



Hills  
Grammar

Extraordinary Education:  
Extraordinary Individuals

# Deeper Water, Deeper Learning

Learning and Teaching at Hills Grammar

# Contents

At first, the infant,  
Scribbling and listening to the parent read;  
And then the nervous school child, with new backpack  
And shining morning face, creeping like snail  
The first day to School. And then the Learner  
Lapping up Knowledge, with a cheerful song  
Made to his teacher's mantra. Then a tall child,  
Full of strange thoughts and wonders like the bard,  
Sharp in English, sudden and quick in debate  
Unafraid of others' reputations  
Even of the teacher's mouth. And then the scholar,  
In fair summer with mind open  
With eyes wider to new curriculum,  
And so she plays her part. Now Year 9 shifts  
Into the lean and sometimes troubled teen,  
With trousers loose and shirt undone;  
With things to learn but world view not yet wide;  
Yet still the seeds of learning are sewn  
Turning again toward the parent, listens  
And sings again sweet song. Last scene of all,  
That ends this strange eventful history,  
Is second childishness post-examinations;  
Sans books, sans pens, sans school, sans everything.

With apologies to William Shakespeare  
The Seven Ages of a [Person's] Life – *All the World's a Stage*

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# Deeper Water, Deeper Learning

Education should play a vital role in promoting intellectual, physical, emotional, moral, spiritual and aesthetic development and personal and social wellbeing. It should promote flexibility, resilience, creativity, and the ability and drive to keep learning (The Alice Springs (Mparntwe) Declaration, 2019).

At Hills Grammar, we value the importance of students striving to fulfil their potential and achieve accomplishment through deeper learning. We believe that all students can achieve excellence given the right support. Our approach to enabling each student to achieve academic excellence is to ensure that teaching and learning are grounded in deep learning, global competency, and social and emotional learning. This document encapsulates our research-informed approach to teaching and learning and the importance that we place on a continuous, connected, and engaging curriculum from early childhood through to year 12. *Deeper Water, Deeper Learning* aims to represent the learning journey as students, over time, enter deeper waters of learning.

According to the literature, deep learning is defined as the ability to develop complex and conceptual in-depth understanding and advanced skills that are pertinent to each subject discipline. Students who demonstrate deep learning have the ability to transfer and apply their knowledge, and they develop a growth mindset that enables them to confront new challenges, take initiative, and persevere through difficulties and setbacks. It is also about growing student agency so that students are curious and motivated to learn and feel empowered to make a difference.

Moreover, deep learning is evident when students display what Fullan and Langworthy (2014) refer to as global competencies: collaboration, communication, critical and creative thinking, citizenship, and character.

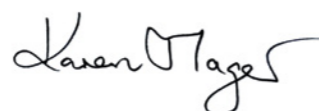
Although philosophers like Socrates and scholars like Dewey have long argued for the importance of skills like critical thinking and creativity, there is now a renewed interest in skills that enable students to take their place in our complex, dynamic and interconnected world with courage, confidence, and wellbeing.

Leonardo da Vinci wrote that 'To develop a complete mind: Study the art of science; study the science of art. Learn how to see. Realise that everything connects to everything else.'

At Hills Grammar we have implemented interdisciplinary guided inquiry units of work that are grounded in overarching concepts and prioritise problems that require critical and creative thinking so students can develop their abilities to ask questions, design investigations, interpret evidence, form explanations and arguments, and communicate findings. Such learning is about connecting disciplines through an overarching concept, igniting curiosity and passion, and enabling students to synthesise and develop deeper learning.

Our founding families took an entirely original approach to education. They envisioned a school where creative thinking, creative arts and creative teachers took precedence. The engaging, relevant, and rigorous educational model we have implemented and continue to grow and improve at Hills, reflects this vision and approach. In this increasingly complex and challenging global world, schools must encourage, support, and inspire students and teachers to deepen and advance their skills and knowledge, to act wisely with courage and compassion, and to have the confidence to contribute generously and extraordinarily to the wider community and the future. In this endeavour, teachers make use of a symphony of pedagogies, from explicit learning to deep inquiry.

I thank our Director of Learning and Teaching Pre-K to 12, Dr Geoff Gates for leading collaboratively this innovative educational model and for his authorship of this document with input from teaching staff and the communication team.



Karen Yager, Principal



# Guided Inquiry

## Developing Authentic and Engaged Learners

Let us start out with identifying what Guided Inquiry is *not*. It is not simply about students finding out for themselves. Nor is it about students sitting on beanbags while teachers act as semi-engaged 'guides on the side'. It isn't unguided discovery learning.

It is about active learners and responsive teachers, and it is about developing authentic and creative contexts to stimulate student learning. Inquiry is the essential methodology of the Sciences and the basic building block of the Humanities.

'Quality inquiry classrooms,' writes educational theorist Kath Murdoch, 'are places where highly intentional teachers work hard to grow the capacity of all students to learn'. Murdoch dismisses the false dichotomy between inquiry and content: 'One has to inquire into something, and that "something" should be conceptually important ideas within and across disciplines' (2014:14). In Guided Inquiry, the teacher changes gears. Sometimes this means direct instruction, where concepts are taught explicitly. At other times, the teacher facilitates collaborative and more independent learning: the teacher bridges the gap between what students need to know to inquire into a given topic, and how that topic connects to larger bodies of knowledge.

Engaging students with rich content is key. Satirising trends in the Victorian era, Charles Dickens begins *Hard Times* by imaging boys and girls as 'little vessels... ready to have imperial gallons of facts poured over them until they were full to the brim'. Learning a set of agreed and mandated facts in the Industrial Age may have been just about satisfactory. It is neither plausible nor desirable in the Information Age when facts are at our fingertips, via keyboards and smartphones.

At Hills Grammar, we frame our curriculum content within Units of Inquiry. In the Early Childhood Education Centre (ECEC) our educators balance child directed play-based learning with intentional teaching experiences. Our planning documentation K-12 includes the notion of a Central Idea (Junior School) and Big Idea (Senior School) which along with 'lines of inquiry' promote curiosity and conceptual thinking.

Students need to know why the content they are learning about matters, and how it might apply in real world applications, or how it connects to richer, deeper knowledge.

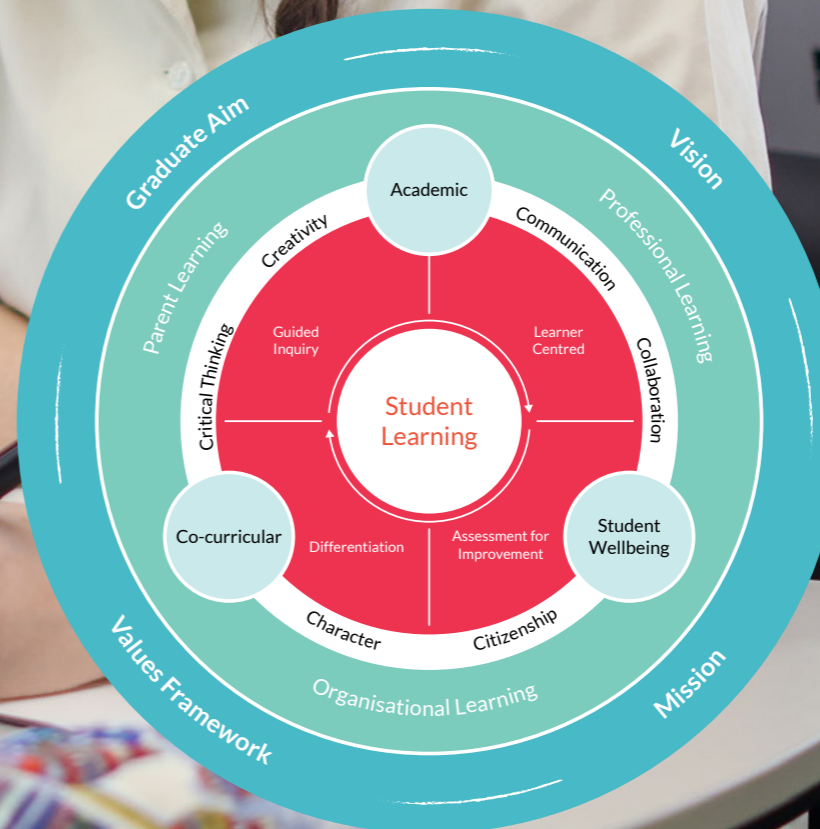
Wherever possible, giving students choice in assessments taps into the motivating power of curiosity and develops student autonomy.

### Features of Guided Inquiry

- Promote curiosity, questioning and wonder
- Empower student voice by taking student thinking seriously
- Build on prior knowledge through pre-testing, formative assessment and classroom discussion
- Connect learning to real-world applications and academic disciplines at a professional level (for example, adopting the Historian's methodology)
- Hands-on experiences integrated to allow for processing and understanding knowledge in new ways
- Reflection and depth of thought valued over speed and quick mastery of content.

(\*Features' adapted from Lutheran Education Queensland: Approaches to Learning - Inquiry Based Learning)

Engaging students with rich content is key.



## Hills Grammar Pedagogy - at a Glance

People tend to balk at the word 'pedagogy' but feel comfortable with 'pediatrician', which has a similar Greek origin. *Pedagogy* refers to 'what a teacher does to influence learning in others' (*Child Australia*, 1).

Our Hills Grammar Pedagogy Pre K to 12 draws on four core principles ("GLAD" model). A constructivist approach to learning underlines these principles and aligns to the School Vision: the student is an active participant in the construction of meaning, and the student is at the centre of our collective efforts.

### Guided Inquiry

The teacher facilitates learning around Central ideas ('Big Ideas), Lines of Inquiry, effective questioning in the classroom, and scaffolding knowledge to assist students as they move through challenging learning activities.

### Learner-Centred

The teacher builds on student background knowledge and interests. There are certain things that everyone needs to know, as a firm foundation, but choice engages the learner.

### Assessment for Improvement

The teacher thinks deeply about the purpose of any given assessment. Ultimately, we want assessments to be challenging and rich learning opportunities to drive learning forward.

### Differentiation

The teacher develops learning activities and assessments in such a way that challenge students at the appropriate level to promote ongoing intellectual growth and development.

# Cultures of Thinking

## Fostering Engagement with Ideas

To say that as a school we wish our classrooms to be cultures of thinking may sound like stating the obvious. Yet whether it is the result of rigid behaviour expectations, or the outcome of high-stakes testing, schools have often been places of “work” rather than learning. Consider the industrial connotations embedded in everyday school language: *homework, units of work, worksheets, working well, a good worker*. This is not to say that ‘work’ discipline is unimportant. It is just to say that the emphasis needs to be on creating opportunities for authentic intellectual activities to build student understanding, rather than ‘school work’ for its own sake.

In *Making Thinking Visible*, Ritchhart, Church and Morrison get to the heart of what we mean by the Learner-Centred principle in our pedagogy:

‘... When we place the learner at the hub of the educational enterprise, our focus as teachers shifts in a most profound way ... from the delivery of information to *fostering students’ engagement with ideas*’ (26).

In cultures of thinking, the key goals are to build understanding, make ‘big ideas’ accessible, teach

students *how* to learn – and, most importantly – to make thinking visible and accessible. If this sounds idealistic, the beauty of the Harvard Project Zero approach is its basis in classroom practice and the collective wisdom of experienced teachers. Our Units of Inquiry (note the shift in language from units of ‘work’) include a range of Harvard “thinking routines” which serve to help teachers to introduce and explore ideas; students to synthesise and organise information; and classes to ‘dig deeper’ into complex concepts and ideas. Big Ideas (or Central Ideal) help centre each unit, along with Lines of Inquiry.

To take a different tack, in 2013 the LEGO foundation released a research paper entitled ‘Cultures of Creativity’ in which they explored how societies nurture and sustain creativity. ‘Cultures do not emerge passively,’ the authors argue, but rather they ‘develop out of a collective need or a shared passion’. The report speaks about culture as a ‘scaffolding for ideas, making them stable and manipulable’ (5). Hills Grammar is without doubt a community of thoughtful parents and teachers, but fostering cultures of thinking (and creativity) for our students requires ongoing energy and commitment to the vision.

## Features of Cultures of Thinking

- Classrooms are places where thinking is explicitly valued and actively encouraged
- Teachers model their own thinking by sharing their thought processes to build disciplinary knowledge and understanding
- A spirit of curiosity and inquiry is evident in the classroom
- Thinking time and a variety of thinking routines help to ensure that all students participate and are given opportunities to talk about their ideas
- Teachers are aware of, and make use of, the ‘8 Cultural Forces’ in their classrooms: [pz.harvard.edu/resources/the-8-forces-that-shape-group-culture](http://pz.harvard.edu/resources/the-8-forces-that-shape-group-culture)
- Classroom interactions reveal a respect for students as thinkers. Teachers show a genuine interest in the thinking of each child.



A spirit of curiosity and inquiry is evident in the classroom

## A Picture of Practice – Using the Harvard Thinking Routine ‘Step Inside’

The ‘Step Inside’ thinking routine helps students to imagine the perspective of a person or thing: to consider their values, what drives them or scares them, even what they see around them. “Stepping inside” deepens understanding and helps to develop a more empathetic response.

Here is the routine (from *Making Thinking Visible*, 178).

Think about a person or an object that is part of or connected to the event or situation you are examining. Place yourself within the event or situation to see things from this point of view. Some questions to consider:

- What can this person or thing see, observe or notice?
- What might the person or thing know, understand, hold true, or believe?
- What might the person or thing care deeply about?
- What might the person or thing wonder about or question?

At Hills Grammar, we have used this routine to help deepen Year 12 Extension 1 English students’ understanding of creative writing as they take on the perspective of a character in a novel. Year 6 teachers have also used this routine in their transdisciplinary inquiry into migration (History, Geography, English) to help students develop historical empathy, making use of objects in a photo to ‘tell their story’.

# Student Voice

## Belonging and Agency

In a school community where individual voices are heard, a strong sense of belonging is palpable, knowing that one's ideas are valued and respected. There is a sense of agency, a feeling of being able to make a difference.

In *Choice Words: How our Language affects Children's Learning*, Peter Johnston writes that agency is a fundamental human desire and that schools should empower students to leave 'with a sense that if they act, and act strategically, they can accomplish their goals' (29). In the Year 6 Exhibition of Learning, students work collaboratively in groups to investigate a real-world problem, develop their own lines of inquiry, and take action to demonstrate their learning. Developing student voice and agency aligns with and affirms our Graduate Aim – the first point of which is to enable our students to 'become confident, resilient and responsible individuals.'

In the classroom, managing dialogue and discussion effectively is key to encouraging student voice and agency. Harvard Project Zero Thinking Routines scaffold classroom discussion beyond 'Think-Pair-Share'. For example, the routine 'Sentence-Phrase-Word' ensures that each participant has a unique starting point or entry into a group conversation. While, at times, whole class discussion needs to be robust, it is always characterised by mutual respect. The idea of teachers as 'warm demanders' (from

*Creating Cultures of Thinking: Interactions*) captures this notion perfectly.

Choice can foster student agency. Rather than having each student research the same topic, or assigning groups to 'report back' on designated areas of focus, student-negotiated tasks can increase motivation. Collaborative learning – particularly based around a challenge or a problem – can develop student voice within teams. As an example, the Year 7 STEM Unit of Inquiry focuses on collaborative problem solving. In this context, the teacher moves between roles, acting sometimes as the instructor and at other times as the coach, asking empowering questions, such as what problems have you identified? What will your next steps will be? How will you draw on each other's strengths to manage this?

As Hills Grammar teaching staff, we take care to gather feedback from students to engage with their perspectives. Our ultimate goal is to develop confident and creative individuals, graduates who have a sense of optimism, self-awareness, and self-worth (see also Goal 2 in *The Melbourne Declaration*, 2008).

## Features of Student Voice

- Students feel a connection to their class and teacher that allows them to share their thoughts without fear of negative judgement
- Students are encouraged to reason with evidence and learn through debate
- If understanding rather than simply 'covering content' is the goal, then student voice will be evident in most lessons
- Exit surveys, post-it notes, online surveys of Units of Inquiry and Learning and Teaching assist teacher reflection and give students a chance to have their say
- Student voice is included in staff development through video interviews or other forms of direct feedback
- Wherever possible, students make choices in assessment tasks (acknowledging equity and reliability issues). Formative assessment provides additional opportunities for students to engage with, and drive, their learning goals
- Beyond the classroom, student initiatives help drive change across the School.



Choice  
can  
foster  
student  
agency

## A Picture of Practice – Student Voice and Feedback to Teachers

Listening to students talk about their learning experiences in our classrooms can help to drive improvements in teaching practice. We have used video interviews with Year 11 students to reflect on the power of cultural forces ("Cultures of Thinking"). An interview with Year 9 students about a range of matters – from the use of Tablet PCs and textbooks, to assessment tasks that stretch thinking – provided another stimulation for staff discussion. "Academic Hardtalk" video interviews with recent graduates encourage students to reflect on recent experiences and share stories of struggle and success.

Videos featuring student voice are part of our reflection on new initiatives, such as the Year 11 and Year 12 Formative Assessment Week; the Year 7 STEM week; and Year 6 integration of thinking routines within a Unit of Inquiry. The article 'Connecting and knowing: the qualities of standout HSC teachers at The Hills Grammar School' is an example of research-based feedback shared with staff and the wider educational community (Gates, AEL 36.3).

Teachers are encouraged to seek student feedback on their teaching, something particularly useful when they are trying a new approach in the classroom. By showing ourselves actively reflecting on our impact, teachers provide powerful models of lifelong learning.

# Connected Curriculum

## Applying Knowledge to Dive Deeper

An essential question faced by schools and school systems is whether subjects should be taught separately as 'disciplines' of knowledge, or combined in some way and taught together.

Traditionally, a degree of interconnected teaching of subjects has been a feature of primary schools, often taught by a single teacher. For example, students may undertake a project covering more than one Key Learning Area, while the syllabus documents also reflect a degree of 'coming together' (see, for example, the NSW K-6 Science and Technology syllabus, and the NSW K-6 Creative Arts syllabus). By contrast, high school curriculum has been the domain of specialists in preparation for TAFE, college or university studies in these areas. At Hills Grammar, the Guided Inquiry pedagogy allows us to have the best of both worlds: subject expertise, and a connected curriculum.

Our ECEC (Pre K) children follow the Early Years Learning Framework: Belonging, Being and Becoming. Combined with aspects of the Reggio Emilia approach of student-centred, relationship-based learning, young learners develop early literacy and numeracy foundational skills while also developing important habits of mind, such as curiosity, empathy and engagement with each other and the world around them.

Hills Grammar Junior School specialist teachers are a definite point of difference to most centres: Drama and PDHPE lessons enhance the learning of our ECEC children, and their connections to the School as a whole.

Our Junior School students (K-6) also enjoy a progressive blend of connected curriculum and specialist education. The classroom teacher is responsible for the whole learning of each child, with English, Mathematics and Science supported by a team of curriculum leaders.

Science & Technology and HSIE (History and Geography) connect in Transdisciplinary Inquiry Units. Subjects are anchored in real world concepts and themes, such as 'belonging,' 'conflict, and 'community'. Specialists in the Creative Arts (Music, Visual Arts and Drama) and PDHPE take students for discrete classes, while Language teachers develop linguistic skills and cultural understanding through the study of French, Mandarin and Japanese. At the same time, specialist teachers make meaningful connections to the inquiry units. For example a study of the concept of 'exploration' might investigate Australian colonisation. In Visual Arts, a study of paintings by both early settlers and Indigenous artists help students to consider multiple perspectives on historical events and forces of change.

As a contemporary grammar school, our Senior School (7-12) maintains distinct subject disciplines taught entirely by subject specialists. This approach enables us to teach mandated areas in a sustained and deep way, and allows for student choice through electives in Stages 5 and 6 (Years 9-12). At the same time, we explore connections across the curriculum through our unique Interdisciplinary Program, which includes both end-of-year-projects (Years 7-9) and areas of study combined strategically at points in the year. Interdisciplinary programs serve a dual purpose, focusing both on connecting knowledge and developing student skills in the "6Cs" (Communication, Collaboration, Critical Thinking, Creativity, Citizenship and Character). Strong disciplinary knowledge provides the basis of meaningful connections between disciplines for our engaged students.

## Features of a Connected Curriculum

- We value **Literacy** and **Numeracy** as foundational knowledge and skills that continue throughout School. Play-based learning nurtures early literacy and numeracy and is visible in the ECEC through talk and hands-on activities. In K-2, more explicit teaching reflects the teaching of reading and writing. These practices continue in Years 3-6 and beyond through the disciplines of English and Mathematics.
- In the ECEC, students learn through play-based activities. The **Reggio Emilia** approach emphasises teachable moments, where we see children as strong, capable and resourceful learners. Guided inquiry and play are the foundations to build understanding and connect ideas and new knowledge.
- In K-6, units of inquiry focus on subject areas, with interdisciplinary connections drawn where appropriate. Teachers focus on key curriculum concepts and 'Big Ideas', supported by articulated Lines of Inquiry to help students and teachers to not only 'cover' key knowledge and skills, but to inquire more deeply into relevant areas of understanding. The Year 6 Expo is an excellent example of connected curriculum, a Science-based unit, where related ideas are explored in English and the arts.
- In 7-12, teachers draw out and articulate the 'Big Ideas' of the curriculum and investigate these with their classes within subject-based Units of Inquiry ('disciplinary learning'). **Interdisciplinary** projects help students to connect their learning and develop 21st century skills for learning, life and the workplace. These units include partners in learning: guest speakers, parents and alumni.

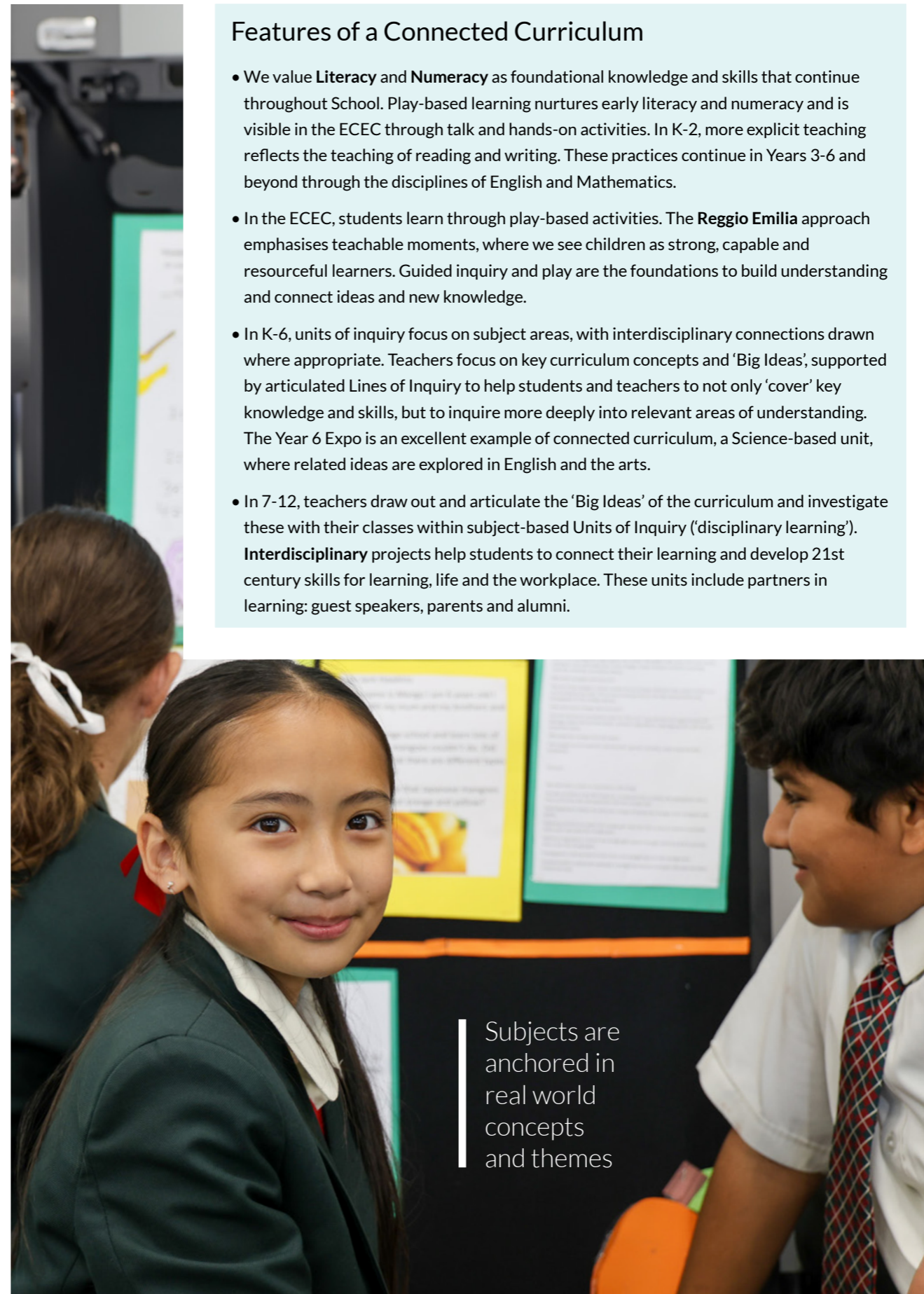
## Picture in Practice - Years 7-9 Enrichment Programs

In the last teaching week of Term 4, Hills students engage in a unique, weeklong interdisciplinary enrichment program designed to help them to make meaningful connections across the curriculum and develop their 21st skills.

**7 DREAM** – Students work in small groups to create a narrative or documentary short film. Each team assigns its own roles (Director, Producer, Main Actor, Editor, Camera Operator) and attend master-classes with our teachers of Drama, English, Art and Music. The week ends with a short film festival and awards for various categories. Students develop skills in Creativity (from 6Cs).

**8 LiGHt** – Students work in small groups to create a trade display incorporating research under the guidance of our teachers of Languages, Geography, History to be presented at the Hills Grammar International Travel Expo. Additional voices and experiences include an alumni presentation, a talk from a representative of the Department of Trade and Foreign Affairs or UN Representative, and a visit to La Perouse to learn about Indigenous culture. Students develop skills in Communication.

**9 STEM** – Students work in small groups on a Science-Technology-Engineering-Maths challenge in response to the big idea that 'water is a valuable resource'. During the week, students design and build a pump to move water as efficiently as possible. Guest speakers and alumni help the students to see connections between subject learning and the 'real world.' Students develop skills in Citizenship.



Subjects are anchored in real world concepts and themes

# 21st Century Skills

## Teaching Tomorrow's Skills Today

The late Sir Ken Robinson was a transformational leader who worked with governments, school systems, international agencies and global corporations. His TED Talk 'Do Schools Kill Creativity?' has had more than 62 million views (and counting!).

Robinson advocates a persuasive case for an entirely new education system that nurtures creativity. 'Our task is to educate their whole beings so that they can face the future. We may not see the future, but they will and our job is to help them make something of it.'

Robinson argues for creativity not only as a 21st century work skill, but also as a reflection of a deeper sense of nurturing the whole child and not just their 'academic' self.

The Lego Foundation's research publication *Cultures of Creativity* was similarly prompted by the realisation that creativity is a sought-after competency that declines as children grow older, and 'teachers, parents, and educational and governmental institutions struggle to support it' (2013, 4).

At the same time, traditional skills in literacy and numeracy, science, the humanities and physical health all continue to be important and seem to vie for attention.

While it is tempting to 'take sides' in debates about educational reform, common ground is possible. We need to maintain academic rigour, while recognising that rote learning is not enough: the aim of education should be to produce curious, creative and critical thinkers, lifelong learners, engaged problem solvers.

So how can Hills Grammar help students to prepare for a globally connected world, to teach the skills of tomorrow, today?

The Hills Grammar Learning and Teaching approach described thus far (Guided Inquiry, Cultures of Thinking, Connected Curriculum) all align towards this aim. In 2019-2022, our engagement with the global partnership New Pedagogies for Deep Learning enhanced these efforts. Specifically, our vision is to 'Future Proof our Hills Originals' by emphasising student voice, agency and collaboration. We wish to think deeply about purpose through an equal valuing of disciplinary knowledge and skills, and the development of student capabilities in the 6Cs (Collaboration, Communication, Critical Thinking, Creativity, Character and Citizenship). This phase of work has helped us to design new interconnected, real-world learning experiences to complement existing curriculum.

New initiatives in building student capacity for the future have included the introduction of the Hills Grammar Education Passport for the Future, a micro-credentialing system designed to capture the many skills our students learn, both in and out of school. We have consolidated a year-long Year 9 Entrepreneur Program to build student capacity to put great ideas into action, and introduced a Year 10 Personal Passion Project to enhance student autonomy. New external partnerships have been forged with UTS Design School, giving our Year 10 students an opportunity to gain university credits while still at school, while the University of Sydney/HEX program enhances entrepreneurial skills for participating students in Year 9.

Deeper Learning begins in the ECEC with play-based learning. As educators speak more about how important play is in nurturing creative thinking and curiosity throughout life, the question is how do we sustain play and creativity, Pre K to 12 and not restrict it, as Sir Ken feared many schools would do?

In focusing on 21st century skills and being able to work across disciplines, Hills Grammar is in good company. In the *UTS: Transdisciplinary Innovation* vision, Professor Louise McWhinnie writes: 'As the challenges before us become even more complex, dynamic and networked, people with the capability to conceive of jobs that do not yet exist and to work with and across disciplines, become highly prized agents to envision and enact change' [uts.edu.au/future-students/transdisciplinary-innovation](https://uts.edu.au/future-students/transdisciplinary-innovation)



## New Pedagogies for Deep Learning (in a nutshell)

- The Collaborative Inquiry Cycle includes 4 steps: Assess, Design, Implement, Reflect
- In New Pedagogies we pay particular attention to pedagogical practice; learning partnerships; leveraging digital; and learning environments
- The Deep Learning Competencies are Communication, Collaboration, Creativity, Critical Thinking, Citizenship and Character
- The aim is to Design Learning Experiences that build on learner strengths, make use of real-life problem solving, and help all students to identify and build their talents, purpose and passion (for their wellbeing, and for their future)

[npdl.global/making-it-happen/](https://npdl.global/making-it-happen/)

\* Dr. Helen Charman Director of Learning and National Programmes, Victoria and Albert Museum  
Cited in Lego Foundation *Creating the Creators: How can we enhance creativity in education systems?* (2019)

We need to maintain academic rigour, while recognising that rote learning is not enough: the aim of education should be to produce curious, creative and critical thinkers, lifelong learners, engaged problem solvers

# Academic Rigour - AR

## High Expectations But Not Afraid to Fail

So far, you have spoken about Guided Inquiry, Cultures of Thinking, Student Voice, the Connected Curriculum and 21st Century Skills. You have explained some important ideas – but what I want to know is how does Hills Grammar promote a culture of excellence? How will it not only nurture the ‘soft skills’ but also push students along when needed?

If these questions sound like your thoughts, then we are talking about academic rigour. In considering ‘AR’, we need to think Pre K to 12, so that our conversation is broader than NAPLAN and HSC preparation and results. We need to move beyond rote learning and recognise that memorising facts is no longer enough. We need to make sure that the pursuit of excellence does not lead to a fear of failure in our students, since many forms of design and innovation, scientific breakthroughs and artistic endeavours require constant trial and error. We rarely get there first go. By graduation, we want our students to have developed the habits of mind that will enable them to succeed – aware, too, that many experts are now emphasising the 6Cs as just as critical as traditional academic skills for future success.

In her education bestseller *Rigour is not a four-letter word* (2008, 2018) Barbara R. Blackburn defines her key term: ‘Rigour is creating an environment in which each student is expected to learn at high levels; each student is supported so he or she can learn at high levels; and each student demonstrates learning at high levels’. Blackburn’s themes are ‘raising expectations, increasing complexity, integrating scaffolding into instruction, creating open-ended choices and projects, and much more.’ These approaches correlate with Hills Grammar Pedagogy. The challenge in achieving an academically rigorous environment is effective differentiation and ‘cognitive support’ – so that, for example, we teach key concepts before students move into more complex applications of knowledge.

In 2019, Hills Grammar hosted a visit by leading Educational Neuroscience expert, Jared Cooney Hovarth, PhD, MEd. Hovarth’s ‘Learning Trajectory’ provides a model to help teachers move students from shallow knowledge, to deep understanding to application and transfer. Traditionally, academic rigour may be associated with surface understanding, with busy students memorising much information, but this level is not really AR as we understand it today. At the risk of moving into theory, Norman Webb’s Depth of Knowledge (DOK) model posits four steps for managing learning and assessment: Level 1: Recall; Level 2: Skill or Concept; Level 3: Strategic Thinking; Level 4: Extended Thinking. What both models indicate is the need for students to receive instruction in knowledge and concepts, but ‘the goal is regular instruction at Level 3’ (AEL 39, 6).

In summary, we support students to learn, recall and apply skills to build their surface understanding. We aim to take students into deeper waters from there, so that our classrooms are places where discussion and learning activities require students to reason with evidence and manage complexity.

To return to Cultures of Thinking, a classroom where a teacher is a ‘warm demander’; where thinking time is encouraged and students are asked: ‘what makes you say that?’; where conversation is defined as “unrehearsed intellectual adventure” (Oakeshott, 1959) – will be a classroom of Academic Rigour.

## Differentiated Assessment in ELEVATE Project

### Process

Student Voice  
Cultures of Thinking  
Real World Connection  
Pre-assessment  
General Capabilities  
Cognitive Thinking Skills  
Collaborative Planning  
Seeking experts and mentors/  
showcases  
Feedback  
Reflection

### Product

Co-designed task  
Thinking Routine  
Student action  
Appropriate Point of Challenge  
21st Century Learning  
Layers of Complexity  
Differentiated Assessment  
Authentic Audience  
Iteration (Sequence of Improvement)  
Evaluation and Next steps  
(Did we achieve our purpose?)



## Features of Academic Rigour

- The teacher has high expectations of each student
- Units of Inquiry and assessment design considers a ‘trajectory’ of learning: from learning facts, to connecting skills and concepts, to applying knowledge and moving beyond the traditional limits of easy-to-mark assessment tasks
- The classroom itself is a culture of thinking, where student thinking is expected and respected. Here the teacher is a warm demander, helping students to reason with evidence and manage complexity
- Student achievement – measured through formative and summative assessment – is the basis of teacher decisions about the design of classroom learning.

## Picture of Practice – Junior School ELEVATE Project

In 2018, our Junior School leaders worked with the Association of Independent Schools on a project called ELEVATE. The project team re-imagined the assessment practices utilised within the Junior School at Hills Grammar. While initially focused on developing next-practice to meet the needs of High Potential Learners, the Differentiated Assessment Framework has been adapted to benefit the learning outcomes of all students.

The vision and driving question for the Hills Grammar ELEVATE question relates directly to Academic Rigour: ‘How might we personalise learning to provide appropriate levels of complexity, choice and challenge to all of our learners to achieve more than anyone believed possible?’

Along with Complexity, Choice and Challenge, the Differentiated Assessment Framework also focuses on the principles of Equity, Validity and Reliability in assessments. A collaborative planning scaffold assists teachers to consider all important aspects of student learning as they design rich tasks to support academic rigour, considering both ‘process’ and ‘product’. The approach moves beyond traditional assessment to the design of learning.

# Collaborative Planning

## Teachers as Designers of Learning

The idea that a teacher arrives at a school, meets with the Principal, crosses the threshold of the classroom and is seen no more is well and truly a thing of the past.

Today's classrooms are likely to have glass walls; teachers work in teams to co-plan lessons and assessments; projects and initiatives often include more than one subject discipline and cross-grade collaboration. Increasingly, we are seeing teachers as 'designers of learning' – curating experiences, finding new voices to join the discussion, and managing a complex flow of learning to lift expectations and provide academic challenge for all.

Some past and present examples of Hills Grammar teachers using a collaborative approach to reflect on student learning and plan for improved strategies includes the work on Cultures of Thinking in cross-faculty and cross-age teams (2015); the STEM Academy (2016); the ELEVATE project on Differentiated Assessment (2017-2018) and our engagement in New Pedagogies for Deep Learning (2019-2021). These projects share certain characteristics. Teachers meet together to reflect on an aspect of student learning. Interventions or strategies are planned and implemented and evidence of learning is gathered. Reflective practice means that we integrate effective approaches into our Units of Inquiry, or as protocols for meeting together to discuss student learning, or as the basis for planning units themselves.

Our Professional Learning Lounge Library is full of books that might serve to frame collaborative planning, with titles like: *Becoming a Reflective Teacher* (Marzano 2012); *The Transformative Power of Collaborative Inquiry* (Donohoo and Velasco 2016) and *Teaching as Inquiry* (Weinbaum et al. 2011).

A basic methodology promoted in educational literature is that of Action Research – defined as research carried out by teachers themselves, often about their own classrooms and teaching 'in order to better understand them and to be able to improve their quality or effectiveness' (Mertler 2012, 5). While not all collaborative planning require the formalities of action research seen in the above projects, the mindset should be present at all times as we prepare and teach lessons, and reflect on evidence of student learning. The New Pedagogies for Deep Learning "Collaborative Inquiry Cycle" on the next page is as good as any model to help teachers achieve this.

Hills Grammar teachers work together in range of ways to open their classroom doors and collaborate. We share ideas at the General Staff Meeting, or at faculty meetings. The Learning Lounge program – with both internal and external presenters – includes one-off sessions and ongoing collaborations. In Teacher Professional Development ('TPD') and as part of Appraisal, teachers can work with leaders on setting goals to develop their teaching practice and reflection. The Student Evaluation of Learning & Teaching and Student Evaluation of Unit of Inquiry are useful tools to gauge student views of our curriculum and our teaching. Reflective practice and collaborative inquiry are two means by which we can increase our impact as teachers. It is, after all, indicative of John Hattie's 2018 number one factor of student achievement: collective teacher efficacy.

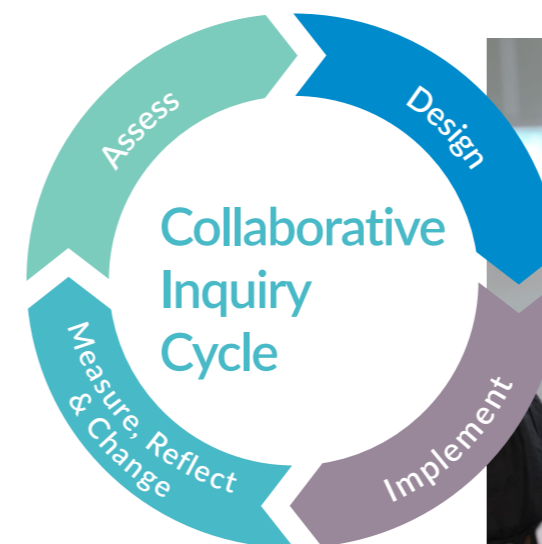


## Learning from Expert Teachers

Reflective Practice has a long history. Donald Schön applied the term in his 1983 book *The Reflective Practitioner*, where he considered the work of doctors, teachers, architects and engineers. This idea relates well to the notion of teachers as 'designers of learning'. Schön distinguishes between reflection-on-action (looking back) and reflection-in-action (in the moment). Expert teachers do both: they know their craft well enough to be adaptive and to "reshape what [they] are doing while [they] are doing it" (1986, 26). They also reflect after the event and share their experiences collaboratively with others as part of our collective efforts.

## Features of Collaborative Planning at Hills Grammar

- Teachers understand that their work is part of a collective effort to educate the whole child
- School leaders work with teachers to develop a shared vision of quality learning and teaching practices and values
- Teachers actively reflect on their practice and see their own need for lifelong learning in the classroom
- Action research provides a basic model for sustaining improvement across the School
- Teachers and leaders have a positive mindset to innovation and change and see their role as including collaborative planning to achieve extraordinary education.



# A Community of Learners

## Connect-Collaborate-Contribute

According to an ancient proverb – said to be of African origin – ‘it takes a village to raise a child’. Perhaps we might update that proverb for our contemporary suburban reality to say that it takes a community to teach a child.

Our Learning Lounge Program provides a rich variety of opportunities for teachers and support staff to learn, with topics ranging from pedagogy to technology, wellbeing, creativity and leadership. ‘Learning Walks’ enable all staff to experience different aspects of the School as a whole, and to feel part of a vibrant educational community. The Learning Lounge also hosts a plethora of NESA-accredited programs for external audiences, including the teaching of subject specialisations to the highest levels.

We have already referred to the Hills Grammar Graduate Aim, which begins with the phrase ‘In partnership with our families’. Our Learner Model (see ‘Guided Inquiry’) includes both Parent Learning and Organisational Learning within its orbit. Just as we now expect teachers to open their classrooms and collaborate, so too parents have a rightful expectation to be involved, to understand, share and support student learning. Parent involvement might include engagement with the Parents and Friends Association, the Class Parents Network, various School social activities, and attendance at showcases of student learning.

The new Parent Engagement Program enhances these established opportunities by helping to promote engagement and by developing a learning program for parents. In addition, we see our parents, our alumni and the wider community as Partners in Learning, adding fresh voices and wisdom to our classrooms. To this end, our Unit of Inquiry programming template and the Elevate collaboration

model both include questions to prompt our thinking about Partners in Learning, Real World Connections, and Showcase opportunities.

Fred Kofman and Peter Senge’s famous business and management book *Learning Organisations: Developing Cultures for Tomorrow’s Workplace* argues that organisations need to renew, reinvent and reinvigorate themselves to meet the needs of a changing world. To be places of learning, organisations need to develop and sustain positive, supportive cultures ‘built upon an assumption of competence ... supported by four other qualities or characteristics: curiosity, forgiveness, trust and togetherness’. Of these qualities, perhaps ‘forgiveness’ is the most surprising. Organisations need to experiment to innovate and adapt, and since experiments can fail, ‘forgiveness is essential... unsuccessful experiments must be viewed as part of the learning process, as lessons learned’ (46-47).

The degree of tolerance for schools as learning organisations to “experiment” is understandably narrow, and yet in a changing world, schools do need to try new approaches and to innovate – carefully, and thoughtfully. For this reason, a close working relationship with our parents and community is essential. A shared focus on student learning sets the positive tone. A collaborative approach to teaching, an openness to feedback from students, parents and each other, as well as the qualities of curiosity, forgiveness, trust and togetherness – deepens the learning for all.



## Organisational Learning – An Inquiry Stance

Theorists argue for two forms of learning in an organisation: operational and conceptual. Operational refers to procedure and know-how; conceptual is a deeper look at why things are done, and may involve challenging the norms (Weinbaum et al. *Teaching as Inquiry*, 23).

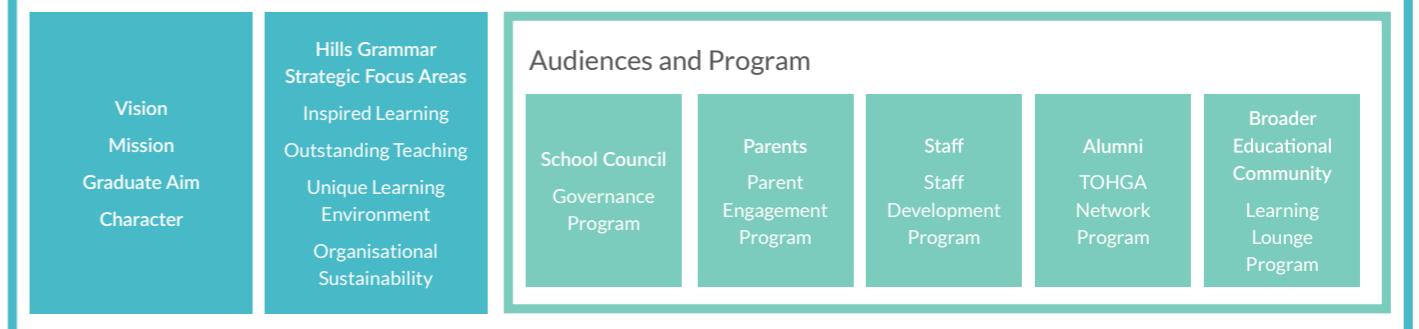
The intention is for *Deeper Water, Deeper Learning* to assist our conceptual learning – to provide ‘mental models’ explaining why things are done in learning and teaching at Hills Grammar. The statement also points the way to deeper purpose. There will thus be a degree of challenging the norm – bringing to the surface perhaps assumed knowledge or unspoken assumptions about the values and beliefs about learning and teaching.

An inquiry stance suggests that conceptual learning is not something settled once and forever: ‘without the willingness to question customary ways of doing things ... organisational learning cannot occur’ (Weinbaum et al 26).

## Features of the Hills Grammar Learning Community

- Professional learning is ongoing throughout the year
- Department Heads and School Leaders provide mentoring and support of teachers and assist in appraisal
- Parent participation in school events, and parent learning, is encouraged through a variety of programs including the Parent Engagement Program
- Thoughtful innovation is encouraged through collaborative planning, learning partnerships and professional learning
- Organisational learning is sustained through a positive culture, open to feedback and change, human in its response to error, while always striving to improve
- The overall focus is on student learning as the centre of all school efforts.

### Hills Grammar Community Learning Framework



# Hills Originals

## Out Beyond the Breakers

Hills Grammar aims to provide personalised learning through the celebration of individual differences. In partnership with our parents, we develop 'Hills Originals' by nurturing individual personalities and learning strengths.

Recently there has been much criticism of stock-standard, industrial models of education. To return to Sir Ken Robinson – 'there are elements of teaching that can be learned that are skilful and informed by experience and information, but it shouldn't be reduced to some sort of algorithm' (*School News* 2019). The response to our students is therefore individualised – knowing each child, teachers invested in their struggles and successes, a very human connection to the School.

The Hills Originals concept relates to this quality, and the capacity of the School to know the learner as a unique person. We begin by recognising individual qualities through a set of descriptors written by parents and students. In House mentoring, strengths form the basis of learning goals – in academic, co-curricular and wellbeing spheres. Learning conversations are crucial in this approach: how are you progressing towards your goals? What are the next steps? A personalised approach also informs our School processes, from induction, to transition between sections of the School, to subject selection and monitoring throughout the crucial final phases of Year 11 and 12.

Academic success – achieving the best results we can for each student – is fundamentally important. Each year, we analyse our NAPLAN and HSC results very carefully; we scrutinise the data; we search for the best ways to improve. This is making a difference. Hills Grammar has been a Top 100 School in five out of the last six years 2014-2019 (improved from two out of six in the previous six years, 2007-2013). More important – and not measured in the 'Top 100' – there are strong signs of increasing academic ambition. We have seen a steady increase in the number of students attempting extension courses (up from 42% in 2014 to 50% in 2017 to 60% in 2019)

and an improved median ATAR over the last 3 years of 80.2 (up from a median of 76.7 over the previous 3 years).

The question remains as to whether traditional academic success counts for deeper learning. According to Harvard Project Zero research, parents and employees align in wanting more out of schools than traditional academic skills. Parents hope for their children to become 'curious, engaged, able to persevere, empathetic, willing to take risks and try new things'. Employers want 'professionalism, work ethic, collaboration, communication, ethics, social responsibility, critical thinking and problem solving' (*Creating Cultures of Thinking* 16-17). Deeper learning points the way – as 'the process of developing durable and transferrable skills' applied to solve problems or do something new. Rote learning might be good for immediate recall but learning remains shallow. Deeper learning means that knowledge can be better organised and accessed in the long-term memory (Moreno and Mayer, 2007, in Jefferson and Anderson 2017, 53). The sections on Connected Learning, 21st Century Skills, and Academic Rigour deal with these questions.

The proof, you might say, is in the pudding. Evidence of deeper learning, of the transfer of the learning culture into the Graduate Aim, is harder to quantify than (for example) HSC results, because of the many and varied experiences of life beyond school. Our role is to provide encouragement, rich challenges, a nurturing environment, high expectations and positive role models, since – as it has been famously stated – 'children grow into the intellectual life around them' (Vygotsky 1978, 88). From here, our Graduates, our Hills Originals, come back and show us the results over time, in many varied ways. Deeper Learning, Deeper Water. Out beyond the breakers.



# Hills Originals

'How has Hills Grammar prepared you well for the future? How did our approach to learning and teaching deepen your understanding and build your knowledge?'



## Alex Rosic

Class of 2018

Hills Grammar provided a great platform that has given me a head start in my tertiary education journey. I am currently studying a Bachelor of Economics and Advanced studies at the University of Sydney. The support I received in my studies was very influential in my success in the HSC. During my glandular fever troubles in the early stages of Year 12, I felt there was a personal and sincere attempt to help me recover and catch up on my missed schooling. I have been lucky enough this year to gain a place at St Pauls College, one of the residential colleges at the University of Sydney. This enriching experience was, in part, possible due to Hills Grammar's glowing reputation in the community and the School's recommendation and support. My future dreams were shaped at Hills Grammar, whereby my Economics and Maths teachers encouraged me to expand into the economic analysis field.

## Zoe de Castro

Class of 2017

With all the leadership possibilities available, I learnt to approach every opportunity with a growth mindset and to utilise it to the fullest. Especially towards our final years, the teachers and staff demonstrated nothing less than an everlasting commitment to each student's personal development and wellbeing. This set a level of understanding and compassion I strive to meet myself each day and I thank them for it. I am currently studying Politics and International Relations at the University of Sydney. Looking ahead, I would like to commit myself to non-governmental work for sustainability practices in developing countries. I know that I will be carrying the work ethic, dedication and appreciation for every opportunity that Hills provided me into that future.



## Karl Jammal

Class of 2016

In reflecting on my time at Hills Grammar, I owe tremendous gratitude to my Hills Grammar education for the transition I made from a shy 5-year-old to a mature 18-year-old ready for life beyond school. Hills Grammar strives to harness and develop the wider skills and develop the well-rounded student. At school, I discovered my passions for music (piano and violin) and sport (touch football and volleyball). My interests – in hospitality, business and economics – all developed within the gates of the school. I learnt valuable lessons in leadership, resilience and commitment. What I admire most about the Hills Grammar approach is the opportunity to do your personal best. You need to be prepared to work hard and take advantage of the endless resources available – particularly the teaching facilities and the quality of teachers. I have recently completed my third year of a Bachelor of Construction Project Management at UTS and currently work within the construction industry. My ultimate goal is to operate my own construction company. My Hills Grammar education has helped to launch me into my next phase of life, equipped with all the attributes I believe required for success, wherever life leads.



## Diana Demetri

Class of 2015

My learning experience at Hills Grammar was nothing but fulfilling and rewarding. I was lucky enough to have inspiring teachers who established positive student-teacher relationships. I always felt supported and valued by my teachers in both education and welfare, particularly in Year 12. After graduating in 2015, I realised that this Hills Grammar relationship is rare and special, as many university peers did not have a similar experience in their own schools. I am very thankful to Hills for making the transition from school to university easy and manageable. What I value most highly from my time at Hills is the development of the necessary life skills and foundations to enter the 'real world', post-graduation. My past education has significantly shaped me to be the person I am and has taught me key foundations to personal and work life. I reached my academic goals, but in retrospect, I achieved much more than this.

*Diana completed the Bachelor of Media and Law at Macquarie University in 2019. She now works as a Content Marketing Executive in the media industry.*



## Afterword

*Deeper Water, Deeper Learning* has its origins in an Education Executive meeting during which ideas for a poster moved to a vision for a booklet to articulate the key themes of our learning journey. Teachers helped to write the headlines and identify some of the key points to be included in the text. Key staff including the Education Executive provided further feedback once the text was in draft form. Writing a research-based statement on pedagogy without being overly 'technical' was a challenge, one assisted by the careful integration of photography and graphics from our Advancement and Engagement team. We hope that *Deeper Water, Deeper Learning* not only informs our parents and community about current educational approaches, but also points the way to future innovations as the School strives to achieve its deeper purposes.

Dr Geoffrey Gates,  
Director of Learning and Teaching Pre K to 12



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