Vision for Instruction

Flourishing Learners position statement

Melbourne Archdiocese
Catholic Schools

Coherent, knowledge-rich teaching and learning programs

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- St John's School, Footscray
- St Jude's School, Langwarrin
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- St Mary's College, Seymour
- St Paul the Apostle Catholic Primary School, Doreen

Acknowledgement of Country

We acknowledge that Melbourne Archdiocese Catholic Schools (MACS) offices and Catholic schools in the Archdiocese of Melbourne are situated on the lands of the five language groups that make up the Kulin Nation, who have walked upon and cared for this land since time immemorial. We acknowledge their continued deep spiritual connection and relationship to Country.

We pay respects to their Elders past, present and future, and commit to the ongoing journey of truth-telling and deep listening, working together for reconciliation and justice.

Foreword from Archbishop Peter A Comensoli

Jesus Christ is our first and greatest teacher. His mercy, his self-giving, his witness to truth, are what motivate all of us in the work of Catholic education.

Every teacher in a Catholic school can look to the Lord with great confidence and trust, as we work together to reflect God's love to every student who is called to flourish under our care.

'I came that they may have life, and have it abundantly' (John 10: 10).

This Melbourne Archdiocese Catholic Schools (MACS) *Vision for Instruction* has been developed to inspire and guide all our teachers, and to build confidence and trust with our families and students. It encapsulates our commitment to excellence in education, imbued with the virtues of faith, hope and love.

Pope Francis (2020) describes the role of teaching as a beautiful vocation that has an impact far beyond the classroom:

> 'They are "artisans" who shape the coming generations. By their knowledge, patience, and dedication, they communicate a way of living and acting that embodies a richness that is not material but spiritual …'

In this way, teachers pass on our cultural memory from one generation to the other, raising up each child so that learners will become contributors, students will become leaders, and the beauty of our Catholic faith will enrich future generations.

Every child in a Catholic school should find a home and a launching pad from which they can thrive, and take others with them, into a life flourishing with wisdom and mercy.

I am encouraged by the commitment to equity and excellence outlined in the MACS *Vision for Instruction*.

To our teachers, parents, families and all in our faith communities, I extend my prayer, and the Lord's blessing, for the full flourishing of every child in our care.

Most Reverend Peter A Comensoli
Archbishop of Melbourne

Foreword from Dr Edward Simons, Executive Director

The MACS *Vision for Instruction* is inspired by our strategic plan, *MACS 2030: Forming Lives to Enrich the World,* and calls upon our Catholic school teachers to embrace the MACS mission, drawing guidance from the light of Jesus Christ as our model teacher.

Grounded in rich cognitive science, *Vision for Instruction* identifies the most effective teaching methods supported by evidence of their positive impact on student outcomes. At MACS, we have high expectations for every learner in every school, and all MACS teachers will be supported by the system to implement these practices.

Vision for Instruction is the outcome of many months of work involving teachers, leaders and educators across the Archdiocese and around the world. I would like to extend my sincere gratitude to everyone who contributed and played a crucial role in the development of this vision.

It is an exciting time as we collectively embark on this journey.

Dr Edward Simons
Executive Director

Foreword from Dr Mary Oski, Director, Learning and Regional Services

This *Vision for Instruction* has been designed to support our schools with clear guidance on instructional best practice, ensuring a consistent approach to teaching and learning excellence across our system.

It builds upon established frameworks for school engagement, wellbeing, improvement, and inclusive practices for students with diverse learning needs. Specifically, the focus for the *Vision for Instruction* is on enhancing cognitive engagement, a crucial aspect for learning.

Drawing from Cognitive Load Theory and the robust evidence base on The Science of Learning, our aim is to implement best practice instruction, curriculum design and planning (evidence-based, knowledge-rich, coherent, and sequenced) and assessment practice in every MACS school.

This vision is a shared endeavour. The MACS implementation model (The How) outlines the five system enablers to support schools on this journey, ensuring our teachers and leaders have access to a suite of professional learning opportunities as well as universal access to high-quality curriculum aligned resources. These supports will be implemented in stages.

Our commitment to evidence-based practice in teaching and learning embraces the creation of learning communities that provide safety, wellbeing, and enable positive and nurturing relationships between students and educators. These are equally founded on high expectations, rigour, and academic achievement to ensure every student is enabled to flourish.

We know that many of our schools are well and truly underway with evidence-based instruction, and some are just beginning to explore the potential. We look forward to partnering with all of you on this journey.

Dr Mary Oski
Director, Learning and Regional Services

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The Why

Preface

It is well known that education has extraordinary benefits, both for individuals and society. The economic benefits have been known for decades, but more recently, research has also shown other, wider, benefits including improved health, greater life-satisfaction, and increased pro-social behaviour. If anyone claimed to have invented a drug that conferred the benefits that we now know education has, no-one would believe it.

However, realising these impressive outcomes is far from simple, in that it requires integrating insights from a number of perspectives, including the cognitive sciences, philosophy, and pedagogy, and that is why the MACS *Vision for Instruction* is so welcome. It combines what we know about how learning takes place, and the distinctive pedagogical approaches that are needed for effective teaching of literacy and numeracy, with a focus on the development of the whole child. Perhaps more importantly, it provides a clear focus for all teachers working in MACS schools to support each other in ensuring that every child thrives at school, and leads a flourishing, fulfilled life.

Professor Dylan Wiliam
University College London Institute of Education

> ‘The mission of schools and teachers is to develop an understanding of all that is good, true and beautiful.’
>
> (Francis 2014a)

1. Inspired by Faith

2. Flourishing Learners

3. Enabled Leaders

4. Enriched Communities

Our intent

By 2030, we aim to become the benchmark for excellence in teaching and learning, through a coherently integrated, academically competitive and distinctively Catholic educational offering.

The *MACS 2030: Forming Lives to Enrich the World* (MACS 2030) strategic plan calls all MACS schools to come together in common purpose and vision to make the most of what a Catholic education has to offer, so we can have the greatest and most distinctive impact in our classrooms, staffrooms and school communities.

We will provide an outstanding education, focused on formation of the whole person, that has the intellectual, practical and moral excellence of learners at its heart. We will aim to deliver the best educational outcome for every student.

To achieve this, we are committed to evidence-based instruction and the active promotion of equity and excellence. As part of the Flourishing Learners strategic theme, we aim to deliver the best educational outcome for every student across the breadth of the Victorian curriculum.

Scan or visit
www.macs2030.com

Our two goals for instruction

Goal 1 – Excellence:

All MACS schools deliver a knowledge-rich, evidence-based teaching and learning program.

We believe in teaching excellence, where all teachers are empowered to implement evidence-based practices and deliver the knowledge that students need to become intellectual and moral citizens of the world.

Goal 2 – Equity:

Every student, regardless of background, achieves literacy and numeracy proficiency.

Our vision is that every student is inspired and enabled to flourish and enrich the world. The dignity and worth of each student is valued, which places the individual student at the heart of what MACS does. Our educators are dedicated to providing all students with fundamental literacy and numeracy skills, ensuring their active engagement in society while fostering lifelong learning.

> ‘To educate is an act of love, it is to give life.’
>
> (Francis 2014b)

Catholic principles for education in MACS schools

1

MACS schools build communities of faith, hope and love in the light of Jesus Christ.

Jesus Christ is our inspiration, the very life of our purpose as Catholic educators. Everything we do is illuminated by the light of Jesus Christ.

MACS schools are sacred spaces where students encounter the transformative power of Jesus Christ. The interconnected virtues of faith, hope, and love hold profound significance and are essential for our spiritual growth and transformation. Derived from the teachings of St Paul in the New Testament, these theological virtues offer guidance for a rich, fulfilling life. We as educators are called to 'form lives of faith, hope and love in the light of Jesus Christ' (1 Cor 13: 12–13).

2

MACS schools are collaborative, inclusive, faith-filled communities.

God's love for every person encourages relationships to be at the centre of Catholic schools. As such, learning is a collaborative partnership where parents, staff and students work together to promote unity, common vision, mission, and purpose. MACS school communities build flourishing relationships between parish and school, between school and home, between parent, teacher and student, between learning and living, focused on formation, learning and wellbeing outcomes for all children.

Catholic schools recognise and value parents as the first and most important educators of their children.

3

MACS schools recognise the inherent dignity of every person as being created in the image of God.

The sacred dignity of each person is honoured in MACS schools. The school community bears witness to the unique and distinctive abilities of each student. 'Every student has the potential to enrich the world throughout their lives by using the gifts they have' (Haldane 2022). When students are known, valued and loved, they can genuinely flourish.

4

The Catholic intellectual tradition emphasises the pursuit of knowledge and excellence.

'Life … is a search for the true, the good and the beautiful' (Benedict XVI 2008). MACS schools draw from the deep intellectual heritage within the Catholic Church, as a body of knowledge, beliefs, and practices that have developed within the Catholic Church over centuries. MACS schools instil a desire for lifelong learning and continuous faith formation. MACS schools offer a solid foundation for lifelong learning, empowering students through ongoing knowledge acquisition along their spiritual learning journey.

5

We are inspired by the Gospel to act for a just society.

Catholic teachers aim to engage and empower students with the necessary knowledge, skills, and values to actively contribute to the betterment of the broader community. By fostering a deep sense of social responsibility and moral awareness through justice, peace and integral ecology, MACS schools strive to develop compassionate leaders who seek the common good and the good of each and every person.

The What

How students learn

All MACS educators benefit from knowing how students learn. The AITSL, *Australian Professional Standards for Teachers – Standard 1*, requires teachers to know students and how they learn (AITSL n.d.). The evidence from cognitive science research offers important information on how this learning happens with practical implications for teaching.

Research summaries

- Australian Education Research Organisation (AERO) (2023c) – *How Students Learn Best: An overview of the evidence*
- Deans for Impact (2015) – *The Science of Learning*
- Science of Learning Research Centre (n.d.) – *Psychology, Education and Neuroscience (PEN) Principles*

‘I came that they may have life, and have it abundantly.’

(John 10: 10)

How students learn	Implications for instruction
Most students need formal teaching to learn biologically secondary knowledge. While many students learn biologically primary knowledge without any formal teaching (e.g. learning to listen and speak), biologically secondary knowledge (e.g. reading, writing, mathematics) requires instruction, and must be taught (Castles, Rastle & Nation 2018).	**Teach what students won't learn on their own.** Biologically secondary knowledge is the core of what MACS schools teach and much of the curriculum requires formal teaching.
Thinking occurs when we combine information from our environment and from our long-term memory in new ways (Willingham 2009b). Working memory is the space where we think (Clark, Kirschner & Sweller 2012). Long-term memory stores information organised in 'schemas'.	**Consider student prior knowledge** when planning a lesson to ensure students have the necessary background knowledge to access new material and connect it to what they already know.
Working memory has limits (Sweller 2011). Students can only keep so much new information in their minds at once. Cognitive overload can occur when students try to process multiple pieces of new information or try to complete new tasks without prior instruction or scaffolding.	**Respect students' cognitive load** by providing new information in manageable parts or steps. Space out sequencing logically using guidance and scaffolds (Chen et al. 2018). **Teach new content explicitly, using modelling and worked examples** (Barbieri et al. 2023) to reduce cognitive load (Deans for Impact 2015).
Memory is the residue of thought (Willingham 2009a). Students retain knowledge and develop understanding through thinking. To help ensure students retain meaning in their learning, we want them to think about the things that matter most.	**Ask questions to get students thinking in a structured way,** rather than just presenting a series of problems to solve or asking them to follow someone else solving problems (which doesn't require as much thinking). Create learning experiences that direct student thinking toward curriculum goals. This has implications for constructing tasks that reduce distracted thinking and support the learning that students need most.
Memory is prone to forgetting (Pashler et al. 2007). Students may be able to do something one day but find it difficult to recall a week later. Teachers can make things easier for their students to recall by connecting information to other ideas and by practicing retrieval of information from long-term memory.	**Stories and mnemonics** can help students to remember what they have learned. Students benefit from **extensive independent practice** for knowledge and skills to become automatic. It helps to interleave practise of different types of content and to space practice over time. **Review** can strengthen previous learning and lead to more fluent recall. It can also strengthen the connections among the material students have learned (Rosenshine 2012).

How students learn	Implications for instruction
Knowledge builds on knowledge. Knowledge is mental Velcro (Hirsch 1996) – students who have lots of knowledge about topics across the curriculum find that new knowledge 'sticks' to it, building understanding from one year level to the next.	**Teaching a knowledge-rich curriculum is essential** to creating life-long learners with opportunity-rich lives (Wexler 2020). Carefully sequencing knowledge across the whole curriculum will deepen student learning.
Novices and experts learn differently. Novice learners process information differently as they do not yet have the mental models that experts do.	**Introduce new ideas carefully and explicitly.** When students attain a reasonable level of expertise in a subject, they should practise and extend their learning effectively through independent problem-solving.

'Each student is important, each is wonderful … because each is made in the image and likeness of God. In their hopes and their challenges, their imperfections, and their gifts … every child is a blessing, to be nurtured, supported, and encouraged.'

(Comensoli 2022)

Vision for instruction

The following evidence-based practices are derived from research on how students learn as well as studies of the most successful teachers. These general high-impact practices are designed to ensure MACS students flourish in our classrooms.

Research summaries

- AERO (2023a) – Guides & resources
- AERO (2023c) – *How Students Learn Best: An overview of the evidence*
- Victorian Department of Education (2023) – High impact teaching strategies (HITS)
- Rosenshine (2012) – Principles of Instruction: Research-Based Strategies That All Teachers Should Know

Coherent, knowledge-rich teaching and learning programs: Students need a broad range of knowledge and skills to have a strong foundation of information across the whole curriculum that will benefit them beyond their school years. Coherent and deliberate planning of knowledge taught and sequencing of tasks has been shown to positively impact student learning. Tasks that build upon each other and are deployed based on student prior learning are the most effective (Wexler 2020).

Explicit instruction model: Effective teachers design lessons that begin with teacher-guided instruction and gradually shift responsibility for learning to the student with modelling and guided practice. This leads to student independent practice only after foundational knowledge is established (Clark, Kirschner & Sweller 2012).

Explicit instruction is effective across a variety of contexts and for different groups of students (AERO 2022a). Explicit teaching refers to a whole system, not just an episode within a lesson, which means that teaching might look different from one day to the next, building on prior learning. The stages of teaching, from introduction of new content to independent practice, might all occur in one day or may occur over a week or more, depending on the content and the students.

Explicit instruction sequence:

Starting with the introduction of new content and skills, effective teaching will generally follow this sequence:

- **Explicit instruction:** Teachers fully explain the concepts and skills that students are required to learn. The most efficient way to teach knowledge is to teach it explicitly, and this is particularly true for the introduction of new concepts (Rosenshine 2012). However, this does not mean students are passively receiving information.
- **Modelling:** Effective teachers break down what students need to learn into smaller learning outcomes and model each step so that students can see what is expected of them (Rosenshine 2012).
- **Guided practice:** Teachers provide multiple opportunities for students to practise, and support is gradually removed as students develop understanding and can work more independently.
- **Independent practice:** Once students have developed understanding, teachers ask students to complete tasks themselves while the teacher monitors and provides feedback.

Formative assessment: Effective questioning is a core part of effective formative assessment. Instruction is most effective when it is highly interactive with frequent checks for understanding. Identifying where a student is in their learning by assessing what they know also helps teachers choose the right starting place before introducing a new unit of work (AERO 2021).

Regular review: Rehearsing and reviewing information creates stronger connections and makes prior knowledge more readily available for use. As a part of a routine, use low- or no-stakes quizzes for frequent review. Material that is practised and discussed in review will be easier to recall. If students are struggling with a concept during review, teachers can do a quick re-teach lesson.

Multi-tiered Systems of Support (MTSS)

Student academic, behavioural, communication, engagement, health, and wellbeing needs are interconnected and complementary facets of student learning. The MTSS is a systematic continuous improvement framework that utilises high-impact evidence-based pedagogical practices to ensure every student receives the appropriate level of support, instruction, and adjustments to be successful across the domains of learning, behaviour, and health and wellbeing.

Tier 1: Universal quality instruction for all

Screening, assessment, and academic and pro-social supports (quality differentiated teaching practice) are provided to all students.

Tier 2: Targeted support

Students requiring more explicit and targeted support are assessed using targeted assessments and are provided with evidence-based supports in addition to tier 1 support.

Tier 3: Intensive support

Specialised assessments and individualised, targeted intervention are provided to students requiring intensive support, in addition to tier 1 and tier 2 support.

The three-tier framework promotes support, services and intervention for students, at increasing levels of intensity, based on progress monitoring and data analysis. Interventions occur across all tiers and in all domains.

The three tiers are not discrete and separate, but interconnected (symbiotic), and are offered with the required intensity and frequency to support the needs of all students, whether below year level, at year level, or above year level, and regardless of complex learning needs.

Under the MTSS, every student is inspired and enabled to flourish and enrich the world within a pedagogical framework for excellence, where all students are supported to progress to the level of which they are capable and participate on the same basis as others.

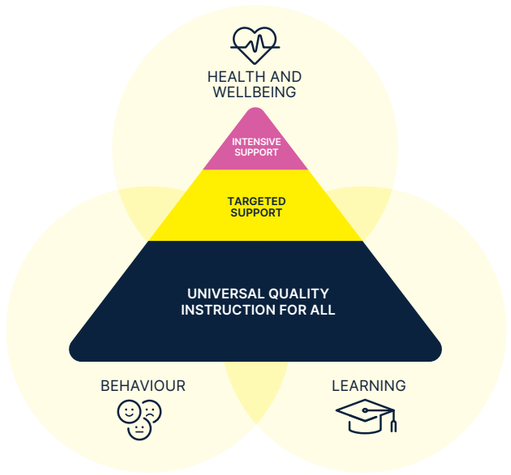

Figure 1: Multi-tiered Systems of Support

Vision for reading instruction

Reading is the gateway to meaning and knowledge. Yet, teaching children to read is complex. Fortunately, reading instruction is one of the mostly widely researched topics in education, and hundreds of studies have refined and consolidated a strong evidence base for reading instruction (Moats 2020).

Research summaries

- AERO (2023b) – Introduction to the science of reading
- Wheldall, Wheldall & Buckingham (2023) – *Effective Instruction in Reading and Spelling*
- Thomas & Thomas (2021) – *Teaching and Learning Primary English*

When classroom teaching includes a range of research-based components and practices, it can prevent and mitigate reading difficulties. Classroom environments should be motivating and supportive, where reading and effective reading instruction is highly valued. The MACS vision for reading instruction is for every student to commence school with access to a high-quality, evidence-based literacy program, made up of the following core areas:

- **Phonemic awareness:** This is when students understand that speech is made of up of words, and words are made up of distinct sounds. It requires being able to identify the phonemes in a word. Students benefit from explicit instruction in phonemic awareness, however, once basic phonemic awareness has been established, further phonemic awareness instruction should occur in tandem with systematic phonics instruction.
- **Phonics:** Phonics is knowledge of the relationships between letters and sounds, and the ability to use letter-sound relationships to decode words. Students need explicit and systematic instruction in how to decode words using their knowledge of letter-sound relationships.
- **Fluency:** Fluent readers can read accurately, quickly and expressively. Fluency is critical for deriving meaning from texts. Evidence-based practices for fluency include modelling fluent reading for students and providing students with repeated practise of reading written passages.
- **Vocabulary:** Vocabulary is knowledge of the meaning of words, both in isolation and in context. Vocabulary is essential for understanding texts but there are often wide disparities in student vocabulary when students enter school. Many studies point to rich, explicit vocabulary instruction as the most effective approach to support students from disadvantaged backgrounds.
- **Comprehension:** The ability to understand and construct meaning from a text is the ultimate goal in literacy instruction. Comprehension relies on strong decoding skills and fluency, but also on the general background knowledge students have about the various subjects they are reading about. This is why a knowledge-rich curriculum is important for student learning.

Vision for writing instruction

One of the most fundamental responsibilities of schools is teaching students to read and write. Reading and writing are foundational literacy skills, and foundational to all other learning areas. Implementing evidence-based instructional practices enhances students' writing skills and confidence while fostering a deeper understanding, enjoyment of, and appreciation for the writing process.

Research summaries

- AERO (2022b) – Writing and writing instruction
- Shanahan (2019) – 'Reading-writing connections' in *Best practices in writing instruction*
- Chen, Myhill & Lewis (2020) – *Developing Writers Across the Primary and Secondary Years: Growing into Writing*

The following recommendations are based on evidence-based practices for writing across all years of schooling:

Create supportive writing environments

- Establish writing instruction as a priority across all learning areas and year levels.
- Create motivating and supporting writing environments where writing is explicitly taught and valued.
- Ensure students write frequently for a range of meaningful audiences and purposes.
- Integrate instruction across the curriculum, recognising the reciprocity of reading and writing to support learning.
- Provide additional scaffolding and instruction for students with learning difficulties and additional needs.

Develop essential writing skills

- Explicitly teach handwriting and keyboarding skills and give students opportunities to compose using digital and handwriting tools.
- Prioritise explicit instruction in spelling and orthography (encompassing morphology, etymology and phonology).
- Utilise explicit word, sentence, and paragraph analysis to enhance student writing.
- Embed grammar and punctuation instruction in meaningful tasks.
- Ensure adequate instruction in planning, drafting, evaluating and revision of writing, and embed formative assessment to provide explicit feedback to progress students.

Build knowledge for writing

- Explicitly teach genre macrostructure and microstructure through modelling, guided practice and exemplars, providing subject-specific instruction as required.
- Build knowledge that includes rich content knowledge and language for expressing and developing ideas, such as knowledge of linguistic and rhetorical features, and opportunities to build and extend vocabulary.

Vision for mathematics instruction

Mathematics involves developing an understanding of numbers and quantity, operations, patterns, space, measurement, and shapes. It builds in complexity, which means that early performance in mathematics relates to future performance. Access to high-quality mathematics instruction can improve student attitudes towards mathematics and change trajectories of student outcomes and pathways (The Meadows Center 2017). High-quality mathematics instruction is essential.

Research summaries

- AERO (2022c) – Mastery learning in maths
- AERO (2022d) – Explicit instruction in maths group facilitation guide
- AERO (2022e) – Formative assessment in maths group facilitation guide
- The Meadows Center (2017) – 10 Key Mathematics Practices for All Elementary Schools
- National Research Council (2001) – Adding It Up: Helping Children Learn Mathematics

The following recommendations are based on evidence-based practices for mathematics:

- **Develop number sense:** Teach students what quantities and numbers mean and how to represent them with objects and numerals. For example, use number lines, get students to count fluently, and compare amounts.
- **Build fluency:** Ensure that students have fluency with addition, subtraction, multiplication, and division.
- **Teach mathematics concepts:** Help students to understand mathematics concepts. Teach the 'why' and 'how' of mathematics in combination with procedures and rules.
- **Use concrete materials:** Get students to use hands-on materials and visual representations to show concepts and procedures.
- **Use problem-solving strategies:** Explicitly teach problem-solving and reasoning strategies. Teach students how to read problems and organise work according to the structure of the problem.
- **Use explicit instruction:** Use explicit instruction when introducing new mathematics content and then gradually release responsibility to students. Model mathematics problems step-by-step and use guided practice, then independent practice with teacher feedback. Provide opportunities for students to explain their work and thinking in oral and written forms.
- **Use precise mathematics language:** Encourage students to use correct mathematics language when verbalising explanations and steps for solving problems.

The How

Implementation approach

Shared implementation principles, processes, and enablers will be used to mobilise evidence-based practices and ensure the MACS *Vision for Instruction* supports student learning in every classroom.

Implementation science research summaries

- Scott et al. (2023) – Variation in schools' readiness for change: Learning from the Getting it Right from the Start project
- Langer, Tripney & Gough (2016) – The science of using science: researching the use of research in decision-making
- Sharples et al. (2019) – Putting Evidence to Work: A School's Guide to Implementation
- Evidence for Learning (2022) – Effective Professional Development

The implementation approach is designed to enhance the effectiveness of the evidence-based practices outlined in the *MACS Vision for Instruction*, ensuring a practical translation of the instructional vision into tangible practice.

Sustainable school improvement often requires continuous learning and unlearning of practices, and the development of new organisational structures and routines. A structured implementation approach supports schools to do this complex work effectively. The MACS implementation approach has three core components:

- Principles of effective implementation
- 4E implementation process
- System implementation enablers.

Implementation science research highlights the complexity of the implementation process and reveals the specific practices that can make school-level change journeys more successful. The MACS implementation approach is built on research-informed practices and effective professional learning models.

> 'Faith and reason are like two wings on which the human spirit rises to the contemplation of truth; and God has placed in the human heart a desire to know the truth – in a word, to know himself – so that, by knowing and loving God, men and women may also come to the fullness of truth about themselves.'
>
> (John Paul II 1998)

Principles of effective implementation

The following research-informed principles of effective implementation inform and guide implementation work for our MACS office, regions, and school-based teams. By using these principles, schools can employ design approaches with a higher likelihood of success and sustainable impact to avoid common implementation pitfalls.

Principle	Description
Humans at the centre Understand that human experience is at the heart of change.	Humans and empathy are at the heart of quality implementation processes in the complex relational world of schools. Leaders focus on the experiences and local context of those who are implementing on the ground. For effective collaboration, it is important to gain a deep understanding of the problems, barriers, and strengths of the people you are designing with. Implementation effectiveness is highly dependent on context and readiness for change. It is crucial to learn about the constraints and opportunities of the environment in which practitioners are working.
Building knowledge Knowledge is foundational to school improvement.	Effective implementation requires deep knowledge (Robinson 2010). It is important to continuously strengthen teacher and school leader knowledge and build the understanding of the adults in our schools. Successful implementation often requires changing educators' mental models, which can be influenced by the way information and knowledge are presented (Holtrop et al. 2021). Knowledge building is ongoing throughout the implementation process.
Rigorous adaptation Balance on-the-ground adaptations with ensuring fidelity to evidence-based practices.	It is easier to implement a new evidence-based practice or program if it is clear which features need to be adopted closely (that is, with fidelity) to get the intended outcomes. Specify what is most important (where to be 'tight') and what elements are adaptable (where to be 'loose').
Lean monitoring Collect and respond to data at each stage.	Establish regular monitoring and feedback loops to quickly learn and adjust through cycles of action and reflection. Implementation is complex and messy. Errors, mistakes and misjudgements will be a natural part of any collective learning process. Monitor fidelity of implementation, teacher knowledge and cognitive load, and outcomes, including student learning and engagement.

4E implementation process

The MACS implementation process offers a systematic approach to introducing, adapting and sustaining evidence-based practices in educational settings.

Implementation is best conceptualised as a set of stages in which teachers and leaders engage in collaborative work over time. The MACS implementation model ensures each school can effectively navigate its own implementation journey. System leaders support school leaders to go through a cycle of stages to build on existing good practice. These stages, as part of the implementation model, are based on the principles of effective implementation.

A school-based implementation journey is best enacted through a four-staged implementation process:

1. Exploring	2. Experimenting	3. Expanding	4. Embedding

As progress is rarely straightforward or predictable, teams will collectively act, monitor and adjust throughout their journeys (Sharples et al. 2019). Ongoing evidence-informed monitoring, reflection and adaption are crucial across each of the four stages of implementation. Early monitoring provides insights into the efficacy, impact and understanding of early trials. During later stages, there will be a growing focus on monitoring implementation fidelity, consistency and outcomes for learners.

The 4E model can be applied to make small changes to specific practices (e.g. daily reviews) or larger whole-school transformations, for example, an evidence-based teaching and learning program in a specific learning area (e.g. early years mathematics). On the path towards full implementation of the *Vision for Instruction*, schools will likely work through the 4E process multiple times, as they collectively build knowledge and change instructional habits across different prioritised focus areas.

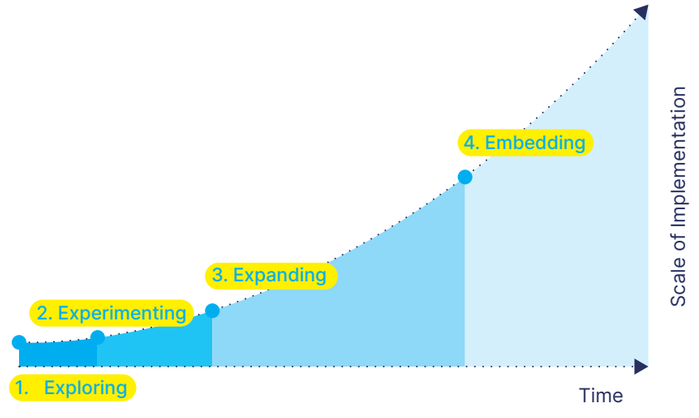

Figure 2: 4E implementation process

Stage 1 – Exploring

Assess student learning needs, *Vision for Instruction* strategies and organisational readiness.

The exploring phase is the groundwork of the implementation process, where knowledge is built, problems are defined, organisational readiness is assessed, and codified evidence-based approaches are selected. School leaders may work with a small team to engage in learning, information gathering and decision-making.

Schools should build on their strengths when deciding how to implement the *Vision for Instruction*. Making fewer, but more strategic, choices is often more effective. By assessing student learning, school strengths and leadership capability, teams narrow the scope of proposed change and inform their strategic decision making, honing in on essential priorities.

Schools must also plan for deliberate reduction of programs and practices that are less than optimal, to create time and cognitive space for successful implementation.

'The essence of effective leadership is stopping teachers doing good things to give them time to do even better things' (Wiliam 2016).

Stage 2 – Experimenting

Create successful school-based examples of the *Vision for Instruction*.

In the experimenting phase, schools run a series of small-scale prototypes combining the implementation model (The How) with the evidence-based practices from the *Vision for Instruction* (The What). Experimentation allows for low-risk testing of a chosen approach in context without using unnecessary change capacity across an entire staff workforce. With early feedback, school leaders can make necessary adjustments to their school-wide implementation plan.

Stage 3 – Expanding

Spread successful practices throughout the whole school.

The expanding phase is about spreading the new practices across a wider group/range of practitioners and teams. During the early stage, it may make sense to start with the quick wins or areas of practice that will be foundational to later change. Forming a core implementation team, that takes the lead in planning, executing and monitoring the implementation process, significantly enhances the chances of success. During this phase, drawing on the educators who engaged in the experimental work is helpful. These 'champions' can help to adapt and spread the work contextually. As more teachers and teams make early progress, support, celebrate and showcase the work of those already involved and model what is possible.

The implementation process should focus on how to build and sustain motivation. Helping people to take small manageable actions, see progress in their work, and experience support from peers/leaders is crucial to unlocking momentum.

Stage 4 – Embedding

Make new practices sustainable and regularly review effectiveness.

Sustaining the work of ongoing knowledge building and practice improvement over the long-term is often a more significant challenge than the initial launch. The final stage, embedding, involves making the new approach an integrated organisational routine. Developing organisational routines and habits around these practices can play a crucial role. Embedding the approach requires ongoing commitment, support and regular review.

At the embedding stage, a focus on establishing habits and routines offers a structural framework that reduces the cognitive load associated with the execution of tasks. When improvement processes become routine, they are less likely to be dropped or overlooked during stress, changes or uncertainties.

System implementation enablers

We know our teachers want to provide the best teaching and learning experiences for all of their students. The task of enhancing teaching and learning in every MACS classroom will be our collective learning work.

MACS office staff partner with teachers and school leaders to implement evidence-based practices in every school. This working relationship is enhanced by reciprocal learning, feedback and adaptation.

For sustainable implementation to occur, teachers need support, resources, time, and the right school environment to be able to enact high-quality teaching and learning approaches. To support teachers, MACS office staff design and deliver quality resources and effective professional learning to make school-based implementation journeys easier. They partner with schools and regions to provide comprehensive support for teachers.

There are five interconnected system implementation enablers to support schools.

Monitoring and evaluation of implementation

Striving for continuous improvement.

MACS uses data, evaluation and monitoring to identify lead indicators of change and improvement in student learning. System and school leaders identify indicators of impact and capture evidence of improvement to guide changes in practice and routines to support key improvements over time.

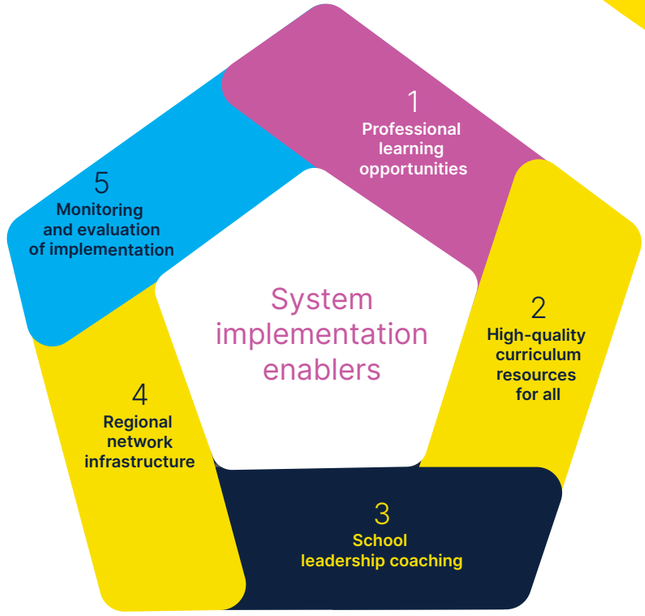

Figure 3: Five system enablers

Professional learning opportunities

High-quality professional learning and on-demand resources.

Schools are provided with an extensive range of high-quality professional learning opportunities to support teachers to embed the *Vision for Instruction* in all classrooms. Through access to this professional learning suite, teachers will be able to collaborate, build knowledge, and share best practices and ideas.

Regional network infrastructure

Coherence and connection across schools.

MACS office staff partner with school leaders through dynamic regional networks of improvement to ensure alignment and deliver system support. The improvement networks bring schools together to share best practice, innovation, implementation advice, and resources. Regional teams support schools to enhance their teaching and learning strategies and build capacity in implementing the *Vision for Instruction*.

School leadership coaching

Instructional leadership to enhance teaching and learning.

School principals and leaders play a critical role in fostering effective structures and routines so that teachers can improve practice. This works best, when school leaders are instructional leaders who nurture effective teaching and learning environments with coherent school-wide approaches. MACS office staff work closely with school leaders to develop effective whole-school approaches to teaching and learning.

High-quality curriculum resources

Supporting teachers with high-quality curriculum resources.

MACS office staff support teachers with high-quality, comprehensive curriculum resource materials, which enables them to focus more on the core task of teaching. This approach promotes equity and excellence across MACS schools, ensuring all teachers have access to evidence-based, well-sequenced curriculum materials to support students in every classroom.

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Saint Mary of the Cross MacKillop

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