

# Queensland Academy for Science Mathematics and Technology

## Executive Summary





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## 1. Introduction

This report is a product of a review carried out by a review team from the Education Improvement Branch (EIB) at **Queensland Academy for Science Mathematics and Technology (QASMT)** from **13 to 16 September 2021**.

The report presents an evaluation of the academy's performance against the nine domains of the [National School Improvement Tool](#). It also recommends improvement strategies for the academy to implement in consultation with its regional office and school community.

The report's executive summary outlines key findings from the review and key improvement strategies that prioritise future directions for improvement.

Schools will publish the executive summary on the school website within two weeks of receiving the report.

The principal will meet with their Assistant Regional Director (ARD) to discuss the review findings and improvement strategies.

For more information regarding the EIB and reviews for Queensland state schools please visit the EIB [website](#).

### 1.1 Review team

Alan Smith	Internal reviewer, EIB (review chair)
Joel Buchholz	Peer reviewer
Justin Harrison	Peer reviewer
Tom Robertson	External reviewer



## 1.2 School context

<b>Location:</b>	Bywong Street, Toowong	
<b>Education region:</b>	Metropolitan Region	
<b>Year levels:</b>	Year 7 to Year 12	
<b>Enrolment:</b>	1238.6	
<b>Indigenous enrolment percentage:</b>	0.2 per cent	
<b>Students with disability:</b>	<b>Education Adjustment Program (EAP) percentage:</b>	1.2 per cent
	<b>Nationally Consistent Collection of Data (NCCD) percentage:</b>	15.5 per cent
<b>Index of Community Socio-Educational Advantage (ICSEA) value:</b>	1221	
<b>Year principal appointed:</b>	2010	



### 1.3 Contributing stakeholders

The following stakeholders contributed to the review:

School community:

- Principal, two deputy principals, two Business Managers (BM), four directors, eight Heads of Department (HOD), eight House Deans (HD), 49 teachers, two teacher aides, two canteen assistants, two cleaners, four executive services team members, Information Technology (IT) support member, two student services team members, research centre supervisor, laboratory research officer, laboratory assistant, two facilities and grounds staff, two administration officers from Queensland Academies (QA) admissions, 52 students and 16 parents.

Community and business groups:

- Four alumni tutors, president Parents and Citizens' Association (P&C) and school council representative.

Partner schools and other educational providers:

- President of Queensland Secondary Principals' Association (QSPA), representative of Brisbane Inner City Cluster of Schools, International Baccalaureate (IB) relationships manager and QA admissions manager.

Government and departmental representatives:

- ARD.

### 1.4 Supporting documentary evidence

Annual Implementation Plan 2021	Explicit Improvement Agenda 2021
Investing for Success 2021	Strategic Plan 2018-2022
OneSchool	School budget overview
Professional learning plan	Curriculum planning documents
School pedagogical framework	Professional development plans
School data plan	School newsletters and website
School Opinion Survey	Student Code of Conduct
School Data Profile (Semester 1, 2020)	School Online Reporting Dashboard
Headline Indicators (October 2020 release)	School based curriculum, assessment and reporting framework



## 2. Executive summary

### 2.1 Key findings

**The academy opened in 2007 and provides a Science, Technology, Engineering and Mathematics (STEM) education enriched through a broad liberal arts curriculum.**

It is one of three Department of Education (DoE) academies available to highly capable students. The academy is the only one that provides for students from Year 7 to Year 12. A growing alumni attests to its stellar efforts and focus on providing a world-class education that nurtures excellence and fosters global citizenship for an ever changing world.

**The academy is an Independent Public School (IPS).**

The principal expresses that the curriculum is uniquely and exclusively the International Baccalaureate (IB), delivered through the Middle Years Programme (MYP) and the Diploma Programme (DP). Leaders indicate that the student body represents 40 nationalities, with 70 languages spoken across the range of student backgrounds. They describe parents and caregivers as highly aspirational, and that the academy draws from a vast geographical area.

**A culture of high expectations permeates the academy.**

A caring and collegial approach is apparent amongst staff members who express a strong and positive commitment to the academy and its students. Most students express a sense of pride and belonging, and an appreciation of the opportunities and support afforded them by staff. Students value the opportunity to interact, learn and collaborate with like-minded peers in an engaging and culturally diverse learning environment. Most parents express a high level of satisfaction with, and confidence in, the academy.

**Teachers and leaders are committed to the effective implementation of IB programs across all year levels.**

The principal indicates that the IB has been assessed by the Australian Curriculum, Assessment and Reporting Authority (ACARA) and identified as a well-established alternative curriculum framework that delivers comparable educational outcomes for students as for those who are taught the Australian Curriculum (AC). Staff members proudly describe the successful Foundation Program offered in Years 7 and 8, the STEM Futures Program in Years 9 and 10, and the DP in Years 11 and 12.

**Teachers acknowledge the importance of providing programs of learning that are engaging, relevant, and challenging.**

They particularly reference the elements of international-mindedness, inquiry learning, and a broad, balanced, conceptual and connected curriculum. Many staff members identify the importance of the IB learner profile and reference the attributes of learners they are seeking to further develop.



**Academy leaders recognise the central role of highly effective teaching to the enhancement of student learning.**

A strong focus on the use of evidence-based pedagogical practice is apparent across the academy. The academy's approach to teaching and learning is based on a bespoke model developed by the academy that incorporates a range of research-informed elements and is aligned to the academy's context as an IB World School.

**Academy leaders acknowledge the impact that high quality teaching and learning has on student achievement.**

Leaders view the continuing development of staff into an expert teaching team as central to the successful delivery of the IB program and improving outcomes for students. The leadership team is committed to the identification, recruitment, and retention of qualified and skilled teachers, and to the development of a culture of collective responsibility for student outcomes. Teaching staff are highly committed to supporting students' learning and articulate valuing the opportunity to work in the academy environment.

**Academy leaders have established and are driving a strong improvement agenda.**

The principal indicates that the academy's improvement challenge is based on the moral imperative of unlocking every child's potential. Leaders have documented an Explicit Improvement Agenda (EIA). It identifies: 'the what' – a set of explicit targets to measure the success of realising the moral imperative; 'the why' – based on a premise that all students, teachers and leaders can learn and achieve success; and 'the how' – working together and focusing on priorities to nurture excellence and foster global citizenship. A one-page representation, the EIA is displayed prominently throughout the campus. Teachers are yet to consistently reference the six elements of the EIA – lift, stretch, maximise, qualify, quantify, and growth.

**Staff members express strong enjoyment and satisfaction derived from working at the academy.**

Staff variously acknowledge positive interaction and relationships with students, innovative curriculum, extensive resources, excellent facilities, generous Non-Contact Time (NCT) provisions, and strong collegiality within faculties as key factors in their appreciation for working at the academy. Most staff value and support the vision for the academy. Some staff articulate a desire for further opportunities for more meaningful and authentic staff empowerment, voice and agency.

**Teachers and academy leaders identify co-teaching as a key component of the academy's focus on collaborative practices.**

Many teachers are experimenting with a range of co-teaching models within their classes. Many demonstrate a desire to engage further with co-teaching and to develop a deeper understanding of different models of co-teaching. Academy leaders outline clear plans for the development of a whole-of-school approach to co-teaching, supported by additional Professional Development (PD) and the allocation of additional NCT to support the co-planning and reflection phases of co-teaching. Academy leaders identify the implementation



of these plans as an opportunity to reinvigorate the academy's focus on pedagogy, building on the strong focus on curriculum in recent years.

**The academy places a strong focus on Positive Education as an evidence-based, whole-of-school approach to developing and enhancing student wellbeing.**

Students from Year 7 to Year 11 have dedicated weekly Positive Education Program (PEP) lessons with their House Dean (HD). Many teachers express strong support for the value of Positive Education in supporting the wellbeing of students, particularly within a context of high academic expectations and workload for students. Academy leaders and teachers recognise that the use of Positive Education language and strategies across the academy is yet to be embedded. Many teachers express a desire to learn more about Positive Education and how it can be applied across the curriculum.

**Teachers articulate that significant attention has been directed to developing meaningful and successful programs of learning for junior secondary students.**

Teachers comment that this has occurred over the past three years. They acknowledge the premise that students learn best when their learning experiences have context and are connected to their lives. Leaders indicate that the first cohort of students is set to complete the MYP at the end of the current school year. Executive leaders reiterate the importance of valid, reliable and manageable assessment and reporting. Leaders and teachers are cognisant of the need to further review and refine the MYP.

**The academy has a developing array of signature practices designed to promote the de-privatisation of practice and the sharing of expertise and best practice within and across faculties.**

It has initiated Pockets of Practice (POPS) that provide staff with opportunities to share vignettes of practices, strategies, approaches, PD learnings and the sharing of expertise with colleagues. POPs are valued, and staff comment positively on the opportunity to hear from colleagues. Instructional rounds and learning walks are identified within the academy's Pedagogical Framework and Visible Learning Schedule as key non-evaluative mechanisms for observing specific instructional practices and student learning. Teachers indicate that these mechanisms are yet to be regularly and systematically enacted.

**The principal and other leaders utilise a range of systematic, formative and summative assessments to track and monitor student achievement and engagement to improve student learning outcomes.**

The academy uses this data to identify starting points for improvement, monitor progress over time, and identify improvement priorities for the future direction of the academy. Leaders additionally use data to quality assure school practices and programs, and to track student performance. Members of the leadership team demonstrate a depth of knowledge regarding the use of data and how to utilise it as a tool to stimulate conversations, influencing teachers to reflect on and adjust their teaching practices.





**An explicit whole-school expectation that differentiated teaching and learning is used across the academy to support the learning of every student is apparent.**

Leaders recognise the importance of classroom teachers understanding and addressing the needs of individual students in their day-to-day teaching. Teachers describe using a range of data and other sources of information to understand where students are at in their learning and to identify appropriate teaching strategies to meet their learning needs. They are dedicated to providing engaging learning opportunities and targeted support.

**The academy actively seeks ways to enhance student learning and wellbeing by partnering with other education and training institutions, businesses, community organisations and the broader community.**

These extensive partnerships offer support and provide access to resources, services, and expertise to enhance learning opportunities for students. The academy has a documented Academy Partnership Framework that espouses an intent to broaden horizons and improve outcomes for students in the areas of teaching and learning, STEM education, Future pathways, and Alumni. This framework identifies some of the key initiatives and partnerships developed. The academy works assiduously to ensure all students have a range of opportunities to improve student achievement and promote exposure to career possibilities.



## 2.2 Key improvement strategies

Collaboratively determine specific and precise priorities and actions to enhance understanding and ownership of the academy's improvement agenda.

Further develop a collegial culture that invites, values and responds authentically to student and teacher voice.

Co-develop a clearly defined and evidence-based co-teaching framework that outlines the philosophy, approach, models and expectations that will inform the intended expansion of co-teaching practices across the academy.

Collaboratively develop and implement a plan for the embedding of Positive Education language, principles and strategies across the academy, including clarification of the role of every teacher in the house system.

Continually refine and further embed the MYP.

Develop processes to systematically enact and monitor the consistent implementation of agreed high-yield strategies across the academy to enhance collective efficacy and empower expert teachers.