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The First Three Years of Catalyst: Implementing evidence-informed curriculum, pedagogy and assessment across 56 schools

JULY 2024

Deloitte Access Economics

Background

About Catalyst

Catalyst is a comprehensive system-wide improvement initiative being implemented in Catholic Education of Canberra and Goulburn (CECG). Catalyst covers the full spectrum of what to teach (curriculum), how to teach it (pedagogy), and how to measure what students have learnt (assessment). Catalyst seeks to improve student outcomes by equipping all Principals, leadership teams and teachers with the knowledge, skills and desire to employ evidence-based pedagogical practice in their classrooms. External experts supported CECG to design and implement Catalyst, with particular attention to the appropriate dosage and frequency required to support meaningful classroom practice change.

About CECG

CECG operates 56 schools and 9 early-learning centres, serving over 22,000 students in the ACT and NSW. In NSW, CECG has 19 Primary Schools, 2 K–10 Schools, 3 K–12 Colleges, and 3 Secondary Colleges. Meanwhile, in the ACT, CECG has 9 early learning centres, 24 Primary Schools, and 5 Secondary Colleges. In 2023, CECG employed 1,653 teachers, with 1,067 having completed High-Impact Teaching Practice (HITP) training, representing 65% of teachers.

How is Deloitte Access Economics involved in this work?

CECG engaged Deloitte Access Economics as an external, objective evaluator to monitor and evaluate the Catalyst program. Deloitte Access Economics produced three full-length reports corresponding to the three phases of work set out below. This short report summarises high-level, formative insights regarding the introduction and implementation phases of Catalyst. In the coming years, the monitoring and evaluation work is expected to transition from formative to summative.

Phase 1 (January 2022 - May 2022)

Aim: develop a pre-Catalyst baseline analysis and foundational artefacts to support ongoing data collection and analysis

- Validated and extended the Catalyst theory of change. This communicated what changes were planned, the intended progress, the key program activities, and the expected outcomes.
- Evaluated the monitoring framework for Catalyst implementation.
- Undertook baseline analysis of system performance pre-Catalyst.

Phase 2 (September 2022 - April 2023)

Aim: understand how Catalyst has been introduced and implemented in schools and the system to-date

- Recommendations to operationalise key elements of the monitoring framework.
- Revealed independent insights on how Catalyst is being implemented on the ground at a school and system level.
- Built understandings of the emerging outcomes of Catalyst.

Phase 3 (September 2023- March 2024)

Aim: understand the ongoing implementation of Catalyst & establish an early view of outcomes achieved

- Understand the ongoing implementation of Catalyst, at the classroom, school and system level.
- Measured progress and established an early view of the impact of Catalyst across the system.
- Report containing findings and recommendations for consideration towards Catalyst ongoing implementation, monitoring and evaluation.

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What is Catalyst?

Catalyst is a comprehensive, system-wide improvement initiative focusing on classroom practice change through three core pillars: curriculum, pedagogy, and assessment. Catalyst aims to improve student learning by ensuring that every teacher uses a common, evidence-informed approach to teaching and learning.

Evidence

Theory base, practice base, design method, program models, and implementation tools

- Science of Learning
- Science of Reading
- Rosenshine's Principles of Instruction, Hollingsworth and Ybarra, Dr. Anita Archer, Tom Sherrington, Tom Bennett, Dr Tim McDonald
- Kimberley Schools Program, the Knowledge Society, Fogarty EDvance, SA Literacy Guarantee, The Reading Pledge

High-quality resources and training

Pedagogy

- Centralised curation, commission, and delivery of live, system-wide professional learning and refresher training
- Expert instructional coaching (delivered by Lorraine Hammond, Shaping Minds, TeachWell, and CogLearn)

Curriculum and Programs

- Low variance curriculum (K-6 Maths, 3-6 English)
- Spelling Mastery
- Shaping Minds and Ochre Education
- The Writing Revolution
- InitiaLit, MacqLit, MiniLit

System-wide Assessment

DIBELS PAT

Centralised Change Management

ProSci tools including ADKAR® Implementation Framework

Awareness
↓
Desire
↓
Knowledge
↓
Ability
↓
Reinforcement

Desired outcomes

- Improved student learning
- Improved student engagement
- Improved professional satisfaction for teachers
- Improved student attraction & retention
- Improved staff attraction & retention

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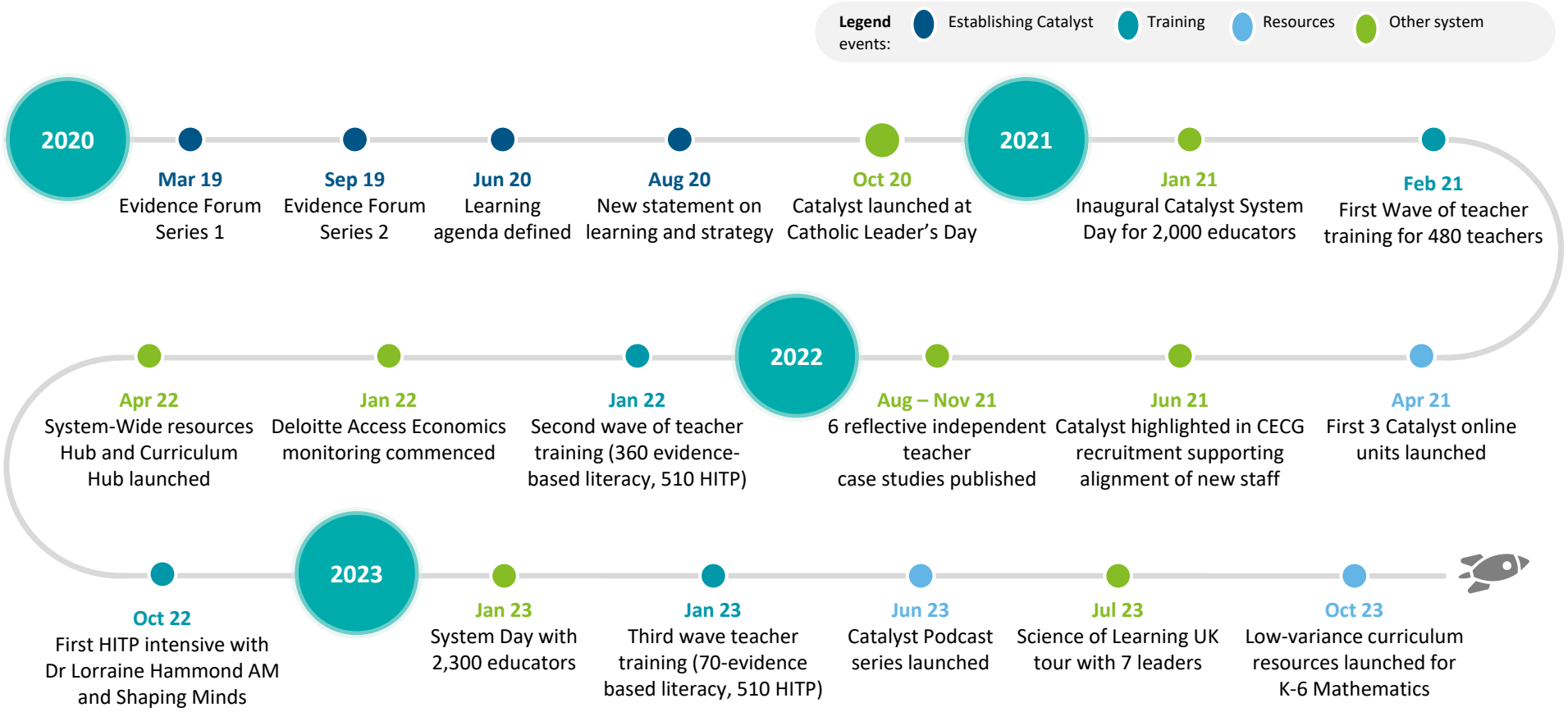
How is CECG Implementing Catalyst?

Implementation of Catalyst is led by a dedicated central office Teaching and Learning team. To date, CECG teachers have been trained in Catalyst over a three-year period in successive waves.

The key moments that have mattered to Catalyst's system-wide implementation are displayed to the right.

- Catalyst design commenced in 2019 with an initial Evidence Forum Series that considered how teaching and learning could be elevated across CECG schools.
- Catalyst launched in October 2020.
- System Days, held in 2021, 2022 and 2023, brought together staff from all CECG schools for joint learning and reflection on Catalyst.

Figure 1: Timeline of the Catalyst Journey



Source: Deloitte Access Economics (2024) using Catholic Education Canberra and Goulburn data.

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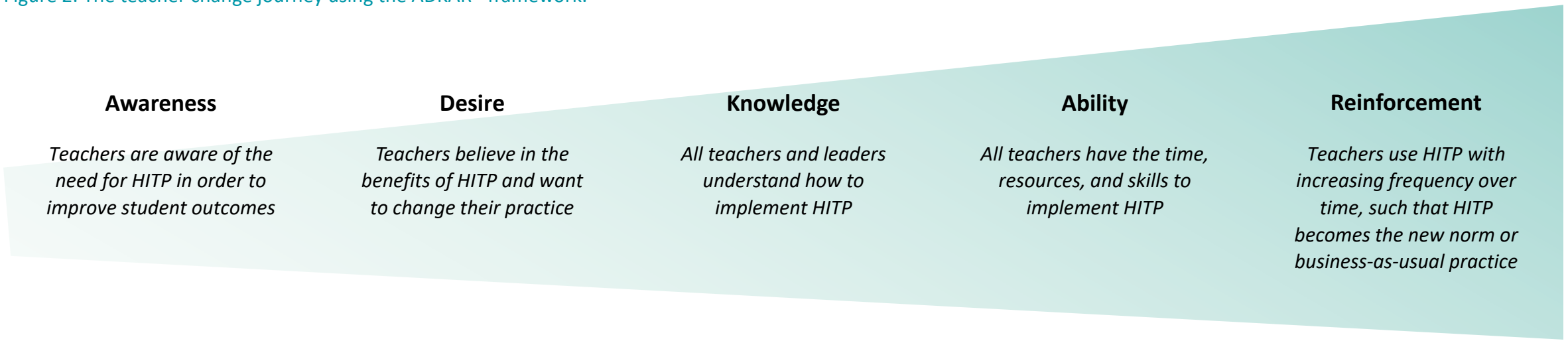
How does Catalyst seek to enhance teacher practice?

A cornerstone of Catalyst is High-Impact Teaching Practice (HITP), which is a suite of teacher "pedagogical moves" that help maximise the amount of information students learn and retain. CECG is deploying HITP via a systematic implementation approach, reflective of the ADKAR® model.

Figure 2: The teacher change journey using the ADKAR® framework.



Given teachers are at the centre of the Catalyst change effort, the proportion of teachers trained in High Impact Teaching Practice (HITP) were a key focus of early implementation. Accordingly, key early implementation outcome pertained to teacher perceptions of, and response to, Catalyst training. Key evaluation questions included:

- Did the training teachers received under Catalyst actually influence the instructional decisions they made in the classroom and change teacher behaviours?
- If so, did the earliest implementers of HITP believe the practice made a difference to student engagement and student learning?

These evaluation questions were assessed via 15 case studies (encompassing a principal interview, teacher interviews, and classroom observations) as well as an annual HITP Teacher Self-reflection survey.

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What do teachers think of Catalyst?

Teacher support for HITP increased between 2022 and 2023 on every dimension of the ADKAR framework.

ADKAR® alignment	Survey item	% of teachers agree	
		2022	2023
Awareness	Understand Catalyst	-	81%
Awareness	Understand HITP	75%	83%
Desire	Belief HITP helps	83%	83%
Desire	Belief it is worth it	80%	80%
Knowledge	Know effective implementation	54%	76%
Knowledge	Confident explaining	47%	70%
Ability	Part of everyday teaching	65%	77%
Ability	Confident using HITP	51%	73%
Ability	Sufficient time	30%	50%
Ability	Sufficient resources		64%
Reinforcement	Teachers support each other	67%	74%
Reinforcement	School leadership	58%	68%
Reinforcement	Receive feedback	32%	44%
Response rate		40%	82%

About the survey:

- All CECG teachers were asked to complete a self-reflection survey on HITP on system day in Term 1, 2023 (reflecting on the 2022 school year), and again on system day in Term 1, 2024 (reflecting on the 2023 school year).
- Note that survey results from the 2023 administration are more representative than those from 2022 due to the stronger response rates achieved in 2023.
- Both surveys were anonymous, so individual teacher responses cannot be linked or tracked over time. For further documentation on the survey, please refer to the Phase 2 report.
- From 2022 to 2023, teachers' perceptions improved across all but one measure. Results are presented in the context of the ADKAR® framework for change, presented on the previous slide.

The next slide provides a higher-level overview of teachers' interactions with, and perceptions of, HITP, alongside direct teacher testimonies of their views on HITP.

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What do teachers think of Catalyst?

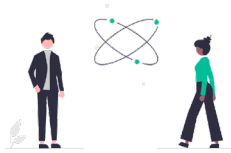
As of 2024, over 1,000 teachers are now trained in HITP and nearly 80% of these teachers have recently reported they would not go back to their previous teaching approach.

1000+

TEACHERS TRAINED IN THE USE OF HIGH-IMPACT TEACHING PRACTICE

79%

OF TEACHERS USE HIGH IMPACT TEACHING PRACTICE DAILY



4 IN 5

TEACHERS AGREE USING HITP HELPS STUDENTS LEARN MORE

4 IN 5

TEACHERS AGREE IMPLEMENTING HITP IS WORTH THE TIME, EFFORT, AND FOCUS

78%

OF TEACHERS SAY THEY WOULD NOT GO BACK TO A WAY OF TEACHING WITHOUT HITP

Testimonies from the field

"Teachers can't imagine another way of teaching or going back to what they used to do."

- Assistant Principal

"Catalyst is game-changing. It's the best hope for students."

- Teacher

"Students are in a safe and supportive space… and less likely to have their mistakes become misconceptions."

- Teacher

"I could see that students were becoming more confident."

- Teacher

"The trainings were well designed and done religiously by teachers and leaders."

- Principal

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What does the teacher Catalyst journey look like?

Each teacher has their own experience with Catalyst. At the same time teachers tend to reflect that implementing HITP requires an initial transition period, and the practices become increasingly automatic and second nature over time.

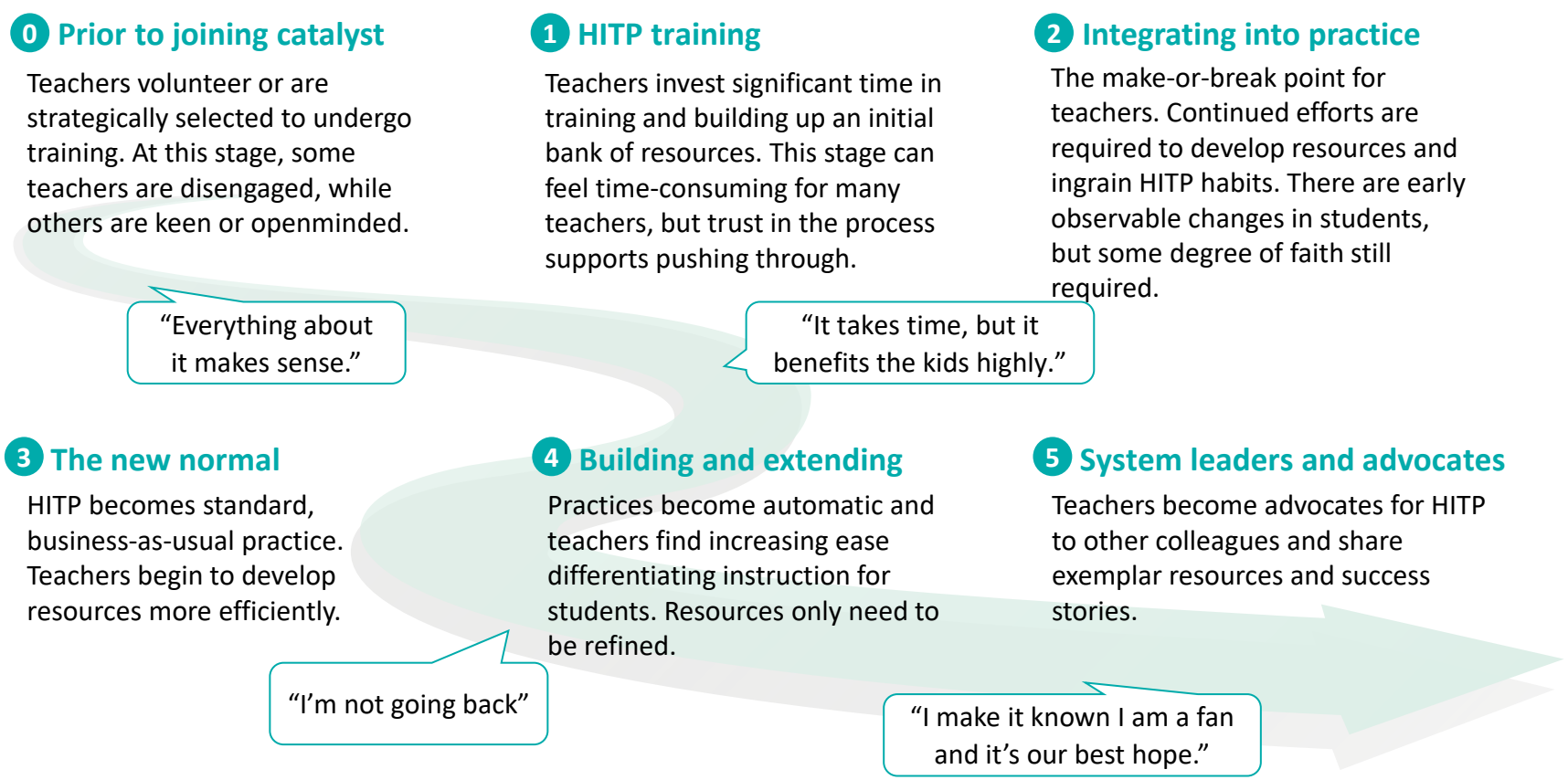
Where a teacher is situated on the roadmap depends on factors such as:

- When they started with Catalyst (such as joining a CECG school),
- When they underwent training
- The support systems around them to implement High Impact Teaching Practice
- The investments they have made in creating resources and embedding Catalyst into their teaching.

As Catalyst matures, the average point along the roadmap is advancing.

Classroom-level data showing aggregate student learning growth will be the next marker of success for individual teachers.

Figure 3: Key stages of a stylised teacher's journey with Catalyst



.Source: Deloitte Access Economics (2024).

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What does success look like for Catalyst?

To improve student learning, Catalyst places high expectations on the entire school community. The information below details what Catalyst implementation is expected to look and feel like at the Principal-level, teacher-level, and student-level, and what CECG seeks to observe in every classroom (system-wide) in the years to come.

Principals

- Principals strongly endorse HITP and promote staff buy-in
- Principals model best practice and participate in professional learning
- Principals create whole-school structures that create time for teachers to implement HITP and Catalyst learning
- Principals establish a strong culture of continuous learning, peer observation and coaching feedback

Teachers

- Teachers use evidenced-based teaching practices:
  - Explicit Instruction
  - Retrieval Practice (e.g. Daily Review)
  - Reading Instruction
  - Checking for Understanding
- Teachers use high-quality, low-variance scope and sequences and instructional materials
- Teachers collaborate, share resources, and observe one another's classrooms
- Teachers use student assessment data to personalise instruction for individual students

Students

- Students are active, on-task and engaged in their learning
- Students develop strong literacy and numeracy skills in the early years that provide a strong foundation for future learning in all subjects
- Students receive a consistent learning experience of high expectations across every class in the school; similar expectations and routines create a safe learning environment
- Students receive additional support to achieve mastery of student learning standards when needed

Source: CECG, Characteristics of Lighthouse Schools (now 'momentum schools')

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How will we understand the impact of Catalyst?

High-impact educational programs tend to materialise at the school level 1-3 years after successful implementation. As 2023 was the first year many CECG schools reached a critical mass of teachers and leaders fully engaged with Catalyst, 2024 will offer the first reasonable window to test the degree to which Catalyst drives improvement in student learning.

EVALUATION NEXT STEPS

The next phase of Catalyst monitoring and evaluation will seek to understand the impact of Catalyst on teacher performance and student learning. This analysis will likely need to occur at the teacher-level (or classroom-level), with a focus on teachers with the most experience implementing HITP.

DESIRED OUTCOMES

- **Improved student learning**
- **Improved student engagement**
- **Improved professional satisfaction for teachers**
- **Improved student attraction & retention**
- **Improved staff attraction & retention**

OUTCOME MEASURES

DIBELS. DIBELS assessments are used globally to monitor students' development of literacy skills.

Phonics Screening Check. A measure used by systems to assess Year 1 students' decoding skills.

PAT. The ACER Progressive Achievement Test (PAT) is a two-part assessment program, with PAT-M for Mathematics and PAT-R for Reading.

NAPLAN. NAPLAN is Australia's nationwide, standardised assessment administered to students in Years 3, 5, 7, and 9 in reading, writing, language, and numeracy.

Tell Them From Me™ (TTFM™) Student Survey Data. A survey administered to CECG students that covers a range of constructs pertaining to student behaviours and engagement

CECG Annual HITP Survey. CECG deploys a teacher self-reflection survey annually to capture teachers' perspectives on Catalyst.

CECG Student and Teacher Census Data. CECG maintains rich panel data on students and teachers that enables tracking of student and teacher retention over time.

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Appendix

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What are students presently experiencing through Catalyst?

CECG students are responding favourably to the changes they have observed in their teachers' approach to teaching. Students report feeling more engaged in lessons, more focused on learning, and more enjoyment in the classroom.

"I want other teachers to complete this training course because my teacher is getting everyone involved now."

– Year 4 Student

"I believe that all teachers should try a new way to teach the class even if they are different and strange. Our class has been focused and loves learning since our teacher has taken this course."

– Year 7 Student

"I believe it would be beneficial if other teachers implemented these strategies as they have a lasting positive impact on our understanding and commitment to topics…Our teacher has already been implementing a range of these strategies but has shown a clear commitment to trying a few new ones since our initial completion of this survey. They have been effective."

– Year 10 Student

"I enjoy the way this class is run, as it allows me to achieve approaches to learning and strive for my best results in each test.'

– Year 12 Student

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What evidence informs the Catalyst approach?

CECG designed Catalyst using evidence on how to improve student learning **and** how to improve teacher practice. This meant CECG placed a twin focus on what supports students need to reach their full learning potential, as well as what supports teachers needed to effectively provide those supports to students.

In validating and extending upon the Catalyst theory of change, the evidence base that informs each of the inputs for Catalyst has been reviewed, and summarised below. The strength of the evidence base provides confidence of the likely effectiveness of the program.

Designing systems for learning

Catalyst is a coherent, system-wide approach to learning – which in and of itself is an enabler of improved practice – and utilises a number of tools identified by Fullan & Quinn (2016).

Coaching

The use of coaching is well supported by evidence with research indicating that educators who are observed more frequently by a coach implement instructional strategies more readily than non-coached peers. Additionally, there is evidence that effective coaching can help educators make informed instructional decisions (Joyce & Showers, 2002; Ingvarson, Meiers & Beavis, 2005).

Curriculum, assessment & pedagogy

HITP is the pedagogical underpinning of Catalyst. The value of aligning curriculum and assessment to pedagogy is underscored by research demonstrating that quality curriculum matters to student achievement (Steiner, Magee & Jensen, 2018) while teachers' use of formative assessment has been shown to have a significant and positive effect on student learning in mathematics, reading, and writing (Klute, Apthorp, Harlacher & Reale, 2017; Black & Wiliam, 2010).

Supportive leadership

The focus within Catalyst on ensuring school leaders support teachers in implementing HITP consistently in all classrooms is supported by research that demonstrates the effectiveness of having school leaders that are focused on improving student outcomes (Robinson, Rowe & Lloyd, 2008; Leithwood et al, 2020).

Collaborative communities

Research regarding the benefit of collaborative communities (usually referred to as professional learning communities) has found that the benefits are both in improving teacher confidence and engagement (Donohoo, Hattie & Eells, 2018) as well as improving student outcomes (Hargraves & O'Connor, 2018).

Induction and refresher professional learning

Using professional learning to support the growth of teachers' capabilities is well supported by literature (Elmore, 2002). There is a specific focus on the benefits of professional learning for new teachers (Fletcher & Strong, 2009; Kutsyuruba, 2012). The Multilit program has been developed based on findings from research to support effective instruction for low-progress readers (Wheldall & Beaman, 2000).

Response to intervention

Response to Intervention (RTI) is a multi-tier approach to the early identification and support of students with learning and behaviour needs. RTI is effective in preventing and improving learning outcomes for such students (Fletcher & Vaughn, 2009; Sugai et al, 2000).

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The monitoring and evaluation approach

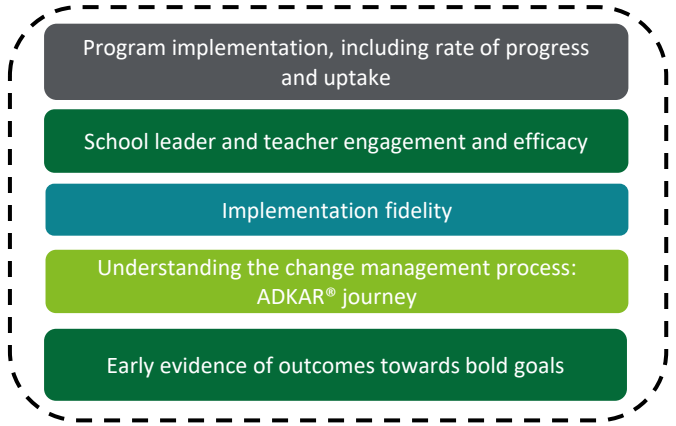
The Catalyst evaluation analysed several sources of data using a mixed-methods evaluation.

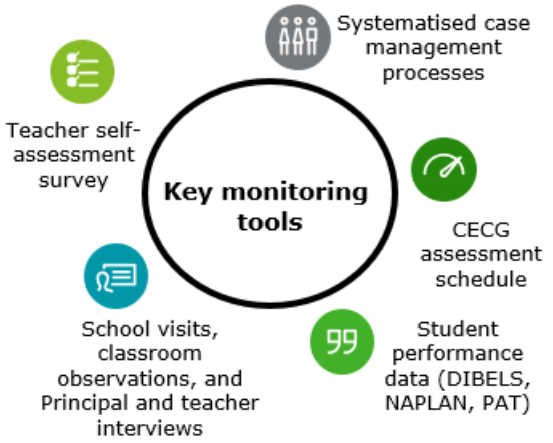
Methodology and data sources

- **Implementation data:** This included participation data on Catalyst uptake (for HITP in Action and K-2 literacy programs), sourced from CECG.
- **Case management data:** A record of schools' implementation of Catalyst. This contains key variables such as school size, school programs (K-2 literacy programs, literacy interventions), progress rating, teacher participation data, and qualitative feedback from HITP in Action providers. This data was sourced from CECG.
- **Teacher self-reflection survey: A** brief survey administered on Catalyst System Day 2023 and 2024. All CECG teachers were invited to participate. The response rate doubled from 2023 (40%) to 2024 (82%). The survey captured teacher perceptions of Catalyst, self-reported use of HITP before and during Catalyst, open-text questions, and more.
- **School case studies:** 15 school case studies were conducted across Phase 2 and Phase 3 of the Catalyst evaluation. The school case studies aimed to better understand the factors that drive effective implementation of high impact teaching practice (HITP) within schools and classrooms.
- **Provider impact reports:** This included reports from the HITP in Action providers, which include a progress rating for schools, including areas of strength, areas of challenge and recommended next steps for the schools.
- **System performance data:** including PAT-R and PAT-M, DIBELS. NAPLAN data was used for Phase 1 for baselining, but has not yet been used as an outcome measure.

Methodological approaches are further outlined in each respective section.

Key areas of focus





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