided me with a

deeper insight into not only their comprehension of the text, but the valuable skills and ideas they took away from the thinking process.

Summary of the two approaches

To summarise, this two-pronged model allows the generic skills of critical thinking to be explicitly taught and practised with students in the detached microlessons and also reinforced across the curriculum via the embedding of further practice throughout the different areas of academic inquiry. Purposefully planning for, engaging with, and reflecting on generic critical thinking skills, both in detached and embedded form, will increase student capacity with these skills so that they are accessible to students when new problems and challenges present themselves. The novel detached and embedded approach provides the best prospect for the problem previously known as ‘transfer.’ On the view that the skills are generic, we maintain that the problem is not actually one of transfer but instead a problem of access. To ensure each student in each lesson feels equipped with a set of critical thinking tools and growing proficiency in their use across subjects, we need *a common language of thinking tools and skills* and also regular *opportunities for students to practise and reflect on practice*, so that learners can become fluent in the use of critical thinking skills. Importantly, this reflection is not only individual but also collaborative. At Newington College, we encourage our teachers to include thinking goals as part of the learning intentions and success criteria in lesson planning. To realise the embedding project across all subject areas requires building capacity across our whole teaching staff. To this end, we have rolled out a systematic and sequenced set of professional learning sessions.

And now a disclaimer: at Newington College, the roll out of this programming wasn’t staged but rather more simultaneous. Drawing upon the expertise of our team, we worked from a draft scope and sequence to trial sample lessons and develop dedicated critical thinking resources concurrent to upskilling the whole staff across a period of 10 months. We were able to take this approach due to the comprehensive nature of the existing PRS program, having itself been developed and refined over at least a decade under the capable leadership of Jeremy Hall and colleagues. We drew from the critical thinking tools and skills, which were synthesised into this program, and ‘detached’ particular skills to make them explicit. We now have a working model that we are refining and upscaling. Although we are out of our infancy, we are only just in our adolescence in our application of these methods. We are learning, refining, addressing shortcomings, and improving with each semester.

3. Building capacity: Equipping our teaching staff

In working toward the goal of becoming a critical thinking school, we began with a series of pre-assessments, to determine the nature of our current capacity in this area. An introspective evaluation of teachers' comprehension of 'critical thinking' was undertaken on all three campuses. Our junior school P4C specialist devised a student/teacher audit using a bespoke critical thinking resource to assess students' understanding of thinking scenarios. The task involved systematically categorising student responses based on seven embedded thinking skills. Students in Years 3 to 6 responded to five thinking scenarios, each requiring the use of one or more thinking skills. In total, 180 student responses from nine classes were gathered. Class teachers were asked to evaluate their students' responses, including noting the type of thinking used and making comments about their students' thinking. The results revealed the need to further develop teachers' recognition of thinking skills such as open-ended questioning, suggestion-making, justification of claims, reasoning, providing counterexamples, and making distinctions, when they appeared in student thinking. The initial findings of this and other pre-assessments revealed that, though many teachers expressed feeling proficient in being able to recognise excellence in critical thinking, there was not a clear, shared understanding of what critical thinking is. In particular, the terms 'inquiry' and 'critical thinking' were conflated, the distinction between thinking routines (as articulated in the Visible Thinking Project of Ritchart, Church & Morrison 2011) and thinking tools/skills was confused, and we noted a distinctive absence of robust, shared terms for comparing practice.

The conclusion drawn from these collective endeavours underscored the necessity of firstly equipping educators with a coherent and unambiguous comprehension of the dimensions of critical thinking; and secondly empowering teachers to be able to guide students' cognitive processes by explicitly nurturing their own awareness of thinking skills. So, we set out to initiate and sustain professional discussions among staff about critical thinking and classroom practice. Establishing a shared vocabulary of thinking tools provided a clear metalanguage around which to base further cross-curricular discussions of student thinking. In addition, we aimed to model the instantiation of student thinking in a classroom community of inquiry guided by the norms and expectations of the P4C model, as developed by Lipman and Sharp. Exposing our staff to the common language and norms of the community in effect helped us to forge a staff-wide community of inquiry in the wide sense of Sprod (2001).

We planned and delivered three large-scale professional learning sessions on March 2022, June 2022, and January 2023. To maximise alignment with our schools' vision, we mapped the elements of our school's strategic emphasis on dispositions such as curiosity, open-mindedness, and rigour to the FAPSA 'Introduction to Philosophical Community of Inquiry' course as delivered by the Association for Philosophy in Schools NSW (FAPSA 2022).^{14,15} This workshop structure is further articulated in the text *Philosophical Inquiry* (Cam 2020), which is in regular use by our staff. The mapping of our 12-month professional learning plan is summarised in Table 1.

Table 1: Whole school professional learning for Inspired Minds

Professional Learning session	March 2022	June 2022	January 2023
	Thinking Together: Building Communities of Inquiry	Thinking Together: Concept Exploration	Thinking Together: Critical Thinking K-12
<u>Element of Strategic Plan (2020-2024): Inspired Minds</u>	Curious	Open-minded	Rigorous
Central skill	Questioning	Concept exploration	Reasoning
Specific skills / activities	Generating, classifying, and refining questions; Setting an agenda for inquiry	Distinctions Differences of kind (categorical task) Differences of degree (comparative task)	Inferencing Testing Generalising Justifying

To emphasise the whole-school approach, and in recognition of the high-quality critical thinking work already happening in classrooms, we began at the senior school by convening a large-scale day conference with five parallel streams, entitled 'Thinking Together: Building Communities of Inquiry' (March 2022). Sessions were led by colleagues from the local FAPSA association, the Philosophy in Schools Association of NSW (Andrew Costantino, Britta Jensen, Kate Kennedy White, Sandy Lynch, and Michael Parker), and by experienced Newington teachers, in recognition of the fact that across the College there were many elements of best practice to highlight across several subject areas. The conference was a giant smorgasbord of possibilities intended to stimulate creativity and celebrate teachers already operating

¹⁴ See <https://www.newington.nsw.edu.au/about/vision-strategy-governance/>

¹⁵ See https://www.philosophyinschoolsnsw.org/?page_id=59

with a great deal of mastery in this space. Sample session titles included: Questioning, Unpacking Concepts: Animal Farm, Unpacking Concepts: Using Political Cartoons in the Classroom, Correlation and Causation, Reasons and Reasoning, COI Bingo, and Traps in Reasoning: Informal Fallacies, plus the Bull Hunt, a gamified scavenger hunt to test knowledge of informal fallacies.¹⁶ The day was designed to offer teachers maximal opportunity to choose topics and sessions that were most relevant for them.

The hope was for everyone, regardless of his/her level of experience, to walk away with something new to try in the classroom. Testimony from staff in the feedback sessions speaks to the success of this day. Representative comments include:

Today was an excellent and very productive day. I have never studied philosophy and it was very useful and simple to understand. I would greatly benefit by doing more PD similar to today's. (Language teacher)

I found this day to be, hands down, the most useful, educational and practical staff day I have attended at Newington in the six years I have worked here. Thank you. (Art teacher)

Teacher feedback informed our model for provision of support. In response to the question 'What do you need to advance your practice?' teachers suggested: (i) team teaching, (ii) lesson observations, (iii) more PD in relation to eliciting questions and concept exploration, and (iv) time to discuss and plan with colleagues to implement some of the activities and strategies in their own subject areas.

Critical thinking leaders (who are also Philosophy in Schools mentors) opened their classrooms and provided observational lesson opportunities. We devised other opportunities for staff to extend their learning in relation to dialogue, community of inquiry, and classroom activities to support critical thinking. One central element of this work was to co-ordinate with the Philosophy in Schools Association of NSW to provide several sessions of the two-day, face-to-face FAPSA professional learning course 'Introduction to Philosophical Community of Inquiry,' hosted by Newington College. This FAPSA-endorsed course has become the foundational critical thinking course available to any of our staff who self-nominate; this course is encouraged but not obligatory. The 12-hour face-to-face component of this professional learning course was run seven times in 2022 and a further four times in 2023, attracting a sizable

¹⁶ The Bull Hunt was created by Michael Parker (2005) and has since been used widely around Australia as part of philosophy units teaching informal fallacies and also as part of Philoathons in recent years.

number of our Newington College staff. Because we aim to share all that we are learning, sessions were also open to external staff; teachers and leaders from thirty-three other schools attended during this time, including teachers from all three sectors: Independent, Catholic, and Department of Education schools. In our first two years, over ninety members of our Newington staff, including leaders, have elected to undertake this course. Several have since achieved the FAPSA Introductory Certificate, the premier micro-credential for Philosophy in Schools pedagogy in the Asia-Pacific, which has also recently been endorsed by the UNESCO Chair for Philosophy with Children, based in Nantes, France.

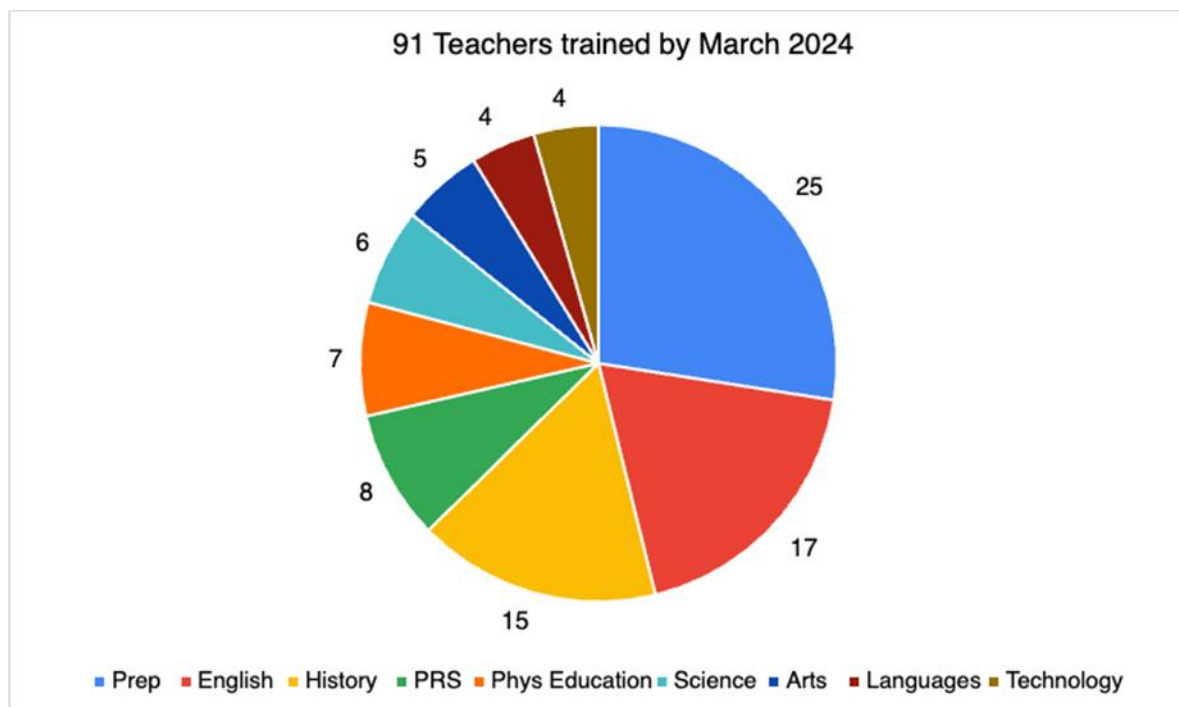


Figure 1: Breakdown of 91 teachers and leaders who participated in voluntary P4C training (the two-day FAPSA course ‘Introduction to Philosophical Community of Inquiry’) by subject area.

By June 2022, five months into the project, we enlisted the assistance of several FAPSA-trained teachers to facilitate peer discussions at our second (mandatory) staff development session: ‘Thinking Together: Concept Exploration’. Newly trained teachers facilitated mini-community of inquiry discussions focused on concept exploration using three P4C classroom activities for distinction-making and setting and testing criteria (the latter using oppositional and relative tasks to explore differences of kind and differences of degree, respectively). Each of three tasks was (i) introduced by an expert practitioner, modelling introduction of the task to a classroom, with emphasis on the distinct thinking skills required to engage in it; (ii)

practised at table groups facilitated by newly-trained teachers; and followed by (iii) a showcase of how the activity had been used in subject areas (apart from PRS) by select newly-trained teachers. To illustrate, one teacher showcased their use of distinction tasks in music, and another spoke about deepening discussion using these activities in visual art and personal development health and physical education (PDHPE). It was inspiring to include this testimony from newly trained teachers on the utility of using P4C activities to encourage deeper thinking in subject areas. This training assisted our staff to launch the embedding project, with teachers leading teachers along this collaborative journey.

In the second half of the day, teachers were engaged with their subject peers in two different types of planning activities. Firstly, they designed lessons for their own subject's context to demonstrate or elucidate a critical thinking skill (e.g. 'difference in degree, difference in kind' can arise in geography as the difference between an island and continent, in history as the difference between an assassination and a murder, and in music as the difference between a melody and a random series of notes). Secondly, teachers had time in departments to map their own syllabi regarding where critical thinking skills already arise or where they could be made more explicit. Teachers could then highlight these critical thinking moves in lessons as appropriate. Thirdly, some subjects devised units in which critical thinking skills would more easily arise. For example, English planned a lesson on uses of media, history planned a unit on propaganda, and geography planned a unit on the controversies around climate change.

As shown in Figure 2, a majority of teachers left that day having planned to embed a critical thinking activity (with discrete skills mentioned) in a lesson to be taught in coming days or weeks. In this way, the professional learning day helped turn teachers' attention to the kind of thinking required for students to engage optimally with the tasks in their programs. It also offered them tools (activities) for students to expand their conceptual thinking in ways directly linked to their programming and curricular goals.

Are you leaving today's workshop with a plan to employ a concept exploration activity in a class you'll teach later this year?

117 responses

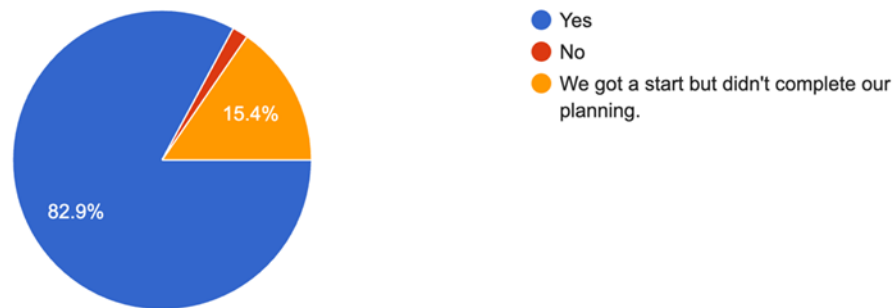


Figure 2: Responses by teachers after second (obligatory) staff day (June 2022).

Despite the success of our whole-school professional learning workshops, not all of our (optional) professional learning offerings enjoyed brilliant uptake in the first year. Early in the project, we developed and delivered a sequence of weekly (catered) lunchtime Critical Thinking Professional Learning sessions for interested secondary staff (Term 2, 2022), focused on classroom microlesson activities to practice foundational thinking tools. Sessions included 'Making Distinctions', 'What if ...?', and 'Analogy and Analogic Reasoning'. We learnt from this initiative that lunchtime isn't a suitable time to offer professional learning sessions given the busy tempo of school and the many demands on teachers who often already work through their lunch break.

Further success was had in the junior school environment, where critical thinking microlessons (e.g. developing criteria using difference of kind and difference of degree tasks) were introduced and practised in weekly staff meeting presentations to help build staff capacity. These microlessons gave teachers an opportunity to workshop the activities with peers. Engagement was high, subsequent results have been lively, and the demand for team-teaching and co-planning with critical thinking mentors has improved as a result.

Year 2 of the initiative

Our third intensive session of professional learning (January 2023) brought together teachers from all three (geographically separate) campuses of Newington College, from pre-school teachers at our Early Learning Centre to Year 12 teachers. The 200+ teachers were deliberately seated in mixed groups, to encourage conversations across

subject and age areas. The workshop focused on the skills required for oracy and how to embed critical thinking skills in a lesson using a P4C approach, with particular focus on 'teacher talk'. Specific emphasis was placed on building what Reznitskaya and Wilkinson (2017) call 'argument literacy' through exercises reinforcing mastery with operations such as justification and inference. In order to increase teachers' tools for supporting students' argument literacy, we modelled the sort of procedural questions required to call students' attention to their thinking and the thinking of their peers.

To consolidate their professional learning, each secondary subject department worked to establish critical thinking goals in 2023 including a sequenced teaching and learning action plan. For instance, our English team put forward critical thinking goals: 'Build student independence in responding to questions in complex and nuanced ways' and 'Develop strategies for teaching how to decode and respond to unseen questions'. The critical thinking leadership team then tailored support to subject teams, providing professional mentorship, team teaching and co-planning, as required.

Evidence of teacher uptake (teacher learning)

As showcased at the FAPSA conference in Melbourne in 2022, an illustration of the efficacy of our professional learning program is the extent to which FAPSA-trained teachers have embedded (aspects of) P4C pedagogy into non-philosophy lessons. Eighteen months into the school-wide initiative, we surveyed our teaching staff, asking them to self-report on their growing capacity. Preliminary results were reported in Jensen and Timillero (2023). One promising result is clear: of the 89 teachers who responded to the survey, 93% report considering student thinking either 'daily' (27%), 'often' (42%), or 'sometimes' (24%) when lesson planning. According to the results of this survey, more staff feel competent (or more confident) in their practise in the realm of exploring concepts (57/89) than with either questioning or reasoning (both 54/89). We recognise, however, that self-reporting is a limited measure of growth.

A second qualitative indicator of uptake comes from individual teacher reports, effectively testimony. In the interests of brevity, we report feedback from one long-standing and lead teacher, our head of history. In a recent presentation (Jensen & Laurence 2023), he noted that, since 2018, history staff at Newington College have been consistently using visual graphic organisers to teach higher-order thinking skills such as comparing, evaluating and analysing (It must be noted that simply using graphic organisers to scaffold comparing or evaluating could in principle be taken to be 'enough' to comply with the ACARA General Capability 'Creative and Critical

Thinking.’ On our view, this is insufficient) Prior to the critical thinking initiative, this lead teacher would have rated himself and his department as ‘very confident’ in the capacity to engage student thinking in the history classroom using these tools. However, having attended the critical thinking professional learning, both the mandatory staff days and opting to undertake the FAPSA introductory course on using P4C pedagogy, he now recognises the limitations of his department’s earlier approach. His team is now empowered by a repertoire of skills and classroom activities and appreciates the value of situating the teaching of critical thinking skills within a community of inquiry. We are working closely with the history department to embed critical thinking (in its more nuanced form, including sequencing of generic tools and skills) across programs in history Years 7 to 10. If this anecdote is representative, it shows that even for experienced teachers who express a degree of confidence with critical thinking, there is room for growth, precision, and nuance. And, of course, if this experience is replicated across the many departments across the school, the effect on consolidating student mastery will be even greater.

For teachers, part of the excitement of adopting Philosophy in Schools strategies and activities is the mandate to engage not only with the empirical aspects of history (with which they are more familiar) but the capacity to engage with the conceptual elements of the discipline. In NSW, experienced teachers are frequently calling for concept-based programming or for students to engage with the big concepts of history such as change/continuity, cause/effect, and so forth. As argued by Dennett (2023), ‘history needs to prioritise concepts’. The tools and activities presented in the FAPSA professional learning have enriched teachers’ capacity to answer this call: to engage with the conceptual through structured classroom activities that explicitly target specific thinking skills.

Since the project of embedding critical pedagogy into subject areas is operationalised differently across the different campuses, the next section will describe one formative case study from the junior school.

4. The power of collaborative thinking: Insights from the Azaria Project

Philosophy has been incorporated into the K to 6 program at the geographically distinct Wyvern and Lindfield campuses of Newington College; as detached lessons at Wyvern, and embedded into the key subject areas through team teaching at the Lindfield campus. At Wyvern, all K to 6 students have a one-hour detached lesson fortnightly, led by the P4C specialist teacher. Lessons employ the community of inquiry, within which thinking skills are explicitly taught and practised. At the

Lindfield campus, P4C has been embedded as team teaching into key learning areas and selected stages, also led by expert P4C practitioners. The core of all lessons is the fusion between student-led questioning within a collaborative learning environment conducted with the teacher as arbiter.

In 2022, the 'Azaria Project' was initiated to demonstrate the methodology of P4C in two Year 6 classrooms. From its humble beginnings, it developed into a multi-faceted project, extending across both campuses and across other learning disciplines, both internal and external to the school. At its inception, the Azaria Project was envisioned as an introspective examination of the book *Azaria: A True History* written and illustrated by Maree Coote (2020). The story retells the infamous case of baby Azaria Chamberlain, who disappeared while on a camping trip in central Australia, and the arrest, imprisonment, and later release of her mother.

During the opening philosophy lesson and before the book had been read, the 48 Lindfield Year 6 students divided into small groups to consider the book's cover and the subtitle 'A True History.' Focusing on either the concept of 'truth' or the concept of 'history', students raised questions relating to the veracity of information and the intricate tapestry of historical events. Led by the philosophy specialist, the project expanded into the detached philosophy lessons at the larger Wyvern campus (adding four more classes of students). In divided groups, the six classes independently generated forty-five questions with a focus on the keywords 'truth' and 'history'. Questions raised by the Truth groups encompassed ontological matters relating to the nature of truth, the potential for multiple truths, the malleability of truth vis-à-vis personal bias, and the ethical dimensions of truth-telling: 'What is truth?' 'Can there be more than one truth?' 'Is truth just what we want to believe?' 'Is truth tangible?' 'To be a good person, do you have to tell the truth?' 'Is it ever okay not to tell the truth?' 'Why do we need the truth?' The history groups asked questions concerning the epistemological foundations of historical narratives, including historical accuracy, the influence of divergent perspectives and the inherent fluidity of historical events over time: 'What defines history?' 'How much of history is the truth?' 'Whose perspective should be believed?' 'Why is it important that we know what happened in the past?' 'Can history change over time?' 'When does something become history?' 'How do we decide what makes a reliable source?' A Question Gallery was established in the corridors of each campus, where students wandered and pondered on each other's questions. Students were intrigued both by the diversity in questions and by the overlap of the concepts they raised. The effect was unifying and community-

building—joining students across geographic distance through their questions and ideas.¹⁷

The journey expanded from the gallery questions, and during further specialist-led inquiry sessions, students delved deeper into the intellectual landscape, unearthing further questions that intersected with the overarching themes of blame and the role of scientific methodology and media manipulation in shaping historical narratives. ‘Who was to blame?’ ‘Who decides?’ ‘What was the crime?’ ‘Who was guilty?’ ‘Is it possible that no one was guilty?’ ‘Is scientific evidence always right?’ ‘What role did the media have in manipulating the story?’ Interrogating these additional concepts added depth to the project’s multifaceted exploration.

While the initial inquiry was made during the team-teaching session with the dedicated philosophy teacher, class teachers independently expanded the project during literacy lessons and in inquiry lessons to enrich linguistic prowess and to gain a more insightful analysis of historical documentation. Students compared newspaper articles to build background knowledge and analysed sentence structures from the book. One class teacher developed and performed a Conscience Alley, an activity that involves role-playing and providing different perspectives on a particular issue.

To complement and strengthen students’ inferential reading, the visual art teacher embraced the project, embedding generic skills such as inference-making across a series of lessons. Students examined the book’s illustrations focusing on elements of scale, vectors and symbolism to give differing perspectives on the story. When dissecting an image of the court scene and noting the placement of key characters, students raised further questions: ‘Why were the police in the centre of the picture?’ ‘Why were the Indigenous trackers outside the courtroom and with their gaze elsewhere?’ When prompted to explore vectors, the invisible lines that artists use to make connections, students discussed how this had expanded their understanding of the story. Through interrogating the image, students expanded their understanding through giving them a new way of seeing and thinking that in turn led them to challenge the perspectives provided by the media. This critical reading was led by the specialist art teacher and reinforced student capacity to draw inferences from pictures and texts. As per the P4C model, students reflected on their thinking (‘How did we go

¹⁷ It is worth pointing out that until 2022, the two Junior school campuses operated in a separate way, with little overlap between teachers or programs. Offering students the opportunity to reflect upon their own questions and those of Year 6 students at the other campus was profound for many of them, and assisted to build a larger ‘thinking community,’ something akin the larger sense of community of inquiry in the sense of Sprod (2001).

in making inferences today?' 'How are vectors like hidden assumptions in a text or in a dialogue?'), as well as on their collaborative skills. In this way, the extension of the Azaria Project helped students to fully experience the pattern of inquiry, the critical thinking skills operative in their lesson, and the importance of metacognitive reflections. According to those involved, students' conceptual engagement was unmatched.

Inferencing was extended to include symbolism, with students searching for symbols within the illustrations to see what new inferences they could make. As an example, the text stated that a dingo had killed a hopping mouse just before the baby disappeared. Students then looked back to identify six appearances of a hopping mouse in the illustrations they examined previously, including one being pursued by a dingo, another poised outside an open tent near a baby. What might this suggest? They explored the dominant use of darkness throughout the book and conjectured as to what this might symbolise: the presence of evil or relevant information ignored or overlooked or kept in the dark?

By exploring culture, symbolism, perspective, scale and vectors, students were challenged to extend their inferencing and reasoning to consider a graphic double spread of media reports on the disappearance of Azaria Chamberlain. They continued to ask further questions. 'What might be inferred in the illustration showing the dingo as a predator as it scavenged for food around the travellers' barbecue, or the image of the baby wrapped as a chrysalis?' 'Did the exaggerated images of nature versus human-made objects prompt a rethink on the relationship of humans to nature?'

With the involvement of the science teacher, the students participated in a forensic incursion on investigating a crime scene. They performed a variety of activities, including chromatographic matching of blood samples, fingerprint testing, using UV light to detect substances, DNA puzzles, and using microscopes to analyse hair samples. Their inquiry gave a deeper dimension to the Azaria book. Through interweaving the conceptual inquiry, in which critical thinking skills played a central role, with subject content (literacy, visual literacy) and subject-specific methods (artmaking, empirical tests), students' learning was integrated and rich.

The project reached a highlight when the Year 6 students and teachers met the author. Having engaged in critical analysis of the text, raising inquiry questions exploring the nature of concepts such as 'truth', 'history', 'nature', 'blame,' engaging critically in art interpretation, and investigating science processes and methods arising from the text, students were able to confidently pose sophisticated questions to the author.

The Azaria case study illustrates the claims made by Lipman (1991) that philosophical inquiry can enable both thinking *in* and thinking *among* the disciplines. The Azaria case study is a pivotal project in the roll out of our critical thinking approach at Newington because, through it (led by student agency and student enthusiasm to formulate and pursue their own inquiry questions), teachers observed the potential of P4C methodology. The cascading effect throughout the subject areas and across campuses helped to raise teachers' attention to elements of student thinking. This project showcases the successes of students' collaborative inquiry across campuses when we integrate the detached and embedded threads of our initiative.

Building from the success of the Azaria Project, we have now embarked on the next phase of the embedding project in the junior school—working with stage and literacy leaders to find opportunities for embedding P4C-based critical thinking activities and methods throughout units of work across all programs. We continue to offer team-teaching opportunities and lesson observations and continue to support professional conversations wherever possible to increase teachers' capacity to support students' thinking. We are inspired by the successes of other Australian primary schools such as Buranda State School, Stanmore Public School, Leichhardt Public School, and Bondi Public School, where P4C programming has been embedded across the whole of school and inextricably linked to school culture.

While we have made good headway in our first two years, there is much more to do; and though we take a different view to Willingham regarding the best way to support critical thinking in the classroom context, we heed his advice that, '[d]eep, critical thinking is hard-won' (Willingham 2019, p. 14). In the junior school context, the detached and embedded model has achieved greatest successes when teachers experience the engagement and thinking skills that students demonstrate in communities of inquiry.

5. Conclusion

We have outlined our strategic and practical whole-school approach to critical thinking at Newington College, which builds from the following assumptions:

- Philosophy (meaning 'philosophical inquiry') can enable both thinking *in* and thinking *among* the disciplines, as per Lipman (1991)

- There is a basic set of foundational critical thinking skills that are generic in the sense that they are used across all disciplines (the Generic Argument set out in Cam 2018)

The claim that the foundational thinking skills are generic, which resonates with the findings expressed in Bain (2004), implies that the problem in the critical thinking literature known as ‘transfer’ doesn’t present the same challenge as it might have initially seemed. If the skills really are generic, underpinning critical thinking in all disciplines, it doesn’t make sense to speak of ‘transfer’ at all, but instead the challenge is for each teacher in each subject to reach for the same shared, common, tool kit. The challenge is to make provision for students to develop the requisite metacognitive awareness of the variety and nature of foundational thinking tools, and the skill in choosing and using them. To do this, students must regularly reflect on their own thinking and on the thinking of their peers to build a shared vocabulary and recognition of the skills that are operative across all subject areas.

We believe that our approach and our programme has emerged from its infancy and into its early adolescence. To build student capacity we have set out a whole-school, cross-curricular critical thinking program that consists in detached (discrete) microlessons and explicit practice of the same set of tools and skills embedded throughout all subject areas. Through a spiralsised detached and embedded program that emphasises both skills and metacognitive reflection, students will grow in their critical thinking proficiency and be able to draw upon their growing set of critical thinking skills in ever-more sophisticated contexts.

To support students’ growth in critical thinking, we need to build capacity in our teaching staff. This paper outlined the professional learning program we have rolled out to date, in which the FAPSA ‘Introduction to Philosophical Community of Inquiry’ (previously known as ‘Level 1 P4C training’) is a core element, and also highlighted our initial successes and challenges. We have described our programme at one school—Newington College—but it is important to emphasise to the broader community that our collective commitment to critical thinking in education using P4C methods substantially predates our commitment to our very good college. Our team has fortuitously converged to collaborate and lead at Newington College, but we have been vigorously involved in the teaching and leadership of, and advocacy for, philosophy and philosophical inquiry in a variety of schools and organisations, both Government and Independent, since the early 1990s.

To us, teaching critical thinking across disciplines is not merely a high-functioning add-on to our existing programmes and subjects—instead, we believe it powers the intellectual curiosity, open mindedness, and rigour that is humanity’s best chance for thriving, and even surviving, into the next decades and centuries. It is urgent for us. To that end, we would be disappointed if our approach was so intensive and bespoke that it could not be replicated and adapted widely. A few hundred students from a single school who can think very critically is not going to tip the balance.

In some inchoate way, most people know that critical thinking is our collective best shot, but our education institutions are frequently paralysed when they have to move past platitudes and into programmes. As a result, we at Newington are very focused on the scalability and adjustability of our approach. We hope that the fruits of our research, testing and evaluation is something that can be either used in other schools or taken apart and reconstituted to suit the needs of other educational institutions. To that end, we very much aim for ease of application. We are keen to collaborate with other educational or research institutions. We are also enthusiastic about being decent ‘critical thinking citizens’—sharing resources, offering guidance, hearing criticism, listening to other perspectives, and continuing to be a part of this necessary but underdeveloped pedagogical area.

Acknowledgements

We are grateful for the guidance of our mentors, our international advisory panel, our anonymous reviewers, and the JPS editors and copy-editor. This paper has been improved through their input. We wish to especially recognise and thank Sandra Lynch for her helpful comments on an earlier version of this manuscript. We also thank the dedicated teachers at Newington College for their spirited uptake of this new initiative and to the inquiring students we have the pleasure to work with. We acknowledge the work of the Newington Council, our Academic Executive, led by Amy van Arkkels, Head of Preparatory Schools Ben Barrington-Higgs, and the earliest adopters of P4C methods into their classrooms whose work we showcased in Melbourne in 2022, specifically: Beth Walker and Marina Hinves (visual art) Susanne Williams (science, technology, engineering and mathematics), Marley Harding (English), Cheryl Priest (French), and Chelsea Fowler (geography).

References

- ACARA (2023) *Critical and creative thinking*. The Australian Curriculum (Version 8.4). <https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/critical-and-creative-thinking/>
- Bain, K (2004) *What the best college teachers do*. Harvard University Press, Cambridge, MA.
- Burgh, G & Thornton, S (2016) Philosophy goes to school in Australia: A history 1982-2016. *Journal of Philosophy in Schools*, 3(1), pp. 59-83.
- Burgh, G & Thornton, S (eds) (2018) *Philosophical inquiry with children: The development of an inquiring society in Australia*. 1st ed. Routledge, Abingdon, UK.
- Cam, P (2006) *Twenty thinking tools*. ACER, Camberwell, Vic.
- Cam, P (2006) Philosophy and the school curriculum: Some general remarks. *Critical and Creative Thinking*, 14(1), pp. 35-51.
- Cam, P (2010) Philosophy for a thinking curriculum. Unpublished manuscript available via *Philosophy in schools NSW* at https://www.philosophyinschoolsnsw.org/?page_id=18
- Cam, P (2018) The generic argument for teaching philosophy in schools. *Journal of Philosophy in Schools*, 5(1), pp. 59-75.
- Cam, P (2020) *Philosophical inquiry: Combining the tools of philosophy with inquiry-based teaching and learning*. Rowman & Littlefield, Lanham, MD.
- Coote, M (2020) *Azaria: A true history*. Melbournestyle Books, South Melbourne, Vic.
- Dewey, J (1910) *How we think*. DC Heath, Lexington, MA.
- Dennett, B (2023) Causation, connections and chance for Year 7 to Year 12. Presentation at the *HTANSW State Conference*, Sydney, NSW, 13-14 July.
- Duggan, S (2022) '21st century skills' really just a slogan: Sweller. Professional Development section of *Australian Teacher Magazine*, October.

- Department of Education (2020) *Nurturing wonder and igniting passion: Designs for a new school curriculum*. NSW Curriculum Review. [Final Report: NSW Curriculum Review](#)
- Department of Education (2023) Capabilities and priorities. *NSW Education Standards Authority*.
<https://curriculum.nsw.edu.au/about-the-curriculum/capabilities-and-priorities>
- Ellerton, P (2022) On critical thinking and content knowledge: A critique of the assumptions of cognitive load theory. *Thinking skills and Creativity*, 43, 100975.
- FAPSA Education Advisory Board (2022) *Accredited course guidelines*. Federation of Asia-Pacific Philosophy in Schools Associations.
- Gardner, S (1995) Inquiry is no mere conversation. *Critical and Creative Thinking*, 3(2), pp. 38-49.
- Gick, ML & Holyoak, KJ (1980) Analogical problem solving. *Cognitive Psychology*, 12(3), pp. 306–355.
- Giles, S (2024) Assessing student understanding of discussion through video analysis. *Engaging Questions 2024: Assessment of Philosophical Community of Inquiry*. Newington College, NSW, 22 March.
- Halpern, D (1998) Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist*, 53(4), pp. 449-455.
- Hand, M (2018) On the distinctive educational value of philosophy. *Journal of Philosophy in Schools*, 5(1), pp. 4-19.
- Hadley, G & Boon, A (2022) *Critical thinking*. Routledge, Abingdon, UK.
- Jensen, B & Giles, S (2023) The Critical Thinking Passport – sharing a new initiative. *VAPS 2023 Conference: Educating for capabilities: Critical & creative thinking, ethical, intercultural, personal, & social*. University of Melbourne, Vic, 1–2 December.

- Jensen, B & Kennedy White, K (2014) The case for philosophical inquiry in K-12 classrooms. *Scan*, 33(2), pp. 6-11.
- Jensen, B & Laurence, P (2023) Augmenting critical thinking via Community of Inquiry in the history classroom. *HTANSW State Conference*, Sydney, NSW, 13-14 July.
- Jensen, BM, Parker, K, Kennedy White, K & Hall, J (2022) Newington College: Thinking communities. Presented at *Communities of inquiry: Significance, cultural change and the ongoing relationship to P4C*. University of Melbourne, Vic.
- Jensen, B & Timillero, J (2023) Building professional capacity across a whole school. *VAPS 2023 Conference: Educating for Capabilities: Critical & Creative Thinking, Ethical, Intercultural, Personal, & Social*. University of Melbourne, Vic, 1-2 December.
- Kennedy White, K, Fynes-Clinton, L, Hinton, L, Howells, J, Skoutas, E, Smith, D & Wills, M (2018) Philosophy in schools across Australia. In G Burgh & S Thornton (eds) *Philosophical inquiry with children: The development of an inquiring society in Australia*. Routledge, Abingdon, UK, pp. 172-184.
- Laverty, M (2014) Commentary on Philosophy in Schools: Then and now. *Journal of Philosophy in Schools*, 1(1), pp. 107-130.
- Lipman, M (1991) *Thinking in education*. CUP, New York, NY.
- Marin, LM & Halpern, D (2011) Pedagogy for developing critical thinking in adolescents: Explicit instruction produces greatest gains. *Thinking Skills and Creativity*, 6(1), pp. 1-13.
- Millett, S & Tapper, A (2011) Benefits of collaborative philosophical inquiry in schools. *Educational Philosophy and Theory*, 44(5), pp. 546-567.
- Newington College (2020) Newington College strategic plan (2020-2024). [Vision, Strategy and Governance – Newington College](#)
- Parker, M & Jensen, B (2023) Critical thinking in Communities of Inquiry. Guest presentation at the *43rd Annual International Conference on Critical Thinking*. The Foundation for Critical Thinking. USA, online.
- NESA (2024) *Glossary of key words*. NSW Education Standards.

<https://www.nsw.gov.au/education-and-training/nesa/hsc/student-guide/glossary>

Reznitskaya, A & Wilkinson, I (2017) *The most reasonable answer*. Harvard University Press, Cambridge, MA.

Ritchhart, R, Church, M & Morrison, K (2011) *Making thinking visible*. Jossey Bass Wiley, Hoboken, NJ.

Robson, N (2023) Critical thinking for a global society: A holistic approach. *Journal of Academic Perspectives*, 1, pp. 31-41.

Sala, G & Gobet, F (2017) When the music's over. Does music skill transfer to children's and young adolescents' cognitive and academic skills? A meta-analysis. *Educational Research Review*, 20, pp. 55-67.

Sprod, T (2001) *Philosophical discussion in moral education: The community of ethical inquiry*. Routledge, London, UK.

Tindall-Ford, S, Agostinho, S & Sweller, J (2019) *Advances in cognitive load theory: Rethinking teaching*. Routledge, Milton, UK.

Willingham, D (2019) *How to teach critical thinking*. Paper commissioned by the NSW Department of Education, NSW.

<https://education.nsw.gov.au/media/exar/How-to-teach-critical-thinking-Willingham.pdf>

Worley, E & Worley, P (2022) Teaching critical thinking and metacognitive skills through philosophical enquiry. A practitioner's report on experiments in the classroom. *Childhood & Philosophy, Rio de Janeiro*, 15, pp. 1-34.