



Public submission made to the Review to Achieve Educational Excellence in Australian Schools

Submitter: Australian Major Performing Arts Group
Submitting as a: Peak body
State: NSW

Summary

For young people to thrive in the future workplace, a STEM-based education is not enough. Evidence shows employers are already demanding greater cognitive abilities, and that the skills that will be in most demand by far, are problem-solving, judgement and critical thinking. While STEM subjects are important, the arts promote the higher order thinking that activates the STEM skills.

Our current curriculum gives more weight to the STEM subjects. The arts offer exciting, innovative and engaging ways to assess students' deeper learning skills and cognitive abilities through alternative progress measurements, such as portfolios.

Successful learning requires engagement — the Arts changes the learning experience for all — and significantly so for the most disadvantaged. Engagement builds attachment and communities. The arts do this across the student cohort and through engaging parents and the wider community through performances and opportunities for volunteering.

To fully benefit from a STEAM-based curriculum, the education framework must clearly recognise and articulate the pivotal value of the arts in education and support;

1. full implementation and proper resourcing of the Australian Curriculum: The Arts
2. invest over the long term in our teachers' capacity to teach and teach through the arts; this includes increased time for The Arts allocated in pre-service teacher education,
3. give proper space within the curriculum to the Arts,
4. and encouragement connections that build and help sustain artistic capacity within a school, including through collaboration with professional arts organisations.

There is growing support for STEAM around the world as evidence-based research strengthens the argument against STEM-focused education systems and narrow curricula. A STEAM-oriented education system, with its demonstrated ability to improve academic and non-academic outcomes for students, can provide Australia with the chance to move up in the international education rankings and better prepare our students for their adult life.

Main submission

The Australian Major Performing Arts Group, or AMPAG, is the umbrella group for Australia's major performing arts companies (MPAs). World-class performing arts companies dedicated to the pursuit of artistic excellence, the MPAs are an integral and vibrant part of Australia's arts ecology, reaching large audiences in Australian cities, regional and remote communities and overseas.

AMPAG COMPANIES' ROLE IN ARTS EDUCATION

Almost one in four Australian school children is reached by MPA education programs annually. The 2015 MPAs presented to over half a million students and teachers through school programs (more than 136,000 from regional and remote Australia) and reached 109,000 participants through workshops, classes and seminars.

What should educational success for Australian students and schools look like?

Theme: what they learn

What are the capabilities, skills and knowledge that students should learn at school to prepare them for the future?

Economics strategist Andrew Charlton from AlphaBeta was recently quoted on his analysis of 4.2 million job advertisements over the past three years. He found a 212 per cent increase in jobs demanding digital literacy, a 158 per cent rise in jobs demanding critical thinking and a 65 per cent rise in jobs demanding creativity. Many unskilled and repetitive jobs are under threat, as are some in the engineering, accountancy and science disciplines. However, jobs that require the human touch—creative and emotional intelligence—are much less vulnerable. Being so resilient in the face of automation, these are the jobs that will grow over the next 20-plus years.

This report adds to the growing body of research confirming the importance of creativity and innovation in the future workplace. (The Heart of the Matter 2013; Humanities Graduates and the British Economy: The Hidden Impact 2013; Australia's Future Workforce? CEDA 2015)

The Arts ((Dance, Drama, Media Arts, Music and Visual Arts) develop deeper learning skills, and students with these skills are able to master core academic content, think critically and solve complex problems, work collaboratively, communicate effectively, learn how to learn and develop academic mindsets.

Quality arts education and an education culture that naturally and confidently work with and through the arts can build skills for the future. The implementation of the national arts curriculum varies in each state. The federal innovation funding, rhetoric and measurement is on science, technology, engineering and maths (STEM) skills, with the arts undervalued.

STEM skills alone will not be enough for the workplace of the future; in fact, successfully activating the STEM skills requires higher order thinking and deeper learning skills, such as self-discipline, communication, collaboration, creative thinking, critical thinking and problem solving—skills that are bolstered through the arts. To develop deeper learning skills, our curriculum must take a STEAM (science, technology, engineering, the ARTS, maths), rather than a STEM approach and acknowledge the role The Arts can play in developing academic and non-academic success for all Australian students.

The Australian Council of Learned Academies (ACOLA) report warns

Innovation is not just based on research, science or technology, or even on entrepreneurial skills. Managerial and marketing skills, organisational, social, economic and administrative knowledge, and intellectual and creative capacity are also required to successfully translate new opportunities, ideas and discoveries into innovation.

Professor Genevieve Bell, Australian National University professor, former Intel researcher and anthropologist, works in a new applied science in the fields of data-driven decisions and increasingly autonomous technology, which depends on critical questioning informed by disciplines outside technology. She believes emphasising STEM at the expense of humanities and the Arts was a mistake.

‘You need the arts and the humanities as much as the sciences because that's how you build a nation...We sometimes get so focused on the tyranny of STEM we forget there are all these other ways of making sense of the world that are valuable and useful, and not just because they feed STEM, but because they feed a world we all want to make happen.’

The Cultural Learning Alliance (CLA) research on the value of the arts found:

- participation in structured arts activities can increase cognitive abilities by 17%
- learning through arts and culture can improve attainment in Maths and English
- students from low-income families who take part in arts activities at school are three times more likely to get a degree, are twice as likely to volunteer, and are 20% more likely to vote as young adults
- employability of students who study arts subjects is higher and they are more likely to stay in employment.

Theme: How they learn — engagement

The Arts change the learning experience and ‘level the playing field for youngsters from disadvantaged circumstances.’

An Australian study—one of the largest ever undertaken into the role of the arts on student outcomes—showed arts engagement and in-school arts participation were predictors of academic and non-academic outcomes.

This research shows us that the arts

should be at the centre of the curriculum because it has benefits across all areas of learning ... My advice to schools would be to consider putting arts at the centre of the school experience and not at the periphery—and to think about how the arts can be strengthened in schools using what's available through the Australian Curriculum.

—Professor Michael Anderson, University of Sydney.

Peter Taylor, a professor of STEAM education at Murdoch University, says that the Arts create a holistic environment for learning to occur, particularly project-based learning.

Catterall found that students with high levels of arts participation 'outperform "arts-poor" students by virtually every measure'; that high-level participation in the arts makes a more significant difference to students from low-income backgrounds than for high-income students; and that sustained involvement in particular art forms are 'highly correlated with success in mathematics and reading.'

Properly taught, the arts provide young people with 'authentic learning experiences that engage their minds, hearts and bodies. The learning experiences are real and meaningful for them.' The arts have the capacity to transform the classroom. 'When the arts become central to the learning environment, schools and other settings become places of discovery.'

A recent Grattan Institute report highlights widespread disengagement in schools—with 40 per cent of students being unproductive in a given year. Disengagement is a greater drain on classroom productivity than violence or antisocial behaviour, and the problem is worse in lower socioeconomic areas.

Compelling content is not enough to stimulate students—more needs to be done to build the capability of teachers to manage classrooms. Engaging and well-managed classrooms enhance student behaviour and achievement, and also contribute to teachers' job satisfaction.

Teachers need to teach the skills of self-discipline and sustained application as well as social and emotional language so that students can understand each other and express themselves appropriately. Effective teaching and learning requires student participation, opportunities to collaborate with peers and do group work. The teaching through the arts, and teaching the arts offers unparalleled opportunities for active learning and collaboration as well as a powerful way to teach emotional and social language.

Arts education supports development of the engagement, attention, motivation and persistence necessary for students to succeed in tertiary studies and the workplace.

There is empirical evidence that the complex learning in 'arts-rich schools' is best supported 'by a rich, continuous and sequenced curriculum', ideally carried out by properly educated specialist teachers who collaborate with teachers of other disciplines, and visiting artists and arts providers. Conversely, there is evidence that the development of critical thinking and cognitive capacities of children in 'low-arts' schools is negatively affected.

Engagement with the Arts builds social fibre, improves school climate and culture, and promotes increased parent and community engagement. Schools with extensive arts education opportunities produce students who engage actively in classroom activities, have better student and teacher attendance, and higher teacher satisfaction and engagement.

Theme: Teachers and school leadership

While the benefits of a STEAM-based curriculum are well documented, teachers need to be supported by quality arts education and ongoing professional development augmented by additional resourcing or specialised teachers and/or external support in this area, so that positive learning cultures can flourish.

Teachers in high-arts schools have been found to be more 'open, flexible, knowledgeable and engaged in their own ongoing learning than were teachers in the low-arts schools'.

'We need teachers who—through their own experiences in the arts—are complex, reflective thinkers and practitioners, knowledgeable about the young people they teach and the cultures that define them. Teachers maximising the value that can be leveraged through an arts-centred approach to teaching need to be able to balance teaching both in and across their disciplines, which implies the ability to be collaborative and aware of possibilities for learning beyond their own specialisation.'

Anita Collins from the University of Canberra raises the issues of teacher competence and confidence, and the need to raise capacity through multiple interventions. Low-level arts attained in school, little opportunity to gain or improve these skills in pre-service training, little support or priority given to in-service teachers to develop their skills, and the lack of a methodical way to raise skills across the various arts disciplines, contribute to these issues. She questions the cultural environment within which teachers teach, and the system-wide lack of recognition of the effective and multilayered role the arts can deliver on student learning. Arts education professional development for in-service teachers is a significant issue as 'the provision of arts education is not consistent, coordinated or at its very core, valued'.

A number of MPAs have successful educational and teacher mentoring programs that provide quantifiable results. The Sydney Symphony Orchestra measure the creative impact of their program by using a scale as a common starting point. A recent external evaluation of their teacher training program asked teachers to assess their level of engagement with the training, and their level of self-confidence. The teachers gave a score of 4.5 out of five, compared to a 2012 study where the teachers at that time rated their general professional development at 3.3. 'It is by developing simple scales like that that we can look at the development of creativity from the bottom up, if you like, from those early years of education through'.

The Australian Ballet (TAB)'s midyear survey on the company's education program demonstrates how effective, multifaceted and far reaching arts learning can be in the field. The program effectively furthered cross-curricular knowledge in English, Personal Capabilities learning, Social Capabilities learning, and Critical and Creative thinking, as well as The Arts (Dance) and Health and Physical Education. The teachers surveyed also scored the program highly for its support for STEM learning outcomes.

St Kilda Primary in Melbourne has worked with The Australian Ballet Education over 10 years. Principal Susan Higgins describes the program as authentic learning and feels 'it's a real partnership rather than a one-off experience'.

'...it is amazing to see the children's skills develop over time ... It's a program that builds upon skills and instils in children confidence and the belief that they can master these new challenges.

Theme: Defining and measuring success in education

The emphasis on testing and reporting of core curriculum subjects may work against a successful education for students. Collins suggests there is an issue here about the value given to arts education in schools, and therefore to quality teaching in arts education. Cullen found that in the UK the demands of accountability to "test and judge" through new standards inhibited teachers' use of creative, open-ended explorations and in-depth projects which "support and develop" . In Australia, assessment has moved to become a measure of technical knowledge and away from previous focus on developing students' competencies in and through the arts in educational settings .

The arts provide an opportunity to explore innovative teaching methods and alternative assessment options that will measure students' cognitive engagement and application to real-world contexts.

Theme: Continuous improvement and best practice

What can we do to improve and how can we support ongoing improvement over time

Are there any new or emerging areas for action which could lead to large gains in student improvement that need further development or testing?

Introducing a STEAM-oriented curriculum backed up by rigorous professional development for arts teachers and a supportive organisational framework, including for example, regional access to specialised teachers and/or mentors, would transform the entire education system.

Australian and international research reinforces the benefits that the arts have on student academic and non-academic outcomes (Fleming, Gibson & Anderson, 2016; Martin et al., 2014; Winner et al., 2013; Catterall et al., 2012; Martin et al., 2013; Ewing, 2010; Bamford, 2006; Catterall, 2002; Deasy, 2002; Eisner, 2002; Fiske, 1999).

It is important to note that the improvement to deeper learning skills provided by arts-based instruction is particularly significant for at-risk populations, including low-income and English language learners.

There is a growing understanding internationally of the value of a STEAM-focused curriculum. The world's most progressive education systems prepare students for their future by offering 'immersive, project-based and real-world learning experiences that go beyond the classroom environment, such as working with local businesses or facilitating art and film projects in local communities'.

China, Wales, France, South Korea and the US recognise that creativity and innovation will help their citizens become globally competitive. According to White, the United States, Korea and China have begun producing STEAM curricula (White, 2010).

The US Every Student Succeeds Act, 2015 offers flexibility to broaden curricula to ensure all students have a well-rounded education, including the arts and music.

Early research on STEAM curricula in the US demonstrate that learning activities integrating science, technology and the arts successfully engage minority and disadvantaged students, resulting in improved literacy and numeracy competencies (Clark, 2014; Stoelinga, Silk, Reddy & Rahman, 2015).

In Australia, support for STEAM is gaining ground at policy level. The recent Inquiry into Innovation and Creativity Report recommended that the 'National Innovation and Science Agenda explicitly recognise the importance of STEAM digital skills, the creative industries and the arts more generally.'

Barriers to improvement

Lack of support for arts teaching is a barrier to the provision of quality arts-based learning. Currently, a generalist teacher is expected to deliver arts education across as many as five different arts disciplines—yet may be master of none.

One solution might be specialist generalist teachers trained in two arts areas of their own interest, with the expectation that the teacher community within the school as a whole would have teacher experts with high efficacy across all art forms. The underlying principle is that 'quality provision of arts education within a school is preferable to an attempt to cover all arts disciplines with insufficient experience and knowledge.' Rather than relying on individual teachers to have the skill set, the focus shifts to the school as a whole.

Pre-service teachers with more recent arts training than their school mentors, provide schools with an opportunity to develop in-service teachers to model 'teacher as learner' for students, serving as professional development for in-service teachers, and developing 'communities of practice between pre-service teachers and mentors'.

Collins stresses that it needs to be acknowledged that a problem exists in the provision of arts education in early childhood and primary teaching profession education, and that the breadth and quality of arts education that each child receives is important to his or her development.

SUMMARY

For young people to thrive in the future workplace, a STEM-based education is not enough. Evidence shows employers are already demanding greater cognitive abilities, and that the skills that will be in most demand by far, are problem solving, judgement and critical thinking. While STEM subjects are important, the arts promote the higher order thinking that activates the STEM skills.

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