



Music Education

A Sound
Investment



A report commissioned by



PREPARED BY
Dr Anita Collins
Dr Rachael Dwyer
Mr Aden Date

Alberts is a 135-year-old family business that has played a vital role in the evolution of Australia's media and popular culture since the early days of sheet music and music publishing, through to the birth of commercial radio and television, and the founding of the Australian pop and rock music industry. Founded in 1885 by Jacques Albert, the company is now run by members of the fifth generation under the guidance of fourth-generation member Robert Albert. Alberts was a co-founder of the Australasian Performing Right Association (APRA) in 1926, introduced to protect the rights of writers, composers and publishers. The company is known for its long association with local musicians including AC/DC, The Easybeats, Stevie Wright, Harry Vanda and George Young; and more recent support of Megan Washington, Wally DeBacker and Josh Pyke. Alberts has always believed in the power of music to change lives. In 2012 members of the fifth generation established The Tony Foundation, which strives to improve the lives of young Australians through music.

Dr Anita Collins

Dr Collins is an award-winning educator, researcher and writer in the field of brain development and music learning. She is best known for her role as on-screen expert and campaign lead for the *Don't Stop the Music* documentary that aired on ABC TV in late 2018. She is internationally recognised for her unique work in translating the scientific research of neuroscientists and psychologists to parents, teachers and students. Dr Collins is an expert education advisor for professional orchestras, state, independent and Catholic school authorities, and Australian and international media production companies. She is also a research expert for universities, advocacy and not-for-profit organisations. A founder of the Bigger Better Brains education program, Dr Collins is a founding director of the Rewire Foundation.

Dr Rachael Dwyer

Dr Dwyer is an educator, researcher and advocate, who is focused on ensuring that all students have opportunities to participate in quality music and arts education as part of their schooling. She spent a number of years as a music specialist teacher in primary schools prior to commencing a career in teacher education. Dr Dwyer is co-editor of the innovative 2016 book *Narrative Research in Practice: Stories from the field* (Springer) and her doctoral work has been published as *Music teachers' values and beliefs* (Routledge). She sits on the editorial board for the Australian Journal of Music Education and is President of the Queensland Chapter of the Australian Society for Music Education.

Mr Aden Date

Mr Date is a social impact consultant who focuses on driving ambitious and innovative projects within the arts and cultural sector. He has worked with performing arts organisations, documentary filmmakers, family foundations, universities and Aboriginal-led organisations. Mr Date also acted as Campaign Manager for ABC TV's *Don't Stop the Music* and runs an improvised theatre company, Only the Human.

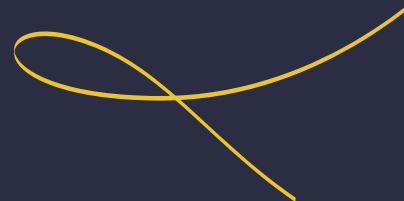


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Executive Summary



Background to the project

The problem: a large proportion of Australian primary school children have little or no access to music education.

Vision: all Australian primary school children need, and have the right to a quality, sequential and ongoing music education.

This report was commissioned by The Tony Foundation to inform their vision to use music to achieve improved life outcomes for young people. Within this vision, a key goal of The Tony Foundation is to ensure all Australian primary school students receive a quality, sequential and ongoing music education. This goal is founded on the belief that music is a core, yet often missing component in a quality education program. To date, The Tony Foundation has supported music programs in schools through the Australian Children's Music Foundation and ABC TV's three-part teleseries *Don't Stop the Music*, produced by Artemis Media; *Musica Viva* and *The Song Room*. Despite the number of fantastic initiatives and organisations such as these working to deliver quality music programs, and the extensive research and evidence of the benefits, the fact remains that a large proportion of Australian primary school children have little or no access to music education. Also, in a number of marginalised schools and communities, the existence of a music program is often heavily dependent on the availability of philanthropic funding.

Given the length of time since the last comprehensive review of music education in Australia (2005), The Tony Foundation determined to fund this research to understand the current state of play, to gather evidence, and to identify barriers in the current system which prevents it from achieving the desired outcomes. It is envisaged to use this research as the foundation for further work towards achieving greater access to music education for all Australian children.

Method of data gathering and analysis

Writing team

The writing team was led by neuromusical educator Dr Anita Collins, and included University of Sunshine Coast education expert Dr Rachael Dwyer, and social change consultant Mr Aden Date. Sustainability and social impact strategist Ms Emily Albert led the project for the Tony Foundation and supported the research team.

Research, data gathering and analysis

The research supporting this document was sourced from the latest education, neuroscience and psychology research. Data was gathered through the expertise of the project team and supplemented by 21 interviews with industry experts from across Australia. Their experience covered all levels (and sectors) of education, music education, music organisations, research and philanthropy. The analysis was provided by the project team with reference to their experience and feedback from the interviews.

The benefits of a quality, sequential and ongoing music education

Practical effects (physical development/practical skills)

Understanding space and time

Music learning is a tool to develop spatial awareness, which in turn assists with the development of logic processing.

Helping attitudes, behaviours and teamwork

Music learning fosters empathy on both an emotional and cognitive level. It also promotes prosocial behaviour and effective teamwork due to the "rich opportunity to nurture positive citizenship skills [through the music ensemble experience] that includes respect, equality, sharing, cohesion, teamwork, and, above all, the enhancement of listening as a major constituent of understanding and cooperation". (p58)⁵²

The benefits of a quality, sequential and ongoing music education (continued)

Cognitive effects (learning development)

Processing sound

Music learning is a tool to train the auditory processing system to function effectively. It is for this reason that many music education methodologies begin at the age of 1 and why music learning is seen as a complementary learning activity during K-2 when children are refining their language skills and learning how to read.

Assigning sound to symbols

Music learning supports the process from verbal language to reading, writing and understanding language. It is for this reason research has found that musically trained children perform better in standardised tests on language; acquire language including words, syntax and prosody more effectively and earlier; and utilise language more effectively.

Logic processing

Music learning is a tool to train the logic and sensory structures and functions of the brain to develop in a highly effective way. It is for this reason that there are strong correlations between academic attainment and music learning.

Memory

Music learning encourages the development of working memory, particularly auditory working memory. This development is thought to be one of the mechanisms that assists students in processing verbal information quickly and without the need for repetition, remembering multi-step processes and independently managing busy schedules. The development of effective working memory is thought to contribute to the effective creation, storage and retrieval of other types of memories.

Non-cognitive effects (human development)

Understanding of self

Music learning improves students' confidence in their sense of self and realistic sense of their capacities and abilities. A strong and well-defined sense of self will inform students' approach to learning and management of relationships.

Regulation of self

Music learning assists students to control their own emotional and behaviour responses while also understanding other student, teacher and parent responses. This promotes independence in learning and the ability to remain on task and work towards set goals.

Healthy development

Music learning promotes healthy development by better integrating the cognitive, emotional, social and physical development of every student.

Social cohesion

Music learning promotes social cohesion through the experience of physiological synchronicity, tolerance of diversity and desire to seek out and value novelty and difference.

Best practice in music education

The following factors are identified as core components of a quality music education. These factors have been shown to improve sound musical development and permanent cognitive enhancement. This can be seen through improved results in academic attainment, standardised testing, tertiary study, human development, and musical achievement.

1 Start early

A focus in high-quality music education in preschool will have profound effects on student development.

2 Recognise that all children are musical

Music education is as beneficial for human and cognitive development as it is for the training of expert musicians. Therefore, quality music learning is valuable for students to thrive in all subject areas.

3 Commit to quality music education

Both cognitive and musical development cannot occur without a commitment to quality programs, teachers and pedagogy.

4 Learn a complex musical instrument

Choosing a musical instrument that will provide both musical and cognitive development is important. Instruments such as complex strings, wind, brass and percussion take years to master and require consistent effort, but it is this effort that will result in positive cognitive development. Simpler instruments such as ukuleles, simple percussion and recorders are great starting or gateway instruments to the more complex instruments.

5 Learn music (classroom and/or instrument) over a long period of time (3-7 years)

To achieve cognitive, musical and cultural development outcomes, a music education needs to be ongoing, active, structured and sequential. One-off or short-term music experiences do not constitute a quality music education as they do not result in these outcomes on their own. However, they are an excellent complement to quality, ongoing music programs.

6 Maintain a high level of engagement (age appropriate level of 30 minutes to 7 hours per week during the academic year)

Music learning is a discipline and as such cognitive and musical development needs to happen over time.

7 Support high levels of teacher expertise

Formal qualification and professional development is imperative.

8 Utilise teaching pedagogy that is active, formal and structured

Including activities related to pitch, rhythm, singing, instrumental work, composition and improvisation, and reading notation.

Barriers to the provision of quality music education

The following factors and issues were identified by the project team as the key barriers to the provision of a quality music education to all Australian primary school children. They form the basis for the key insights and opportunities which follow.

1 Systemic inequity

Support of music education is varied and differs across and within educational systems.

2 Teacher education and training

There are currently insufficient numbers of trained and/or upskilled teachers of music in all systems.

3 School leader education and expectations

There is a lack of access to and understanding of cutting-edge research into music education and brain development among school principals and other leaders. A deep understanding of the nature of music education provision within their schools and the opportunities this could provide is also lacking.

4 Australian Curriculum

Resources to inform the structure and interpretation across states/territories and systems of the Australian Curriculum requirements and benefits of music education are not available.

5 NAPLAN and STEM

The ability for the general public to see and compare schools via NAPLAN results (published on the MySchool website) has forced literacy and numeracy into a privileged position over all other subject areas. The impact of a STEM curriculum focus has done the same for STEM subjects and content.

6 Professional collaboration

There are a number of professional organisations, both not-for-profits and representative bodies, which make active representations to policy makers and politicians and deliver professional development. Although there appears to be a willingness to collaborate in the sector, to date these organisations have worked largely in their own spheres.

7 The value of music education

There is not a shared understanding of the value or place and purpose of music in every Australian child's education.

Key insights and opportunities

The following insights and opportunities were identified by the project team and will form the basis for the recommendations and actions to follow this report.

Locating opportunities for systemic change in the states/territories and the schools

- Interventions to effect systems change should be designed on a state-by-state basis.
- Innovation exists where a principal can demonstrate leadership and mobilise human, financial and community resources to achieve an ambitious vision.

From “value” to “place and purpose”

- Discussions of value and the sense that music is undervalued have dominated the discourse within the sector and defined its advocacy strategy for decades.
- Recent research provides an opportunity for a new conversation about the place and purpose of music education within a holistic education framework.

Collaborating for impact

- There is a shared desire within the sector to collaborate and work together on advancing music education in Australia.
- The case of South Australia and the leadership group that created the Music Education Strategy demonstrates that models of collaboration can have a large, material impact on the music education system.

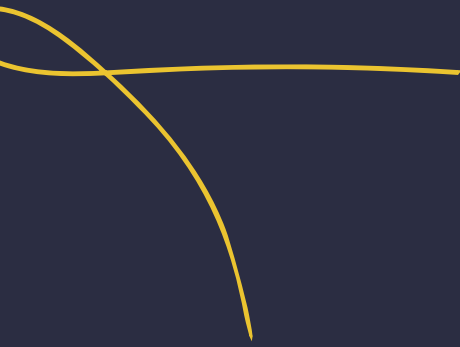
The crisis and innovation relationship

- A shared sense of crisis inspires and propels innovation, as seen in the South Australian Music Education Strategy.
- A challenge in music education is to uncouple the relationship between crisis and innovation, enabling the system to change when it can rather than when it has to.

The skills cliff

- Music education in Australia may be facing a new crisis as the availability of competent and confident music educators steadily diminishes.
- This area may benefit the most from cross-sector collaboration. If we can find an opportunity to collaborate today, we will be in better shape than if we wait for a crisis tomorrow.

Glossary of Terms



Music education: a broad range of activities that may include learning to play an instrument or sing, performing individually and in groups, clapping and moving, learning to read musical notation, composing music, listening and analysing music.

High-quality music education: the features of high-quality music education are:

- the learning is sequential and continuous, building in complexity over time, and offering opportunities for ongoing practice of skills;
- the learning is facilitated by an appropriately qualified music teacher.

Music experiences: one-off or infrequent experiences that may be largely passive (e.g. attending a concert). These are valuable enrichment activities but are not a substitute for high-quality music education.

Music learning and music training: for the purposes of this report, music learning is defined in the same way as music education but without the overlay of music education methodologies (as listed below). Music training has the same meaning as music learning but is the term favoured by the scientific research community.

Government system education (public): a system of schools funded by each state/territory. While there are statewide regulations and processes, school principals have some degree of autonomy to make decisions locally.

Catholic system education (private): schools that are funded by Catholic diocese and parent fees (with supplementary funding from the federal government). Catholic schools are governed by the Catholic Education Department which has federal, state and diocese-governing structures. While there are diocesan regulations and processes, school principals have some degree of autonomy to make decisions locally.

Independent system education (private): schools that are primarily funded by parent fees (with supplementary funding from the federal government). School principals make decisions in conjunction with school boards.

Neuromusical research: this is an interdisciplinary research term that encompasses the fields of neuroscience, psychology and therapy and uses music listening, music learning and music processing as a tool to better understand how the human brain develops, heals, changes and functions.

South Australian Music Education Strategy: the South Australian Music Education Strategy was launched in December 2018 and is a 10-year strategy to improve the provision of music education across the state government education system in South Australia.

Music: Count Us In: MCUI is the education program of Music Australia and consists of an annual song that up to 600,000 Australian school children sing on the same day every year. The song is accompanied by music education resources aimed at generalist teachers. MCUI is supported by the Australian Government up until the end of 2020, funded through the Department of Education and Training.

Instrumental music program: a program provided by either the state department of education or diocese education department that employs specialist instrumental teachers to provide individual and ensemble music education programs to their schools.

Generalist teacher with a music specialisation: a generalist classroom teacher who has undertaken 2-4 additional units in music education as part of their studies.

Specialist music teacher: a teacher who has completed substantial tertiary study in music (e.g. a bachelor's degree), and education units that are music specific.

In-service teacher: in-service teacher education provides learning opportunities for practising teachers.

Pre-service teacher: pre-service teacher education is the education and training provided to student teachers before they have undertaken any teaching.

Australian Institute for Teaching and School Leadership (AITSL): provides national leadership for the Commonwealth, state and territory governments in promoting excellence in the profession of teaching and school leadership.

Australian Professional Standards for Teachers (APST): describes the knowledge, skills and understanding expected of competent and effective teachers. Accreditation is the structure through which teachers are recognised as meeting these standards.

Australian Curriculum, Assessment and Reporting Authority (ACARA): the independent statutory body that provides advice on, and delivery of, national curriculum, assessment and reporting for all Australian education ministers. It does this through development and ongoing refinement of the Australian Curriculum, national assessment including NAPLAN, and reporting on schooling in Australia.

NAPLAN: the National Assessment Program – Literacy and Numeracy is a series of tests focused on basic skills that are administered annually to Australian students. These standardised tests assess students' reading, writing, language (spelling, grammar and punctuation) and numeracy and are conducted for all Australian students in grades 3, 5, 7 and 9.

Established music learning methodologies (heavily used in early childhood and primary education)

- The **Kodály** approach is a highly sequential music learning method using scaffolding techniques such as rhythm syllables, rhythm and movement, sequences and notation, moveable do solfège (pitch accuracy system), and melodic sequences. It is heavily focused on singing, classroom instruments (xylophone, handheld percussion) and hand signs. In Australia, the Kodály approach is predominantly used in primary years and is considered the most extensive methodology when taught by a qualified expert. The Kodály approach is used extensively in Queensland public and private education systems.
- The **Suzuki** approach is an aural-based approach that teaches music to children aged between 3-8 years primarily through listening and copying musical phrases on a violin or piano. The method aims to create an environment for learning music which parallels the linguistic environment of acquiring a native language. In Australia, the Suzuki approach is predominantly used in early primary years group instrumental learning and moves to music notation reading after the first year.
- The **Orff Schulwerk**, or simply the Orff Approach, is a developmental approach used in music education. It combines music, movement, drama, and speech into lessons that are similar to a child's world of play. In Australia, the Orff approach is predominantly used in early childhood education.

Two yellow lines, one straight and one curved, intersecting to form a shape reminiscent of a musical note or a stylized 'X'.

Music Education in Australia



Introduction

Across Australia, there is a wide variation in the provision and quality of music education. It is somewhat difficult to provide a definitive account of the current or historical landscape, partly due to the sporadic national and state reporting and data collection, as well as limited nationwide research in the academic field. With these issues in mind, this report looks to provide an overview of the historical and current context of music education in Australia. This contextual overview is by no means exhaustive and is written for readers with less experience in, or understanding of, music education and broader education fields.

The 1970s and 1980s saw enormous growth in education research generally, and an increase in research, philosophy and theory specifically related to the value of learning music and the artsⁱ. This work identified a need for an increase in the value and status of music education, providing a foundation on which to build an argument for greater time and resources to be invested in music education. However, the research that followed in the 1990s^{1,2,3} indicated that, by and large, music was still taught inconsistently and was not considered a priority. A Senate inquiry in 1995 confirmed earlier findings that rigorous curricula needed to be developed and their implementation monitored, and that teachers needed to have appropriate levels of musical expertise.

The National Review of Music Education in 2005⁴ reached largely the same conclusions. This review recommended the following priorities for the improvement of music education: (a) access; (b) participation and engagement for all students; (c) pre-service and in-service teacher training; (d) curriculum support services; (e) partnerships and networking; (f) leadership and resources; (g) accountability; and (h) improving the status of music education. It reported that across the sample schools, which were from all educational sectors, 66% of students received music education⁵. The review also highlighted differences of quality and access to music education in schools across Australia, varying between states/territories, between government and non-government schools, between primary and secondary schools, and between metropolitan and regional/rural/remote schools. Most importantly, the considerable inequality of access to music education between state and independent schools was identified as a crisis⁶.

This 2005 review was significant in scale, with close to 6000 submissions, and a resultant 280-page report. Its recommendations were supported by the Howard government, but a change in Education Minister halted progress. Funding of \$500,000⁷ was not sufficient to make substantial progress towards the ambitious undertakings laid out in the recommendations.

Since the 2005 review, little appears to have changed, and the economic rationalist agendaⁱⁱ has continued to shape the landscape of education, and importantly, of teacher education. The creation of the Australian Institute

for Teaching and School Leadership (AITSL) and the Australian Professional Standards for Teachers (APST)⁸ has placed significant limitations on what is included in teacher education programs, leaving little room for anything beyond the mandated requirements. The 2005 review recommendation that primary generalist pre-service teachers receive more music education as part of their initial teacher education has not been taken up. In fact, the impact of increased regulation by AITSL and state-based teacher registration bodies has further reduced the time that is available for music in teacher preparation programs. In addition, the ability for primary pre-service teachers to specialise in music has virtually disappearedⁱⁱⁱ.

The same tendencies towards economic rationalism have shaped the school curriculum, particularly through the introduction of NAPLAN in 2008, and the Australian Curriculum which commenced development in 2009. While there is no debate that literacy and numeracy capacities are crucial for all Australian children, the introduction of NAPLAN, with the associated high stakes and very public consequences (it became the key means to compare schools and school performance) has relegated music education to a fringe subject⁹. This is despite the introduction of the Australian Curriculum: The Arts, which should have established a place for music within the curriculum. However, it is arguable that the grouping of music with four other arts disciplines has inevitably reduced the amount of time, value and expertise put towards quality music education for most children in Australia. As the implementation of the Australian Curriculum progresses, the same issues identified in the 2005 review (and previously) appear again - not enough teachers with appropriate levels of music expertise; the time allocated is insufficient to teach the music curriculum well; and not enough attention being paid by systems and school leaders as to how these issues might be addressed. Lastly, the data on what, how, how much and by whom music education is delivered in schools is inconsistent, so it is difficult to accurately assess the scale of the problem and develop appropriate solutions.

This report focuses on the primary school system in alignment with the evidence that this is where music education has the greatest developmental impacts. This decision was based on feedback from stakeholder interviews and the significant research base that points to the importance of high-quality music education in the primary years. Furthermore, it is much harder to offer a high-quality secondary music education when the primary-level offering is of varied quality. As such, we feel that a focus on the primary system provides the greatest potential for impact.

ⁱ See the substantial work of Philip Alperson, Elliott Eisner, Maxine Greene, Howard Gardner and Bennett Reimer.

ⁱⁱ Economic rationalism: the theory that efficiency and productivity should be the primary measures of economic success. In education, this results in a focus on things that are easily implemented and measured.

ⁱⁱⁱ Current exceptions are the Bachelor of Education Primary (Music or Arts specialisation), Bachelor of Music Education at University of Sydney & Bachelor of Primary Education (Creative Arts) at University of Canberra.

Research on the Benefits of Music Education



Introduction to the field

For over a century, formal research has been conducted into the nature and impact of music education for children and adults. As an art form, music is exclusive to humans and there is now a large body of research into how music education plays an important and unique role in human and societal development¹⁰. Prior to the 1990s, much of the research was based in the social sciences (i.e. education, health, and behavioural psychology) with numerous large longitudinal studies highlighting the impact of music education on child development. With the advent of new technologies (fMRI, EEG, PET) the impacts of music education were re-examined and many of the findings prior to the 1990s were both validated and expanded¹¹. As we approach 30 years since the commencement of neuroscientific research into the impact of music education, there is a substantial and compelling research base to view music education as a tool to support cognitive and learning development for every child¹².

In many ways, this field of neuroscientific research was building on the social science research. While the social science research was examining behavioural and educational changes, the neuroscience research was using music and music education as a tool to understand the human brain. Both fields use very different research instruments, procedures, protocols, questions and desired outcomes. This leads to a difficulty in comparing research findings across different studies.

While we cannot compare all research findings on the same playing field, there are now enough replicated and validated studies across the research disciplines to come to several well-supported conclusions on the impacts of music education on learning. What the field of neuroscientific, or neuromusical, research can also provide is a greater understanding of both the impact music education has on child development and how and why that development occurs.

It is recommended that the following methodological issues are considered when reading this report:

- **Correlation does not equal causation** – due to the varied nature of the focus of the research studies, methods they use, disciplines they stem from, age and nature of the participant groups and the nature of the interventions or experiments, correlation results are the most common findings. However, in some areas of the research into the impact of music education, the number of significant correlation findings is leading to the view that causation exists in specific areas.

- **Not all music education is the same** – the recognised term for music education in the literature is music training. This term can refer to an incredibly broad range of musical activities, such as clapping rhythms, learning to play a violin or singing in a choir. The nature of the type, length, engagement, teacher expertise, starting age and pedagogy all have a significant impact on the benefits music education can provide to children. For the purposes of this report ‘music learning’ will be used as a broad term to refer to music education (as per methodologies such as the Kodály, Suzuki and Orff approaches^{iv}) and music training (as per the interventions and experiments used in neuromusical research studies).
- **The term musician was not initially consistent** – a common study design utilised in the neuromusical field is a comparison model between a group of musicians and non-musicians. Earlier research studies used self-reporting mechanisms to create these groups and as a result it was common to see a musician group with wide age ranges (i.e. 5-15 years) and enormously different musical experiences (i.e. 30-minute group drumming lessons per week versus 5-8 hours of private practise on a piano per week). This was one of the reasons that so many correlation findings occurred during this period of research. However, in later research studies the variables related to music learning were strictly controlled, as well as other factors such as IQ, socio-economic status, and parental education. This has resulted in research findings with statistically significant effect sizes, comparable neurological and behavioural baselines and randomised, longitudinal (3-5 year) studies yielding replicable and validated findings.

Research findings

The benefits have been divided into three areas: (1) cognitive effects as they relate to how children learn; (2) practical effects which include physical development and how that impacts on learning; and, (3) non-cognitive developments as they relate to emotional, social and wellbeing development. Each section is divided into sub-sections which highlight the specific areas of benefit.

^{iv} See Glossary of Terms for descriptions

Cognitive effects (learning development)

Music learning is a tool to train the auditory processing system to function effectively. It is for this reason that many music education methodologies begin at the age of 1 and why music learning is seen as a complementary learning activity during K-2 when children are refining their language skills and learning how to read²⁵.

Music learning supports the process from verbal language to reading, writing and understanding language. It is for this reason research has found that musically trained children perform better in standardised tests on language^{32, 33}; acquire language³⁴ including words, syntax and prosody more effectively and earlier; and, utilise language more effectively³⁵.

Processing sound is now understood to be one of the most important areas of human development¹³. Our auditory processing network is the largest information gathering system¹⁴. It is the only network that is fully functional at birth¹⁵ when children make sense of the world primarily through their ears¹⁶, not through their eyes. Language development is directly related to the ability to separate speech from all other noise and to consequently separate the elements of speech so that children can learn how to speak and use language¹⁷.

We now know that at birth, the human brain processes all sound as music, including language, and over the first 5 years of life develops the language centre of the brain through the music processing network¹⁸. This overlapping network is why music learning and language development have a causal relationship¹⁹. This relationship is the foundation upon which literacy skills are built²⁰. Effective sound processing has been found to be one of the fundamental issues with delayed language acquisition and failure to meet literacy standards in children from disadvantaged backgrounds²¹. The inability to process sound information effectively has also been found to be a significant issue with children diagnosed with dyslexia²², ADHD²³ and autism²⁴ and atypical auditory processing testing is currently being explored as a marker to identify these conditions at, or even before, birth.

Assigning sound to symbols builds on the foundations of well-developed auditory processing skills²⁶. Reading music and reading language are fundamentally based on the same cognitive function, known in literacy literature as the phonological loop²⁷. This is the process where the student sees the symbol (letter or music note), hears the “brain recording” they have in their head, makes the sound with their body, hears the sound they have made and checks it with their “brain recording” and either reinforces or amends the “brain recording”²⁸.

In terms of cognitive load, it has been found that the music symbol to sound process on a musical instrument requires more cognitive energy than the language symbol to sound process²⁹. This is believed to be because making a note on a musical instrument requires far greater activation of the motor cortices. Consequently, when students transfer the phonological loop to reading, it uses less cognitive energy and feels easier to do³⁰. As well as music learning being found to improve auditory processing, the requirements for students to maintain their attention, make logical sense of multisensory information and control their impulses, it helps the development of executive function skills which assist with logic-based aspects of literacy such as comprehension³¹.

Music learning is a tool to train the logic and sensory structures and functions of the brain to develop in a highly effective way. It is for this reason that there are strong correlations between academic attainment and music learning⁴⁰.

Music learning encourages the development of working memory, particularly auditory working memory⁴⁵. This development is thought to be one of the mechanisms that assists students in processing verbal information quickly and without the need for repetition, remembering multi-step processes and independently managing busy schedules. The development of effective working memory is thought to contribute to the effective creation, storage and retrieval of other types of memories⁴⁶.

Logic processing is a cognitive activity we often think is separate from other processes. However, the field of neuromusical research has shown that building capacity for logical thought is developed on the foundations of highly effective sensory processing. The study of musically trained children has shown that learning music, particularly through an age-appropriate musical instrument, involves consistently high levels of cognitive processing³⁶.

To learn to play a musical instrument requires the auditory, motor and visual cortices to be synchronised and working effectively while the reward, sensory and cognitive networks are simultaneously processing information at the same time as referencing the perception, cognition and emotional networks³⁷. No other human activity has been found to be as cognitively intensive while integrating our logic and sensory processing networks³⁸ and therefore helps a student's brain to form highly effective and flexible cognitive pathways which assist learning³⁹.

Memory is fundamental to learning and is one of the most complex fields in neuroscientific research because memories are made, stored and retrieved using complex and personalised brain systems⁴¹. Musically trained people have been found to have highly developed memory systems⁴² and thus have been rigorously studied to help us understand how memory works and how to improve it. In particular, musically trained children have been found to have a highly developed working memory system⁴³, which is responsible for temporarily holding information available for processing. Working memory is important for reasoning, the guidance of decision-making, behaviour and therefore essential for day-to-day learning⁴⁴.

Practical effects (physical development/practical skills)

Music learning is a tool to develop spatial awareness, which in turn assists with the development of logic processing.

Understanding space and time is known as spatial awareness or spatial skills. These skills were found to be highly developed in musically trained adults and children⁴⁷. It was originally thought that the belief that musicians were also highly skilled at mathematics was mediated by advanced skills in spatial reasoning⁴⁸. Interestingly, when the two skills were investigated, this connection could not be confirmed. However, musically trained children have been found to have high levels of spatial awareness, both physically and cognitively, and it is believed that this assists with their development of effective logic processing which they then apply to comprehension and some forms of mathematical reasoning (i.e. geometry).

Music learning fosters empathy on both an emotional and cognitive level. It also promotes prosocial behaviour and effective teamwork due to the “rich opportunity to nurture positive citizenship skills [through the music ensemble experience] that includes respect, equality, sharing, cohesion, teamwork, and, above all, the enhancement of listening as a major constituent of understanding and cooperation”. (p.58)⁵²

Non-cognitive effects (human development)

Music learning improves students’ confidence in their sense of self and realistic sense of their capacities and abilities. A strong and well-defined sense of self will inform students’ approach to learning and management of relationships.

Music learning assists students to control their own emotional and behaviour responses while also understanding other student, teacher and parent responses. This promotes independence in learning and the ability to remain on task and work towards set goals.

Music learning promotes healthy development by better integrating the cognitive, emotional, social and physical development of every student⁶².

Helping attitudes, behaviours and teamwork are a significant focus throughout schooling and are embodied in the Early Years Learning Framework and the Australian Curriculum. Musically trained children have been found to exhibit greater connection, both physiologically and behaviourally, to helping other students, acting with compassion towards others and feeling empathy⁴⁹. It is believed that music learning is a tool through which we initially bond as humans (through parent and child singing and vocalisations⁵⁰) as well as activating our emotional network as part of a cognitive process⁵¹.

Understanding of self is a lifelong developmental process that is shaped significantly by the educational experience in school. Self-concept, self-esteem and self-belief are impacted by numerous factors from genetic predisposition to life and family circumstances to individual learning biographies⁵³. A significant positive association has been found between music lessons and academic concept⁵⁴ as well as prevented self-esteem decline in children as they progressed through primary school⁵⁵.

Regulation of self is also known as inhibitory control or impulse control. It is closely related to the ability to maintain attention, focus on a task and develop positive relationships with individuals, and work effectively in a team. Inhibitory control is learned through role modelling and is influenced by genetic predisposition and individual personality⁵⁶. Musically trained children have been found to have high levels of inhibitory control⁵⁷ and this is believed to be one of the strongest executive functions to develop as a result of musical learning⁵⁸. Music learning has also been used as an intervention tool to assist students who struggle with inhibitory control (e.g. those with ADD and ADHD)⁵⁹.

Healthy development requires many factors during a student’s school life. Students who experience music learning, either as a short (12 weeks) intervention or in an ongoing way (2-6 years learning an instrument) have been found to have more robust immune systems, experience less significant periods of depression or mental illness and report high levels of academic and self-satisfaction⁶⁰. This aspect of music learning has been particularly impactful when working with students from disadvantaged backgrounds, students who have experienced trauma and students who have experienced academic delay due to illness⁶¹.

Music learning promotes social cohesion through the experience of physiological synchronicity, tolerance of diversity and desire to seek out and value novelty and difference.

Social cohesion is a vital element of an effective and nurturing school culture and environment. Within a school, we use music to enhance social and assembly occasions and to improve student mood and wellbeing.⁶³ Music learning is both an extension of that use and entirely removed from it. Music learning is a discipline that relies on consistent and conscientious application by every individual child for the greater good of the group - in music's case, an ensemble. A musical performance is both the culmination and expression of highly developed social cohesion⁶⁴. Neuromusical research has shown that this social cohesion is physiological, meaning musicians' heart beats, body temperature and galvanic skin response readings will synchronise when they are playing music⁶⁵. Research has also shown that musically trained students have higher levels of tolerance for diversity and seek out novelty and difference which also promotes social cohesion⁶⁶.

Summary of research findings

Based on the research cited above and the larger fields of education, neuroscience, psychology, behavioural sciences, mathematics, and linguistics research, the relationships that can be drawn with the experience of active music learning are as outlined in the table below (adapted and updated from Hallam's 2015 literature review⁶⁷). Cognitive developments are the processes and skills that are aligned with brain development in the area of thinking and learning skills. Human developments are the processes and skills that are aligned with emotional and behavioural skills. These processes and skills are of course interlinked and impact on each other. For example, increased academic confidence has been found to directly improve academic attainment.

Benefits related to cognitive development and music learning	Benefits related to human development and music learning
<ul style="list-style-type: none"> • Aural perception, which in turn supports the development of language and literacy skills • Enhanced verbal and working memory skills • Spatial reasoning which contributes to some elements of mathematics and measure of intelligence • Executive function which is implicated in intelligence, academic learning and social skills • Self-regulation which is implicated in all forms of higher order learning requiring a disciplined, consistent approach • Academic attainment 	<ul style="list-style-type: none"> • Motivation and re-engagement in education • Social cohesion and inclusion • Prosocial behaviour and teamwork • Empathy • Psychological wellbeing • Self-belief, academic confidence and self-esteem • Healthy development

A yellow line graphic consisting of a straight line segment that curves downwards and loops back to the left, ending in a small circle.

Best Practice in Music Education

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Opportunities for music learning exist from birth until well into later life. Music education can begin as early as 6 months through private organisations and institutions and continues into early childhood education. It plays a significant role in early childhood pedagogy and practice in preschools through to Year 2 and the Australian Curriculum has an expectation that every child receives music education between the years of K-6.

Quality music education, however, has in many ways become a user-pays system. It is an expectation when a student attends a Catholic or independent school that they will experience ongoing and high-quality music education. Indeed, these schools use the music program as a point of difference and marketing tool in many cases. Students at public schools will have music education experiences and these experiences, rather than high-quality music education, are seen to address the requirements of the Australian Curriculum. If they wish to engage in learning a musical instrument, then their parents will need to pay for that additional activity. Numerous private music education providers and not-for-profits, such as Musica Viva, Musical Futures and The Song Room, bridge the gap for schools. However, the majority of these are quality music experiences and not ongoing music education.

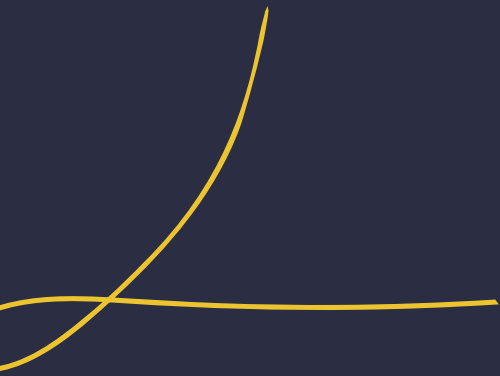
Often in public primary schools, in order to fit music education alongside the many other Australian Curriculum requirements, children will experience one art form every term. Across a school year this may look like music in term 1, drama in term 2, dance in term 3 etc. This experience will either be delivered by the generalist class teacher who will have received between 4-15 hours of music education training in their teaching degree⁶⁸ (keeping in mind they were likely to have had no music training themselves prior to this teacher training) or by a specialist music teacher. These decisions are often based on their own music education experience and on research that is over 20 years old⁶⁹.

The biggest shift in the place and purpose of music education has come from the explosion of neuroscientific research into how music learning impacts positively on brain development. As outlined in the previous research section of this report, causal and strong correlation research findings indicate that music learning improves language, literacy, reading, comprehension, aural memory, spatial and self-regulation skills, psychological wellbeing and health. In addition, students who engage in music learning perform better academically, contribute to their communities, form positive relationships and continue their education into university. They also earn more through their lives⁷⁰ and age better, physically and cognitively.

Countries such as Finland and Canada that continue to perform well or improve their PISA^{vi} scores⁷¹ have recognised the benefits of music education for their students. This is specifically in the areas of aural perception, which leads to improved language and literacy outcomes and social development that improve broad educational outcomes. Countries such as the United Kingdom and the United States of America have reduced their music education provision dramatically over the last 20 years and this may be one of the factors connected with their declining PISA results.

Australia continues to focus on improving literacy through more time and training on 'pure' literacy programs, which may not be yielding the desired results. Similarly, human development programs such as positive psychology can have limited impact if they are not embedded effectively into every part of the school culture. However, individual Australian schools, with well informed and supportive principals, who have made the decision to implement equitable, quality and ongoing music education programs, have seen improvements across numerous educational measures⁷².

^{vi} The Programme for International Student Assessment (PISA) is a worldwide study by the Organisation for Economic Co-operation and Development to evaluate educational systems by measuring 15-year-old school pupils' scholastic performance on mathematics, science, and reading.



National and International Perspectives



Bearing in mind the aforementioned lack of a national picture of music education and the observable differences between and across states, territories and systems, below is a comparison of Australian and international approaches to music education. As there is no nationally consistent approach to music education, each state is considered separately. For international benchmarking, Finland and Canada have been chosen for their high, or significantly improving, scores in standardised tests and higher proportion of music professionals and/or community music participation in adulthood. This table examines the provision for all students in music education and may not always outline the opportunity to study music as an elective subject across most Australian school systems beyond Year 8.

Area: curriculum delivery

Australia	International
<p>Public schools: most schools adhere to the direct interpretation of the Australian Curriculum, providing music education on an equal basis to all other arts from K-8. The common result is one hour, once a week for one term in each school year. It is widely recognised that it is impossible to reach the achievements standards in the time recommended^{vi} by the Australian Curriculum.</p> <p>Catholic and independent schools: most schools have a sequential, developmentally-appropriate music program including classroom (Kodály or Orff) program and instrumental learning from preschool or kindergarten onwards (strings/percussion in pre-school/K-2 and wind/brass from Year 3 onwards). This will usually involve one hour per week all year of classroom learning as well as 30-120 minutes per week all year using an instrumental program.</p>	<p>Finland: students have compulsory music education from the age of 6-12 for 2-4 hours per week. This educational experience builds on government-subsidised day care and preschool where music education is taught for 30-60 minutes each day⁷³.</p> <p>Canada: students experience music through an arts curriculum which is similar to the Australian Curriculum. The curriculum has a focus on music literacy and active music learning and is predominantly delivered in a class music format.</p>

^{vi} It should be noted that the time allocation recommended for music education differs across states/territories curriculums and can then be altered further by individual school leaders.

Australia

Early childhood: most Australian children are receiving music via a generalist early childhood teacher. In K-2 this is often the responsibility of their classroom teacher. Many schools take the opportunity to pay for externally-provided music experience programs each year to satisfy their music education curriculum requirements. A smaller number of schools employ an early childhood music specialist teacher, who has a generalist education degree and has taken on additional professional development to specialise in music. There are no mandated standards to be met for this qualification so low levels of professional development are often acceptable to principals.

Primary school: the current requirement for generalist primary teachers is that they will be able to deliver the music education as outlined in the Australian Curriculum up to Year 6. They are also required to do this for visual arts, dance, drama and media arts. There is as little as four hours' training across their entire teacher education degree in each art form and there is no requirement to continue professional development in the Arts for in-service teachers. The result is that many generalist teachers lack the confidence and competency to teach music effectively⁷⁴. Music education specialists are employed in some public primary schools and many in other education systems. Due to the lack of specialist primary education degrees, these teachers are often trained in high school education.

Queensland: due to the availability of ongoing, accredited professional development in recognised approaches to music learning (most notably Kodály), the number and level of music educational specialists is far higher in Queensland. It is reasonable to assume that this has been a factor in the observable high levels of musical achievement (as can be seen in the annual Creative Generation event) which has in turn maintained the higher value and perception placed on music education in schools.

International

Finland: teacher education is a widely accepted critical factor in Finland's success in education. Entry into teacher education requires very high personal education skills. Teachers have high rates of pay and are highly regarded in the community. In specialist areas such as music education the qualification requirements are even higher and thus music educators across early childhood to tertiary education have a high personal and professional level of training⁷⁵.

Canada: music is predominantly taught by specialist trained music teachers. The level of music studied at university level is very high - double degrees with music are very common. This allows for an ongoing workforce supply for the music performance, composition, research and education industries. Canada⁷⁶ is also arguably the home of neuroscience and psychology research into music learning.

Area: equity and resourcing

Australia	International
<p>There is a significant issue with the equitable delivery of music education to all Australian children. In the current user-pays type system for anything beyond the very basic curriculum, children from disadvantaged schools are far less likely to receive music education that is delivered by well-trained music teachers or have access to musical instruments, music education teaching resources and music experiences provided by external providers.^{77, 78, 79, 80}</p> <p>Resourcing is also a significant issue, mostly in terms of instruments. Numerous external education providers have created high-quality digital music education resources that are free to schools. However, sets of instruments for each school are in short supply as well as the required budget allocation to maintain these instruments. This type of resourcing is often ad hoc and supported as one-off contributions by philanthropists. This type of resourcing also creates issues of storage space, security and specialised instrumental teachers.</p>	<p>Finland: high-quality music education for all Finnish children is an educational and cultural expectation. As such, the resourcing of music programs has been undertaken by the government and most schools have large numbers of functioning instruments, materials and appropriate spaces for all children to access and musical role models they can look up to.</p> <p>Canada: a similar educational and cultural expectation exists for Canada. The provision of resources is less effective, in part due to the geography and variability in philanthropic support that often goes towards the purchase of instruments. However, resourcing levels are still comparatively very high.</p>

Area: perception/value

Australia	International
<p>The value of music education for every child is still unclear across principals, parents, teachers, students and the general public. The National Review of Music Education found that 40% of respondents believed music education was not valued by the community⁸¹. If music is not highly valued this can translate to a lack of appropriately trained staff, declining time allocated to music education in curricula, lack of appropriate resourcing and designated music education and arts time being usurped for other school events.</p> <p>The issues identified in the National Review of Music Education have been repeated in a number of other reviews since 2005, including the Victorian Government Inquiry in 2013 which found that "despite several comprehensive reports on music education at both the state and national level, there have been few substantive improvements to the quality and provision of school music education in Victoria over the past two decades".⁸²</p>	<p>Finland: music education is a core subject in Finland's education system and is valued across parents, educators and policy makers. The level of music education is very high amongst the general population⁸³ and music education is well resourced in all schools.</p> <p>Canada: music education is considered very important for every child and 94%⁸⁴ of sustainable and comprehensive music programs are led by music education specialists. The 2010 report highlighted that "the strongest music education programs have appropriate funding, student interest and time, a strong specialist teacher, appropriate instruments and space, as well as a supportive principal and parents". (p.2)⁷⁶</p>

Summary of Best Practice



Commonalities

The commonalities across music education systems that result in both sound musical development and permanent cognitive enhancement (as reflected in such measures as academic attainment, standardised testing, tertiary study, human development, and elite levels of musical achievement) are as follows:

Key message	Description
Start early	A focus on high-quality music education in preschool will have profound effects on student development.
Recognise that all children are musical	Music education is as beneficial for human and cognitive development as it is for the training of expert musicians. Therefore, quality music learning is vital for students to thrive in all subject areas.
Commit to a quality music education for every child	Both cognitive and musical development cannot occur without a commitment to quality programs, teachers and pedagogy.
Learn a complex musical instrument	Simply learning any instrument will not result in either cognitive or musical development. Ukuleles, simple percussion and recorders are great starting or gateway instruments to the more complex strings, brass and percussion. This learning is easiest and arguably most beneficial if it is commenced before the age of 7 years.
Learn music (classroom and/or instrument) over a long period of time (3-7 years)	To achieve cognitive, musical and cultural development outcomes, a music education needs to be ongoing, active, structured and sequential. One-off or short-term music experiences do not constitute a quality music education as they do not on their own result in these outcomes. They are, however, an excellent complement to quality, ongoing music programs.
Maintain high levels of engagement (age appropriate level of 30 minutes to 7 hours per week during the academic year)	Music learning is a discipline and as such cognitive and musical development needs to happen over time.
Support high levels of teacher expertise	Formal qualification and professional development is imperative and needs to be supported and encouraged.
Require teaching pedagogy that is active, formal and structured	Activities should include pitch, rhythm, singing, instrumental work, composition and improvisation, reading notation, group work and performance.



Situational Analysis



Context and methodology

As discussed previously, comprehensive data is not available as to the extent and quality of music education delivery in Australia. There have been no major nationwide studies conducted since the National Review of Music Education in 2005. There is even less data available on how music education is promoted, funded, and delivered. The purpose of the situational analysis was to supplement and contemporise what little public research is available about the state of music education in Australia.

The research team identified two to three individuals from each state or territory with knowledge particular to that state or territory and five individuals from nationwide music education providers to participate in short, semi-structured interviews. Interviewees came from schools, universities, government, professional associations, and non-profit organisations. The interviewees were selected based on having insight into some aspect of the music education system in their state, region or sector. Twenty-one interviews were conducted over a period of two weeks.

Stakeholder overview

The following page contains an overview of the many stakeholders involved in the provision of music education in Australia. It is included to provide context for the national and state-by-state overviews as well as the situational analysis. It does not include all stakeholders in some sections as these are too numerous to list for the purposes of this report.

How to read this section

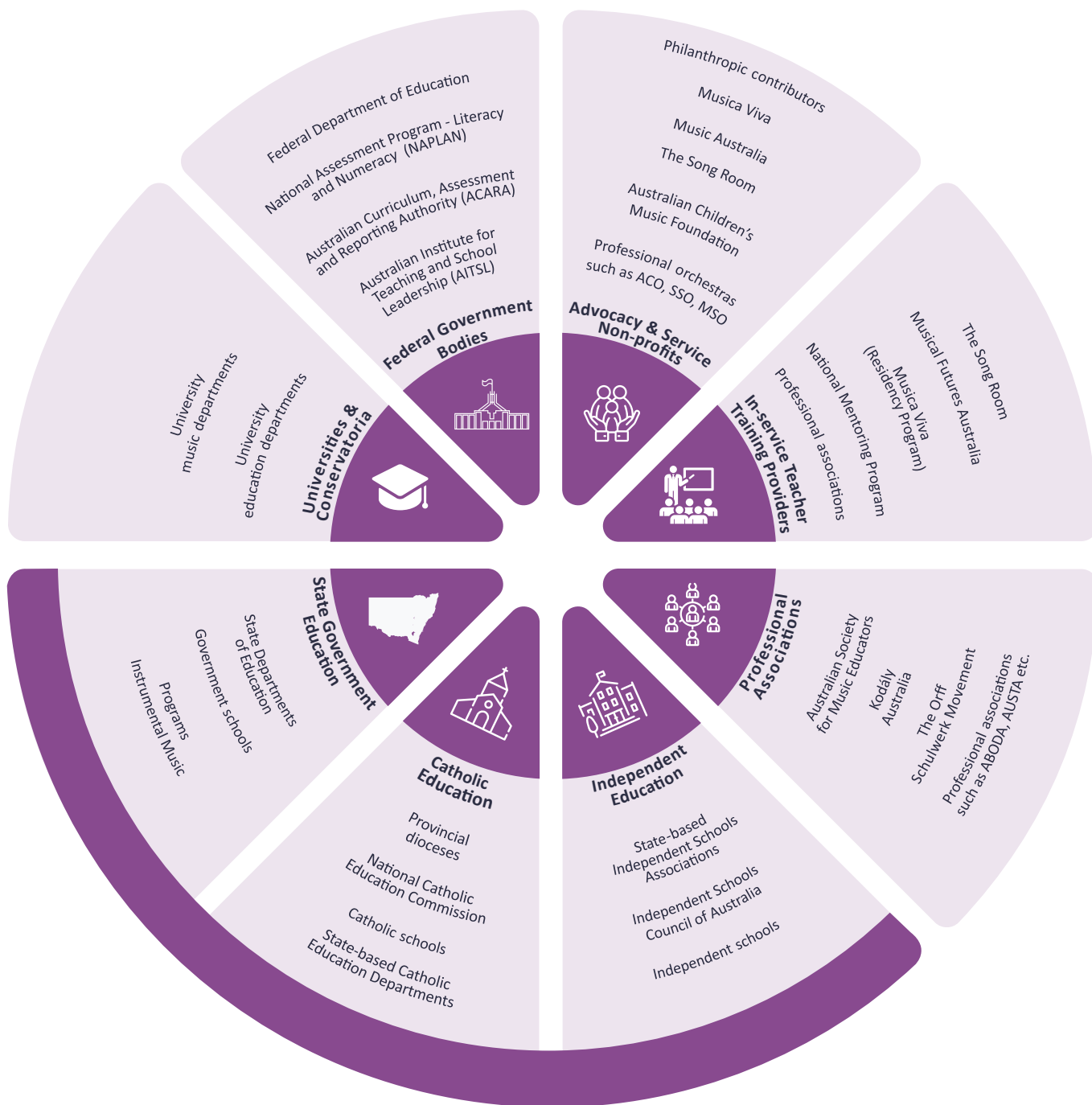
The national overview section covers what is happening to promote and deliver music education within and outside the various school systems. The school systems examined include the government system, the independent system, and the Catholic system which together educate most Australian children. This section also looks at how regional and remote schools fare in comparison to metropolitan schools. The national section looks at the university sector and the external providers within the sector which together provide a variety of functions within the music education system. Finally, the **state-by-state overview** provides insight as to how each state and territory differs from the national picture.

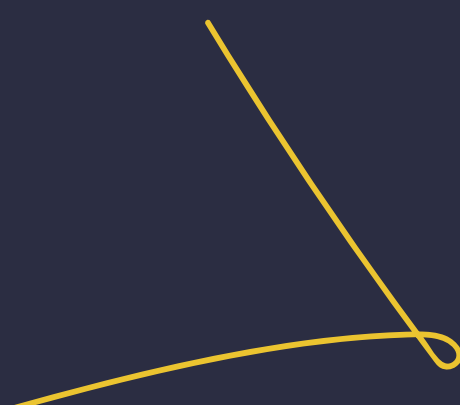
The situational analysis concentrates on the primary school system, which is the focus of this report.

Stakeholder Overview



This report has referenced multiple stakeholders and their influence on the broader provision of music education in the Australian context. As a point of reference, the below diagram outlines the various stakeholder entities and key positions or influencing bodies. This is by no means a comprehensive list but is intended to give an overview of the stakeholders.





National Overview



School systems

Government system: interviewees described public school music education offerings as “patchy,” and “ad hoc,” with significant variance in the quality and extent of what is being offered. This observation was made of every Australian state and territory except Queensland. Interviewees supported the contention that this is largely attributable to the economic rationalisation of education in Australia and the prioritisation of literacy and numeracy under NAPLAN. Although the Australian Curriculum has recommendations of indicative time that should be allocated to each subject area, there have been no federal mandates for time dedicated to individual learning areas. States/territories have also delegated significant budgetary and decision-making requirements to individual principals. As a result, the level of provision of music education in any given school depends primarily on the principal.

Further, when the provision of music education is driven by the requirement to implement the Australian Curriculum, the focus may be on compliance rather than quality. Several interviewees said that many schools just “check the box,” and do so through a variety of approaches. Common examples include classroom music delivered by generalist teachers who lack the confidence and competence necessary to teach music; intermittent music experiences provided by external non-profit providers; and selective co-curricular music education^{viii}. The approach taken often reflects whatever resources happen to be on hand. One interviewee reported a case where a teacher had students dancing and singing along to videos on YouTube to “check the box,” for both music and dance.

Within the government system, principals have significant sway over what is implemented in their school. Where principals value music education and have committed significant time and energy there are high quality, continuous, sequential and developmental programs. These programs require a mass mobilisation of all aspects of how the school operates—principals must work to align school improvement plans, professional learning budgets, timetables, capital expenditure, and parental engagement. However, many of the best government programs require families to make contributions for instruments and/or co-curricular experiences. High-quality programs must also still meet Australian Curriculum requirements for other arts subjects, a task approached creatively by music teachers—for example, by teaching drama and music through musical theatre, or by combining music and dance with body percussion. One interviewee described high-performing

schools as “lighthouses,” meaning schools that serve as models of leadership and mentors to other schools, and a frequent refrain was that these sorts of results are possible within the current system.

Schools utilise a mixture of in-house primary music specialists, generalist classroom teachers, and external specialists to deliver music education. Historically, high-quality music programs have been delivered by school-employed primary music specialists (often supported by external instrumental specialists and/or musical experiences) who may or may not work with the classroom teacher. This is beginning to change in every Australian state except Queensland. The current trend is towards leaning more on the classroom teacher, who typically lacks the capacity and confidence to deliver a quality music education. External specialists may be involved, but they lack the oversight and continuity to deliver a quality music education. Good outcomes are possible where specialists are employed to mentor classroom teachers. However, even in these circumstances there is still a need for instrumental specialists in the later primary years.

Every Australian state except Victoria also supplements primary classroom music with a selective instrumental music program for middle-primary students (typically Years 3 to 6). These are partly government funded but require supplements by a user-pays system. Instrumental music educators typically deliver group or individual music tuition and provide ensemble experiences. These programs are rarely for all students and are most effective when they align with and supplement a classroom music education. The same can be said for government-supported music experiences and competitions like Music Australia’s *Count Us In* and programs delivered by external providers (see page 35).

Independent system: most independent schools provide a high quality, sequential, continuous and developmental music education which typically involves 60-90 minutes of instruction each week throughout every year of primary school. This education is usually delivered by primary music specialists and supplemented with meaningful music experiences. However, several interviewees felt that some independent schools may be delivering a lower-quality music education than others, where the principal sees the brand value but not the educational value, or where the small size of the school impacts the resources available to and required by them. This is more likely in smaller, lower- and moderate-fee private schools which may only be able to employ a single music specialist. The

^{viii} Music education delivered outside classroom hours by private music education providers that require students to pass an audition and pay annual fees to attend e.g. Melbourne Youth Orchestras Program

independent school offering is stronger in states/territories where the government offering is also high-quality, such as Queensland. One interviewee suggested that government schools serve as a minimum standard which independent schools must exceed—therefore a good level of government provision benefits all children in that state.

Catholic system: broadly, the Catholic system tracks the government system in terms of the average quality of provision, though with a wider and more variable distribution. The importance of singing in the liturgy means that some music takes place in all Catholic schools, though it may not constitute a sequential music education. Drivers such as household income and parental expectations tend to have a greater influence than in government schools. As with government systems, the variability of the offering depends significantly on the principal. Catholic schools are also impacted by leadership decisions at the diocese level and the resources available to the school which can be more closely linked with the school size. In general, interviewees reported that their understanding of the Catholic system was lacking in comparison to independent and government systems. Some interviewees attributed this to the tendency for teachers and professionals within the Catholic system to be less engaged with the broader music education sector.

Regional and remote: schools in large regional centres typically have a quality of provision comparable to capital cities, but the quality starts to decline in smaller regional and remote towns. Regional and remote schools suffer several challenges that make the provision of a high-quality music education difficult. This includes high staff turnover, fewer music specialists, fewer professional development opportunities, and weaker communities of practice. There are many freely available curricular resources for regional and remote schools, but these are no replacement for qualified and committed educators and physical resources. However, there are pockets where music education thrives. As with government “lighthouses,” such as McDowall State School in Brisbane that provides an extensive instrumental music program for every student, these schools owe their success to principal leadership but are additionally supported by external providers and a culture of music-making in the broader community. One interviewee described these schools as residing within “musical towns”.^{viii}

Non-school systems (universities and external organisations)

Universities: universities continue to have responsibility for pre-service music teacher training around Australia. There is no formal designation for what constitutes a primary music specialist outside of Queensland^{ix} so a classroom music teacher can have any one of several pre-service experiences. Most university education departments are supplementing their traditional four-year, self-contained teaching degrees with a two-year Masters of Teaching (MTeach) program which requires a bachelor’s degree in any discipline. Under the influence of state-based teacher registration boards and the national Australian Professional Standards for Teachers, the amount of music education training that can be delivered during the MTeach is very low^x. One interviewee said that the MTeach provides “just enough music education training to put the fear into [the pre-service teachers]”.

Interviewees without much experience in the university system attributed the lack of music education training to the university sector itself, whereas university staff tend to direct blame towards registration boards, accreditation authorities and a cultural bias for STEM subjects. No interviewees felt they had a solid grasp on how registration boards determine what universities should teach. One interviewee described it as part of the “dark arts”.

Under the current system, the closest approximation to a primary music specialist would be a student who undertakes a Bachelor of Music (BMus) and several Arts education units as part of their MTeach. However, several factors inhibit this student’s ability to become a competent primary music teacher. Firstly, Bachelor of Music degrees are predominantly focused on performance rather than music teaching. Secondly, conservatoria and education departments rarely collaborate to improve pathways for BMus students to matriculate into MTeach programs. Thirdly, universities rarely collaborate with professional development associations who provide in-service teacher training. Finally, there is no system-wide understanding as to what outcomes are desirable for graduate primary music teachers—even amongst the interviewees there was significant disagreement as to what an ideal outcome may look like. Some advocate for better-trained generalists

^{viii} Mildura, for example, has a highly supportive network of community music organisations, schools and instrumental music instructors which serve to benefit local students.

^{ix} A “Primary Music Specialist,” is a teacher designated by the relevant state-based teacher registration board to deliver music education. In contrast, a “Primary Music Specialisation,” is a University designation and indicates where a student has undertaken additional unit(s) in music education as part of their degree. A “Primary Music Specialisation,” doesn’t designate a teacher a “Primary Music Specialist,” and the terms, standards and availability of these designations are heterogenous, varying between universities and states/territories.

^x Typically 1 or 2 (of 8) units focused on Creativity or the Arts, in which Music will share space with other Arts in the Australian Curriculum.

(one interviewee commented that “the horse has bolted”, suggesting the era of primary music specialists is over), others for a return to primary music specialist training, and a few for a new category of cross-disciplinary Arts specialists.

Numerous interviewees argued that the pre-service teacher training experience was one of the biggest faults in the music education system in Australia. Very few well-trained primary music teaching graduates are being produced, and several interviewees independently speculated that there may be a significant skills shortage in approximately 10 years.

External providers: the external organisation landscape is broad and difficult to categorise, with multiple responsibilities and functions across the sector. These include providing music experiences, in-service teacher training, associational life, sector advocacy, and pedagogical framework advocacy. Several interviewees described much of their work as a “Band-Aid” fix. However, external organisations are generally held in high regard and there is a sense of camaraderie—if not collaboration—between them.

The first group of organisations are professional associations—these include Kodály Australia, the Orff Schulwerk Movement, and the Australian Society for Music Educators (ASME). These organisations provide a mixture of associational life for music educators and in-service teacher training. Kodály and Orff centre their offerings around their respective music education pedagogies, whereas ASME does not advance any singular pedagogy. It was noted that 20 or 30 years ago much of what is now offered by professional associations was provided internally by education departments, mirroring the move from in-service music specialists to external specialists in schools. The high level of discretion exercised by principals also means that these professional learning providers must compete with one another, as well as with generic whole-school professional learning opportunities. However, these organisations do find their professional learning opportunities well subscribed and attribute this to generalists feeling ill-equipped to teach music. All these organisations are structured as non-profits and funded through member dues and private donations.

The second group of organisations centres around providing professional learning experiences. Under the National Mentoring Program, founded by the late Richard Gill, primary music specialists provide in-classroom mentoring to generalist teachers tasked with delivering classroom music. The program operates in New South Wales, Victoria, South Australia and Tasmania and is funded jointly by the federal Department of Education and individual participating state education departments. In some circumstances the state departments pass this cost on to individual schools. The National Mentoring Program functions to bridge the

generational skills gap emerging as a result of the reduction in pre-service teacher training in music education. Finally, the not-for-profit Musical Futures is also a provider of professional learning with a focus on student-centred learning.

The third group includes large, national organisations which tend to do a broad mixture of professional learning, music experience delivery, music education and advocacy. These include Musica Viva, The Song Room, and the Australian Children’s Music Foundation. These organisations are heterogenous in their models but tend to focus on highly disadvantaged schools and individuals, and they provide both music experiences and music education. However, the latter is normally dependent on external funding so will range from only 3-6 months through to multiple years. Their models sometimes contain an element of user-pays for wealthier schools which cross-subsidises schools unable to pay. Some of these organisations operate on a mixed income model in that they draw on government grants, government contracts, philanthropic income, and trade-based revenue to sustain a variety of commercial and philanthropic activities. These organisations tend to acknowledge their own limitations, the necessity of systemic change and express a willingness to play a role in changing the system.

Within the third group are the subset of professional orchestras such as the Sydney Symphony Orchestra (SSO), Melbourne Symphony Orchestra (MSO) and the West Australian Symphony Orchestra (WASO). Although these large organisations are focused primarily on music performance, they typically have a dedicated education officer who facilitates a small number of performances by the orchestra each year that are designated as educational. The performances usually work on a user-pays system with a small fee per child for the performance. These performances are usually aimed at providing children with a powerful musical experience and are usually conducted in the orchestra’s regular concert hall. This allows for children to have an early and meaningful experience of a professional performance venue. Some of the orchestras also provide teaching notes and materials for the repertoire that is performed and in some cases these include music education activities fit for a one-term program.

A few trends are worth noting across the external sector. Firstly, there is growing enthusiasm for the mentorship model of professional learning—expressed in the National Mentoring Program, The Song Room’s DUET program, and Musica Viva’s residency program. Secondly, there is a recognition that interventions should be long-term and focused on changing the whole school system wherever possible. Thirdly, there is a desire for more joint advocacy and long-term thinking in the sector.

State-by-State Overview



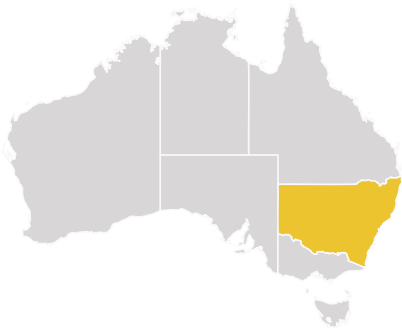
Overview

Differences in the quality and spread of music education provision by state and territory are dominated by three key factors:

- History – historically, individual states and territories had more control over their educational priorities. High-performing states/territories typically owe their performance to ministerial decisions made decades ago before the current era of economic and bureaucratic rationalism.
- Australian Curriculum adoption – state departments of education have a lot of control over how they implement the Australian Curriculum. Typically, smaller states and territories have adopted it more quickly than larger ones.
- Political leadership – decisions made at a ministerial level can and do still have a significant impact on music education. The exploration of music education in each state or territory is essentially about how political leaders have maintained, augmented or diminished historical legacies in the context of nationwide economic and bureaucratic rationalisation.

The below provides a high-level snapshot of current practices across states and territories.

New South Wales



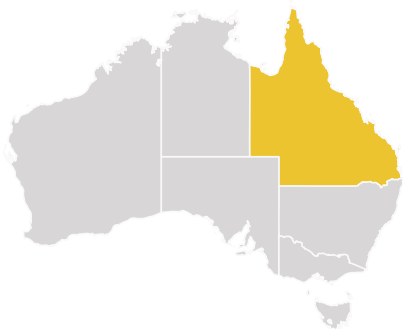
New South Wales (NSW) is still operating off its own curriculum, which is regarded by practitioners within the state as more conducive to quality, sequential music education than many other state curricula. The NSW K-6 curriculum elevates visual arts and music above dance and drama and excludes media arts entirely. Music is also mandated in the 7-10 curriculum, giving it additional continuity beyond primary school. The latest iteration of the curriculum, though not yet approved by the Minister, is regarded by non-musically trained or experienced principals as something which makes music education legible and accessible. The new curriculum has created a sense of optimism that music may be better understood and valued in New South Wales in the future. New South Wales also has an active regional conservatorium network, which continues to have a positive impact on the provision of music in regional communities. The NSW Department of Education is currently reviewing its arts curriculum with the view to release an enhanced syllabus. This is significant as the NSW music curriculum has not undergone a significant revision since the implementation of the Australian Curriculum in 2015.

Victoria



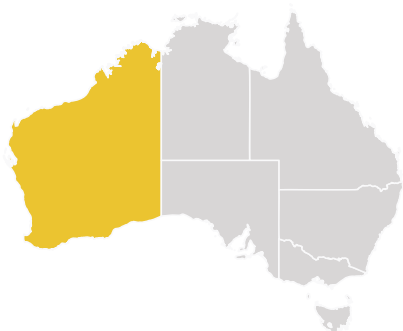
Interviewees offered a variety of opinions on the state of music education in Victoria (VIC), which appears to be in a period of transition following a Victorian parliamentary inquiry in 2013. A favourable political climate has occasioned several funding initiatives in the last few years, including \$2m in funding for professional learning and school-based grants for instrument purchases. However, these efforts are still small and non-systemic in comparison to funding commitments made in South Australia and Queensland. One interviewee highlighted that Victoria had half as many students doing Year 12 Music as New South Wales but was unsure why this disparity was so great. Several interviewees commented that Victorian independent schools offer particularly exceptional music education programs.

Queensland



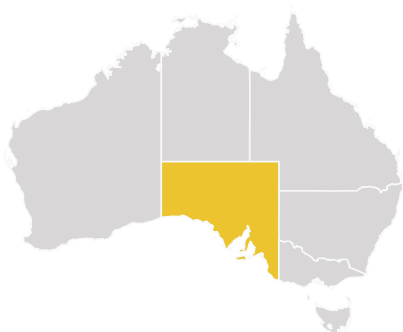
Queensland has been regarded for many years as the crown jewel in delivering music education in Australia. It is both high quality and a known quantity – an interviewee estimated that around 85-90% of Queensland government schools have a primary music specialist, with the remainder being very small schools (usually less than 30 students) with only one or two teachers. Its state-wide Instrumental Music Program recently expanded with an additional \$14.4m in funding over the next three years. The Australian Curriculum presents a potential challenge to the quality and scope of music education in Queensland, as decisions are made about how the other four subjects in The Arts learning area are implemented. Interviewees argued that Queensland can maintain its position if it is creative about addressing the Australian Curriculum, Assessment and Reporting Authority’s (ACARA’s) requirements.

Western Australia



In Western Australia (WA), primary schools can choose to focus on a single performance art (music, drama or dance) and a single visual art. This provides a hedge against the Australian Curriculum’s regard of all the arts as equal and provides an opportunity for more musical schools in WA. The WA Instrumental Music Program reaches nearly half the schools in the state and has the expectation that the program will build on a solid foundation of classroom music. It is speculated that the expectations placed by the instrumental program on schools serves to raise the standard of classroom music in WA government schools. Unfortunately, the program’s reach is poor outside Perth and large regional centres.

South Australia



South Australia (SA) is in a period of significant transition following the announcement in December 2018 of a 10- year statewide music education strategy. Interviewees highlighted that the strategy was a response to a self-identified crisis in the quality of music education and a cross-sector recognition that improvement was urgently needed if Adelaide was to retain its reputation as a musical city. The crisis provided a rare opportunity for system-wide collaboration with non-profits, universities, conservatoriums and government coming together to discuss how to improve the situation. Interviewees expressed optimism at the development of a strategy and an accompanying sense of urgency, but also cautioned that its full impacts will take a while to be felt. The strategy identified four key issues:

- the value of music education needs to be articulated and understood.
- music education should be a continuum.
- connections between people and supports in music education are critical.
- music education should recognise and respond to barriers to children achieving success^{xi}.

Within these four key issues, they identified the areas of focus to be priorities, systems, resources, and places and people.

^{xi} <https://www.education.sa.gov.au/sites/default/files/2019-2029-music-education-strategy.pdf>

Tasmania



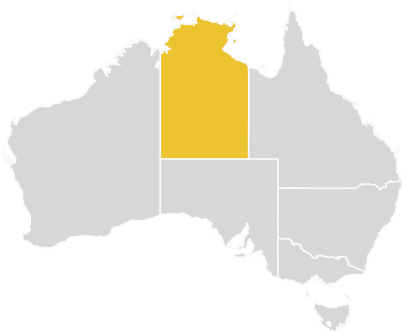
Tasmania is a surprising success story in Australian music education, with primary music specialists across almost all schools in the state. Interviewees attributed this to a statewide culture amongst principals of valuing music rather than any ministerial legacy. However, the state does face some challenges. There is a lack of consistency in what is being offered as there is no designation for primary music specialists, no coherent and agreed approach to music pedagogy, and no curricular framework beyond the Australian Curriculum. There are concerns that burnout and a lack of new music specialists being produced will erode Tasmania’s standing in music education in the long-term.

Australian Capital Territory



The Australian Capital Territory (ACT) is like NSW and VIC in terms of the quality and spread of provision across the different school systems, with one interviewee estimating that around 15-20% of government schools have a primary music specialist. However, government service provision differs from the bigger states in two ways. Firstly, the ACT has no regional and remote schools to contend with, which arguably lessens the burden on resourcing of music teachers to schools. Secondly, Canberra has a “green belt,” of inner-city, well-established government schools which are established in high socioeconomic areas. Many of these schools mimic the culture and provision of nearby independent schools and have high-quality music programs supplemented by voluntary contributions from parents.

Northern Territory



The Northern Territory (NT) is a unique case in the provision of music education in Australia, facing statewide challenges like those encountered by regional towns. These include teacher turnover, a lack of access to professional development opportunities, and a weak community of practice. Where Tasmania and the ACT benefit from their small size with a tight-knit community of practitioners, teachers in the NT were described as “petrified” to share their expertise within a community. All regional schools are serviced by the NT Instrumental Music Program and an interactive TV program.



Barriers to the Provision of Quality Music Education



Introduction

Music education in Australia has been consistently described as patchy and inequitable. Depending on which state, educational system, geographical region and school a student attends, they will more than likely receive a different amount, duration and quality of music education. This uneven provision would not be an issue if music education only benefited those students who were interested or talented in music. However, as highlighted in the *Research on the benefits of music education* section, the benefits of music education in terms of a child's academic achievement, as well as their personal and social development, points to the need to reconsider the place and purpose of music education in every Australian child's education.

As highlighted in this report, music education in Australia has been reviewed and recommendations offered numerous times over the last two decades. In most cases, the issues have remained largely the same and the recommendations have not varied significantly. In looking again at this aspect of the provision of music education in Australia, the project team has taken into account the historical context, the emerging themes from the interviews and situational analysis, and their own extensive experience in the field.

The project team identified seven factors impacting the provision of high-quality music education in Australia. These factors are discussed in further detail in this section and fall under the following areas:

1. **Systemic inequity**
2. **Teacher education and training**
3. **School leader education and expectations**
4. **Australian Curriculum**
5. **NAPLAN and STEM**
6. **Professional collaboration**
7. **The value of music education**

Identified factors impacting the provision of music education in Australia

The provision of music education in Australia is impacted by multiple, interlinked factors. Music education, whether it be delivered as classroom music or through an instrumental program, requires musical equipment, trained teachers, appropriate space, appropriate time within the curriculum, a sequential curriculum across multiple school years, proactive school leadership and parental support. As a consequence of these multiple human and resource issues, launching and maintaining a music education program that delivers quality, sequential and ongoing music education is a complex task with many factors at play. However, when these factors are managed successfully a robust music program across a school can have significant impacts on academic achievement, behaviour management and school culture.

To begin to identify the factors currently impacting the provision of music education in Australia, the project team reviewed the situational analysis data for themes and compared these with their significant experience in the field. We categorised these themes as either being barriers to systems change, enablers of best practice within the current system, or leverage points to transform the system. This list is by no means exhaustive but serves as a way of outlining the complexity of the situation. It also provides a means to examine these factors in light of: updates as a result of changing government education requirements and focus; the introduction of NAPLAN and the Australian Curriculum; and the lived experience of Australian schooling and education since the last significant review in 2005.

1 Systemic inequity

Support of music education is varied and differs across and within educational systems.

Music education is generally highly regarded in independent schools and seen as an expected part of the student experience. This regard is supported by high levels of funding, facilities and expectations of performance. In Catholic schools, music education is more varied and, in some schools, can be seen as supportive of the liturgical life of the school rather than a pursuit in its own right. This mixed purpose often sees the music program highly regarded but lacking in educational value. In the government school system, music education is also varied but far fewer students receive a quality, sequential and ongoing music education. This is influenced by all of the factors outlined below.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none">a. Lack of a shared understanding of the place and purpose of music education in every Australian child's education.b. View by some schools of music education for its brand value to a school, rather than its educational benefits.c. Disproportionate taxpayer subsidies to well resourced, high fee-paying schools exacerbate inequalities.	<ul style="list-style-type: none">a. "Beacon" or "lighthouse" schools across states/territories and systems which have made the educational choice to provide music education in more than just the required or minimal ways provide the evidence base for what can be achieved.b. Where government provision of music education is high, independent and Catholic schools also benefit.c. There is growing public awareness around systemic inequalities in the provision of education.d. The relative independence of state-level Departments of Education provides an opportunity for individual states/territories to demonstrate leadership in music education provision.e. State-based Diocesan Catholic Education Offices and individual diocese can provide systemic leadership to improve provision in Catholic schools within their community.

② Teacher education and training

There are currently insufficient numbers of trained and/or upskilled teachers of music in all systems.

The lack of appropriately trained specialist teachers to deliver music education to every Australian child has been identified in every review and by all interview participants. Music programs cannot happen without confident and competent teachers. This requirement has been impacted by two factors: (1) changes in pre-service teacher training requirements which expect generalist class teachers to teach the entire arts curriculum with only 4-16 hours of music education training across their degree; and (2) the ageing population of teachers trained as music education specialists. A number of interviewees commented on the fact that we are on a skills cliff that will see Australia run out of specialist music educators within the next decade if we do not act immediately.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none"> a. Not enough appropriately trained/qualified teachers in the Australian education landscape. b. Lack of a shared vision within the music education community on what an appropriate level of music education training should be. c. Increased requirements and regulation of preservice teacher education reducing time for music and the arts. d. Lack of system capacity for varied and innovative training pathways (e.g. pre-service programs in universities and/or certifications from professional bodies) and training timings (pre-service or in-service, mandatory or voluntary). 	<ul style="list-style-type: none"> a. Professional organisations (e.g. Musica Viva, Sydney Symphony Orchestra's TunedUp program, Kodály Australia etc) are providing high-quality and well subscribed professional learning for in-service teachers. b. Active and growing numbers of professional organisations (e.g. Kodály Australia, Orff Schulwerk Associations) who represent different methodologies/avenues to music education around Australia. c. Public awareness of the lack of teacher preparation in music education is in the national spotlight due to ABC TV's <i>Don't Stop the Music</i> documentary and instrument donation campaign, and statewide approaches to the problem such as the South Australian Music Education Strategy and significant funding for professional learning in VIC and QLD. This action has been largely observed in the government school system.

3 School leader education and expectations

The lack of access to, and understanding of, cutting-edge research into music education and brain development among school principals and other leaders. A deep understanding of the nature of music education provision within their schools and the opportunities this could provide is also lacking.

School leaders (principals or heads of school) have more autonomy than they have ever had before to lead their schools. This autonomy mostly exists around the allocation of funds towards programs they believe their students need and the overwhelming number of choices now available can be challenging for a principal to manage. With this financial autonomy also comes arguably greater levels of accountability. Increased autonomy of school leadership has the potential for significant impact on music education, as school leaders are now more empowered than ever to build and sustain, or indeed dismantle, music education in their schools. For this reason, education of school leaders about the evidenced benefits of music education for cognitive development is an important area of need. As part of this education, there also needs to be support and expectation management of how to implement a quality, sequential, ongoing music education program and what to expect along the way.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none">a. Lack of access to the research on the benefits of music education, both cognitive and social, in formats that they can understand and act upon.b. Lack of support to plan for, implement and grow their music programs.c. Lack of knowledge on how to evaluate the outcomes of their music programs.	<ul style="list-style-type: none">a. School leaders at "beacon" or "lighthouse" schools across all states/territories and education systems that have already implemented and enhanced their music program can be mentors for other school leaders.b. ABC TV's <i>Don't Stop the Music</i> series raised awareness and created a range of resources for schools and school communities to assist them to assess music programs.c. Increased interest from principals' organisations and national education conferences in featuring music education and the associated research in their 2020 programs.

④ Australian Curriculum

Resources to inform the structure and interpretation across states/territories and systems of the Australian Curriculum requirements and benefits of music education are not available.

The introduction of the Australian Curriculum has had a profound effect on all arts (visual, media, dance, drama and music) education. This impact has two distinct factors: the requirement for “equal” allocation of the five arts across the school year; and the raising of expectations within each curriculum for achievement. Essentially, the equation can be boiled down to “expect the students to perform at a higher level in less time”. Full implementation of the curriculum requires adequate time and requires approaches to timetabling to be considered in light of best practice pedagogy within the individual discipline. For example, visual arts benefits from longer stretches of time due to the resource and clean-up requirements; student-driven “project” work in media, arts or drama benefits from intensive periods of learning; and the full benefits of music learning require continuous and sequential class time. A singular approach across the art forms e.g. learning one artform per school term on a rotation basis, while solving logistical issues, has a negative impact on learning. In particular for music, the gap between the learning periods negates any cognitive benefits that could be achieved through the continual study.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none">a. Lack of understanding of the need for a sequential and ongoing music program throughout the school year.b. Higher expectations for student achievement with less allocated time.c. Lack of knowledge on how to evaluate the outcomes of music programs.	<ul style="list-style-type: none">a. "Beacon" or "lighthouse" schools in every Australian state and across educational systems which are providing a quality, sequential and ongoing music education for their students, and are satisfying all requirements of the Australian Curriculum in the arts are exemplars of good practice and can mentor others.b. Innovative, research-informed and committed school leaders exist within the abovementioned schools.c. Proven models of the provision of music education already exist and can be showcased, learned from and scaled up.

5 NAPLAN and STEM

The visibility and comparability of schools via NAPLAN and its publicly available data has forced literacy and numeracy into a privileged position over all other subject areas. The impact of a STEM curriculum focus has done the same for STEM subjects and content.

Standardised testing in the form of NAPLAN has had several explicit and implicit impacts on music education. This is an area of significant and ongoing debate but since the introduction of NAPLAN the literacy and numeracy skills of Australian children has not markedly improved and in some cases it has declined which, after 10 years of implementation, is not yielding all of the results it was expected to promote. The impact of a focus on literacy and numeracy and the introduction of a high stakes and publicly-reported test has meant that all other areas of learning in primary schools have very much taken a back seat.

Australian education discourse currently places a high value on literacy, numeracy and STEM and students' educational experiences reflect these priorities. The project team is not arguing for the relative importance of subjects, we are examining this focus in light of the research that indicates that a quality, sequential and ongoing music education could have significant impacts on the overall development of every Australian child. This research suggests that we need a new conversation on the place and purpose of music education in Australia.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none">a. Intense focus on literacy and numeracy skills development has, in a number of schools, come at the expense of other learning tools and activities.b. Purposeful focus on STEM has further marginalised the arts and other learning needed for the holistic development of a child.	<ul style="list-style-type: none">a. Implementation of STEAM (as above but including the Arts) in many schools.b. International discourse and best practice are shifting towards an appreciation of the value of creativity, making and other innovative pedagogies in delivering a 21st century education.

6 Professional collaboration

Although there appears to be a willingness to collaborate in the sector, to date not-for-profit organisations and representative bodies have worked largely in their own spheres.

There are a number of professional organisations, both not-for-profits (such as The Song Room) and representative bodies (such as Music Australia), who are making active representations to policy makers and politicians and delivering professional development. These organisations are working largely in their own spheres and there exists both opportunity and willingness for collaboration in the future. The collective energy of these groups could be harnessed to impact many of the factors that impede the provision of music education in Australia.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none">a. A lack of collaboration between organisations due to incentive structures.b. Government, membership and philanthropic funding prioritises business as usual or minor innovations in service delivery over collaborating to promote systems change.c. Lack of a shared or agreed upon vision for music education in Australia.	<ul style="list-style-type: none">a. New commitment to approaches by many organisations to find a new model for collaboration.

7 The value of music education

There is not currently a shared understanding of the value or place and purpose of music education in every Australian child's education.

The word 'value' is used frequently when examining the factors that impact on the provision of music education. This is true in the National Review of Music Education, the South Australian Music Education Strategy and in numerous academic studies. The project team found that the definition of this value is not shared across the interviewees. The project team also felt that the word 'value' itself may be problematic as it implies that some subjects have more worth than others. This lack of alignment in understanding may well make this the most difficult factor to quantify, however it is agreed that it is one of the most impactful factors. Another way to think of this factor may be understanding the place and purpose of music education in the education of every Australian child. We prefer the term 'place and purpose' as it provides an opportunity to consider what specific role music education must play in a holistic educational framework, particularly in light of the benefits we now know it has for cognitive and musical development. 'Place and purpose,' shifts the conversation away from the *extent* to which music education is valued towards the *nature* of its value.

Barriers	Enablers/Leverage points
<ul style="list-style-type: none"> a. Lack of a shared understanding among the general public, school leaders, educational policy makers, state and federal politicians and students - despite the large body of educational and scientific research - of the place and purpose of music education in the education of every Australian child. b. Use of the term 'value' in discourse within the music education sector without a common understanding or definition of what this means. 	<ul style="list-style-type: none"> a. Interest from philanthropic bodies in systemic change in music education in Australia. b. Recognition of the need for equitable provision of music education by the SA Government. c. Prominent figures in the music education community are seeking to update and challenge the concept of value as it pertains to the provision of music education for every Australian child. d. Building on the momentum that currently exists to launch a national campaign to change public and education opinion. Advance the conversation from 'value' to 'place and purpose'. e. Recent research suggests that music education has a unique place and purpose in a holistic education.

Summary of the current factors and issues

Essentially, the barriers to quality, sequential and ongoing music education for every Australian child include the lack of qualified teachers, necessary resources, depth and currency of understanding, and competing educational expectations. However, there are numerous schools across all Australian states/territories and educational systems which continue to break the barriers and deliver meaningful music education to every child in their community. This shows that where there is the will (often from the school leader), and the means (often from multiple funding and policy directives), a solution to this complex, multi-layered problem is indeed possible.

To summarise, the contributing factors that impact on the equitable and sustainable delivery of quality, sequential and ongoing music education are highlighted on the following page. We have included the corresponding or alternate findings from the National Review of Music Education for comparison and historical reference. It should be noted that neither the Australian Curriculum nor NAPLAN had been developed or implemented at the time of the National Review of Music Education.

Summary of factors impacting equitable music education

Music Education: a Sound Investment (2019)	National Review of Music Education report (2005) Observations and Recommendations Priorities	
1. Systemic inequity – access to quality music education across all states/territories and education systems	<ul style="list-style-type: none"> Action is needed 	
2. Teacher education and training – need for sufficient numbers of trained and/or upskilled teachers in all systems	<ul style="list-style-type: none"> Quality teaching is key Effective teacher education is essential 	Priority to improve teacher pre-service and in-service education
3. School leader education and expectations – need for access to and understanding of cutting-edge research into music education and brain development and an evolving understanding of the nature of music education provision within their school and the opportunities this provides	<ul style="list-style-type: none"> Students miss out on effective music education 	<p>Priority to improve the equity of access, participation and engagement in school music for all students</p> <p>Priority to improve music education in schools through supportive principals and school leadership</p>
4. Australian Curriculum – need for resources to inform the structure and interpretation across states/territories and systems of the Australian Curriculum requirements and the benefits of music education	NOTE: The Australian Curriculum was not developed at the time of the NRME and therefore was not taken into consideration. There was a national educational framework but not a curriculum.	Priority to improve curriculum support services
5. NAPLAN and STEM – the impact of NAPLAN which is high stakes and has publicly available data has forced literacy and numeracy into a privileged position over all other subject areas. The impact of a STEM curriculum focus has done the same for STEM subjects and content. The developmental benefits of music education should be understood to complement all learning, including the STEM subjects	<ul style="list-style-type: none"> Raising the status of music in schools will improve the quality of music in schools 	Priority to support productive partnerships and networking
6. Professional collaboration – need for ongoing and robust collaboration between professional music education providers around Australia to support school capacity building	<ul style="list-style-type: none"> The partners in effective music education need to take leadership and action roles 	
7. The value of music education – need for a shared understanding of the place and purpose of music education in every Australian child’s education	<ul style="list-style-type: none"> Music education is valuable and essential for all Australian school students Raising the status of music in schools will improve the quality of music in schools 	

Key Insights and Opportunities



Music education in Australia

Music education in Australia continues to be inequitable, highly variable and in many cases undervalued and poorly understood. This understanding persists despite several national reviews and a compelling body of evidence which reveals the significant cognitive and developmental impacts of a high-quality music education. In parallel to this emerging body of research, the Australian federal government has undertaken an agenda of economic and bureaucratic rationalisation which has led to the creation of federal bodies such as AITSL, ACARA and NAPLAN. These federal bodies manage the contours of the sector indirectly through standards and practices which inform teacher training, curriculum content and school funding. These federal bodies emerged from and reinforce a discourse in Australian education which prioritises literacy, numeracy and STEM over other subjects.

The result of these multiple, overlapping forces is the current, ironic situation: just as we have become most aware of the profound benefits of a quality music education we are most unable to provide it to all Australian children.

Independent schools and large Catholic schools which have greater per-student funding and freedom continue to value music and this is believed to contribute to the sustainable delivery of exceptional music programs. Government schools, various Catholic schools, and regional and remote schools are falling behind. The result is a user-pays system in which music education is regarded as a privilege rather than a right.

Despite the difficulties involved in delivering a high-quality music education, individual principals in government schools who have a demonstrated commitment to music education have managed to buck the trend. These “lighthouse” schools demonstrate the possibility of innovation and leadership within the current system. In a similar vein, due to the relative independence of states and territories in curriculum content decisions and teacher standards, some Australian states are delivering a better music education than others. Queensland is an example

of a historically successful state, and South Australia is a contemporary example of a state showing innovation and leadership within the broader national system.

Within the music education sector there is a shared recognition and a desire for an Australia in which every Australian child receives a high-quality, sequential and ongoing music education. However the sector lacks a shared sense of how we might achieve that vision. Individuals within the system also have differing opinions as to what is possible and achievable within the system. There are currently few forums or opportunities for different actors within the sector to collaborate and work together on shared outcomes. The South Australian Music Education Strategy highlights the value and potential of these collaborations.

In summary, the current music education system in Australia is failing to deliver a high-quality music education for every Australian child. New research challenges us to revisit this vision and to develop new approaches to make the system legible and responsive to creative interventions. Our initial efforts to map the contours of this system have focused on teacher education and training, the value of music education, the Australian Curriculum, professional collaboration, NAPLAN and STEM, school leader education and expectations, and systemic inequity. Within each of these areas we have observed barriers to change, enablers of best practice and leverage points that we feel could tip the system into a new state.

In addition to supporting the existing body of evidence around the state of music education in Australia, our research and discussions have identified several key insights and opportunities which provide an aperture for further investigation and action. These insights are by no means exhaustive and have required us to omit many other insights which also have merit and value. We welcome a critical reading of the report which may identify other insights and opportunities.

The project team is optimistic that a more comprehensive provision of music education is possible, one in which every Australian child has access to a high-quality music education.

Summary of key insights

Locating opportunities for systemic change in the states/territories and the schools

Despite the significant influence of national bodies on the ability of states/territories and schools to deliver a high-quality music education, these organisations and frameworks allow for some scope of local decision-making. The project team has identified that there may be opportunities for systemic change at the level of the school and the state/territory as well as living models in "lighthouse" schools around Australia. At the state level, the key players appear to be senior government education officials and education ministers. State-based Teacher Registration Boards working within the national AITSL frameworks may also have a role to play. This kind of systems change is dependent on the election cycle and a favourable political climate can provide opportunities for bold change at a state level. Therefore, interventions to effect systems change should be designed on a state-by-state basis. For the Catholic system, it is also possible that state- and diocese-level innovations can promote systems change.

In schools, innovation exists where a principal can demonstrate leadership and mobilise human, financial and community resources to realise an ambitious vision. The success of this model has already been demonstrated through existing programs run by the non-profit sector, and attention has been drawn to the success of Challis Community Primary in Western Australia through ABC TV and Artemis Media's *Don't Stop the Music* series.

From "value" to "place and purpose"

Discussions of value and the sense that music is undervalued have dominated the discussions within the music education sector and defined its advocacy strategy for decades. New research provides an opportunity for a new conversation about the place and purpose of music education within a holistic education framework. Importantly, **place and purpose** provides an opportunity for specificity in how we communicate the importance of music education and suggests the possibility of a new narrative for the sector.

Collaborating for impact

There is a shared desire within the sector to collaborate and work together on advancing music education in Australia. Professional associations and large non-profits acknowledge their limitations within the current system and recognise that desired changes cannot come from business as usual, or even from increased funding into their existing operations. There are also numerous smaller non-profits that are contributing to the provision of music education, although not always in a sustainable way, in regional and Indigenous communities. The case of South Australia and the leadership group, which included music industry, education department, philanthropists and philanthropic bodies, elected ministers and education experts, demonstrate that models of collaboration can have a large, material impact on the music education system.

The crisis and innovation relationship

An additional insight emerging from the South Australian experience is the relationship between crisis and innovation. Although the South Australian Music Education Strategy demonstrates the possibility of real systems change, the conditions for collaboration were described as a "crisis," by interviewees. A challenge for future music education advocacy efforts will be to uncouple the relationship between crisis and innovation, enabling the system to change when it can rather than when it has to.

The skills cliff

Acknowledging the above there is, however, one crisis looming for music education in Australia which needs urgent addressing. This is the predicted continuing decline in the availability of competent and confident music educators within schools in the next decade as a result of changes to the provision of teacher training in the university sector. The impact of this may be 10 or more years away but will tip the system into a new state whereby a lack of qualified educators will hinder even the most ambitious policy agenda. This is probably the most complex problem identified by the project team, requiring large-scale changes across most organisations and sectors. This area may benefit the most from cross-sector collaboration. If we can find an opportunity to collaborate today, we will be in better shape than if we wait for a crisis tomorrow.

Supporting research

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Acknowledgement: the research summaries in 'The Research on the Benefits of Music Education' and 'Best Practice in Music Education' have been adapted from the Music Education Strategy 2018 by Dr Anita Collins for the South Australian Department of Education.



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