

# **Evaluation of the Queensland Academies**

**FINAL REPORT**

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## **Executive Summary**

This report provides the Queensland Department of Education and Training (DET) with an independent evaluation that examines the effectiveness of three Queensland Academies designed to accelerate learning opportunities for Queensland's high performing students in Years 10, 11 and 12. It provides recommendations to inform future improvement of the Queensland Academy for Creative Industries (QACI), Queensland Academy for Science, Maths and Technology (QASMT) and the Queensland Academy for Health Sciences (QAHS). An evaluation framework provided by DET established the scope of the evaluation which was to consider a range of quantitative data and artefacts provided by the Department as well as qualitative and quantitative data generated by the evaluators. The evaluation focussed on the academic, career and personal outcomes for academy graduates; stakeholder perceptions of the effectiveness of the academies; and the effectiveness of the academies in adding value to the public education system in Queensland. In addition, the position of the academies as small specialist schools within Queensland's public education system is considered.

The effectiveness of the academies was considered in relation to five principles set out in the terms of reference. The underpinning principles of the evaluation are that the Queensland Academies:

1. provide strong outcomes for students
2. promote the image of excellence and responsiveness of state school education programs
3. offer a unique and different model of education
4. provide exemplars of high quality teaching and other leading educational practices
5. add value to the state education system through leading innovative practice (e.g. new ways of working with universities; young scholars program; Year of Creativity activities; industry engagement etc.)

The independent evaluators are not linked through existing partnership arrangements with the Queensland Academies.

## ***Background***

The Queensland Academies are selective entry state high schools for students in Years 10 to 12. They have been operating since 2007 with two Year 12 cohorts having graduated from the Queensland Academy for Science, Mathematics and Technology (QASMT) and the Queensland Academy for Creative Industries (QACI) in 2008 and 2009, and one from the Queensland Academy for Health Sciences (QAHS) in 2009.

Students from the three academies based at Toowong (QASMT), Kelvin Grove (QACI) and Southport (QAHS), are thought to pursue careers in science, mathematics, technology, creative industries, health sciences or the range of other career path opportunities offered by their partner universities: QASMT is partnered with the University of Queensland (UQ); QACI is partnered with Queensland University of Technology (QUT); and QAHS is partnered with Griffith University (GU). All three academies offer the International Baccalaureate (IB) Diploma Program as their curriculum.

As part of this Queensland Academies initiative, a Young Scholars Program is also being developed for students in Year 5 to 9. It was initiated to promote the future enrolment of gifted and talented students across Queensland and to develop partnership strategies with other Queensland schools.

## ***Summary of findings***

### 1. Student outcomes

Student outcomes can be determined according to two measures: academic Year 12 results; and the perceptions of students and parents. Academic results are determined by outcomes from the International Baccalaureate Diploma (IB) undertaken by all students in all three academies. These results are impressive with the initial and subsequent student cohorts achieving average scores exceeding the Australasian and World Averages on each occasion in 2008 and 2009.

Results provided by the Department of Education and Training in April 2010 indicate that for all three academies (QACI, QASMT and QAHS), the 2009 cohort of Year 12 students graduating included:

- One student in the top 4% of IB students worldwide
- Two students in the top 6.62% of IB students worldwide
- Six students in the top 12% of IB students worldwide
- An average IB score (of all three academies) greater than the southern hemisphere average worldwide score in November 2008 of 30.58
- Sixty-one per cent (61%) of students achieved an IB score of 30 or higher, compared with a lesser percentage (53.04%) worldwide achieving this score.
- Twenty-two per cent (22%) of graduates achieved the highest possible selection rank of 99 for university entrance.

These are noteworthy achievements considering the early stages of implementation of the academy program and the fact that most teachers had not delivered the IB before their appointments to an academy.

The other sets of outcomes are based on expectations for the academies as perceived by parents and students who were surveyed on reasons for enrolment and their satisfaction with the achievement of expectations underpinning these reasons. While overall satisfaction was positive, lower levels of satisfaction were recorded for academic outcomes and career pathways to higher education and employment. Initial expectations of academic outcomes were perhaps unreasonably high given the newness of the IB Diploma for students, parents and staff. In addition, academy cohorts differ from most national and international cohorts because of selection processes that take account of entry level academic achievement as well as interest and aptitude, as demonstrated in interviews and, in the case of QACI, performance in a creative, artistic field.

### 2. Image of state school education programs

The academies have been presented as offering programs of excellence in their particular areas of specialisation. The naming and positioning of QACI as presenting an image of excellence in the creative industries remains a challenge. While the creative industries concept may be understood and accepted within the Queensland University of Technology partnership, there is evidence to suggest that it is not well understood outside that environment. The use of the IB within this area of specialisation remains an issue for further deliberation.

Students at each academy were effusive in interviews at the start of 2010 about the quality of teaching, their relationships with teachers and the support they received from all staff. The academy learning experience has brought students to the attention of people in universities, industry and the community. The image promoted with these constituencies has been generally positive in terms of academic excellence and responsiveness.

A positive image of state school education has been realised at a high level in terms of staff commitment, physical resources and learning environments. It is fair to conclude that the image of excellence and responsiveness has been promoted and there is evidence to support the claim that this image has been realised.

### 3. Model of education

The academies model is unique in Australia in two respects. First, academies are the only state senior secondary schools that offer the IB on an exclusive basis. Other schools in Queensland that also offer the IB do so as an option to the Queensland Studies Authority curriculum for Years 10-12. Few state schools in Australia currently offer the IB at any level; it has been viewed until now as mainly an option for private schools. Worldwide the majority of schools offering the IB are state schools so the Australian pattern is different. Second, the academies are also specialist schools in that within the IB program there is a particular field of specialisation, as implied by their names (creative industries; health sciences; and science, mathematics and technology). Taken together, these features make the academies a quite unique model of education.

The academy model of education was designed to be different in terms of the partnerships with the three universities and industries related to each specialisation. While special, such partnerships are not unique to the academies. Other state and private schools in Queensland are also forging partnerships with universities that provide a range of special credit arrangements, jointly delivered courses, professional development opportunities for staff and accelerated progression through undergraduate degree programs. It is evident that partnerships with business and industry, defined broadly, are still not well-developed in the academies. This is understandable given the relatively early stages of development of these institutions.

Two other aspects of this model of education are noteworthy yet not unique to the academies. First, while still operating within state-wide parameters, it is evident that there is more discretion in the academies in respect to the selection of staff and management of the budget. Academies are not autonomous but are operating with a higher level of authority and responsibility in these areas than other state high schools in Queensland and their counterparts in other states, with the exception of Victoria.

Second, an important aspect of designing a different model of education concerns facilities and those in the academies are arguably unique in Queensland and possibly Australia, although developments elsewhere suggest a trend to purpose-design rather than standard or template-design in state education. There has been a substantial capital investment at all three sites, especially at QACI and QAHS. There is no counterpart to the style and scale of the QACI building in state education in Australia. QAHS has superb facilities that include some of the best for styles of learning that have been advocated in the 21<sup>st</sup> century. The extensions and refurbishments at QASMT are also outstanding, notably the world-class science laboratories. It is fair to conclude that these set a high standard for state education around the country. Surveys of staff, students and parents on satisfaction with facilities were very positive, with ratings well above those of like

schools and all schools. It is unlikely that other schools in the state sector throughout Australia would achieve such ratings except in the cases of recently-built purpose-designed schools at similar scales of investment.

#### 4. Educational practices

The nature of this evaluation did not enable judgements to be made about the quality or innovativeness of education practices undertaken at the academies. As already noted, interview and survey data provided perceptions of the teaching and other educational practices undertaken at the academies. Yet any cause-effect relationships can only be inferred from these data. Moreover there was no provision made for the naming of what constituted high quality teaching or leading educational practices that would provide clear evidence of such relationships.

Surveys and interviews undertaken among students and parents indicate very high levels of satisfaction with the teaching received. While outlying comments were evident in some instances, the evidence suggests that generally the standard of teaching is above that of like schools and all state schools. Staff interest and competence in their teaching areas was also evident and thought to contribute to the general satisfaction of all stakeholders.

The personalised learning experiences provided for all students at each academy is an indicator of good educational practice which, while not unique, provides compelling evidence of general stakeholder satisfaction with the academy experience. A safe environment in which students were free from bullying and harassment was claimed to be a remarkable achievement that differentiated the academies from some other schools.

Finally, the matching of students' interests and aptitudes with the specialisation areas of each school provided for positive learning environments in which teachers wanted to teach and students wanted to learn. Together with the relatively small sizes of each school, the conditions for learning and teaching are conducive to significantly positive academic, career and personal outcomes for all students.

#### 5. Value to state education system

The academies add value to the state education system through modelling leading innovative practice in the collection, analysis and use of a range data and they have the potential to contribute to the development of leading innovative practices in the teaching of gifted and talented young people.

The partnership between DET staff and academies' staff has provided mechanisms for the collection of a range of useful data which are being used to inform decision making at the school level. While the idea may not be unique, the practices observed during this evaluation provide overwhelming evidence of the critical role played by this data collection and analysis service and its use by academy staff including principals, senior management teams and teachers. As an example of best practice, this aspect of the academies' operations is remarkable and worthy of dissemination throughout the state education system.

Partnerships with universities, industry and other schools have much potential for growth. The fact that they are not yet as strong in impact as they have the potential to be is understandable given the fact that the academies have been in their establishment phase with all that entails. They have

the potential to add value to the system in relation to the longer term intellectual impact of the Young Scholars' (YS) Program. Together with this YS program, there is potential also for enhancing intellectual capital of teachers in terms of developing leading education practices in the teaching of gifted and talented children throughout the state.

## ***Recommendations***

Twelve recommendations are offered as a consequence of the findings in this review. They are organised in four areas: endorsement of existing policy and practice, where capacity needs to be built, where significant change ought to be considered, and for the system as a whole. There is considerable overlap in some instances.

### **Endorsement of existing policy and practice**

There is strong and consistent evidence of the success of the academy initiative in providing a new model of public education in Queensland. The three academies are small schools offering three different specialisations while addressing the broad curriculum of the International Baccalaureate (IB) Diploma. Even though the academies have been established for three years or less, students perform well against Australian and World benchmarks. An important qualification is that these are selective schools and selective schools generally tend to out-perform non-selective schools in comparable systems. While other measures should be considered to help bring the three academies to their maximum enrolment, on the balance of the evidence in this review, the initiative ought to be judged a success and should be continued.

*Recommendation 1: The three academies should continue as small specialist schools.*

The academies are currently the only state schools in Australia that exclusively offer the IB. Students maintain their eligibility to receive the Queensland Certificate of Education (QCE). The IB is an internationally-recognised qualification of high standing. Its national and international appeal is indicated by rapid growth in each of its three programs (primary years, middle years and Diploma). Graduates of the three academies have performed well in subsequent placements in universities and other institutions. There is no compelling reason why the focus on the IB Diploma ought not to continue. A different arrangement warrants consideration at QACI which continues to struggle to reach capacity despite further growth in 2010. It specialises in the difficult-to-define 'creative industries', with the arts, broadly defined, at the heart of its programs. The arts are an optional stream in the IB Diploma. It may be that QACI should unambiguously offer a two-stream program, with the IB Diploma being one and the QCE the other. A closer examination of this and other options is warranted if QACI is to build to capacity in its purpose-built facilities.

It is important to note that there has been considerable effort to create a range of opportunities at QACI over and above the delivery of the IB curriculum, often in partnership with QUT. An example is the digital capacity in pedagogy to allow one-on-one delivery outside the 'normal' approach to learning in the traditional classroom.

*Recommendation 2: With the possible exception of QACI, the three academies should maintain their exclusive offering of the IB Diploma.*

One of the most impressive aspects of the initiative is the exceptional capacity of the department and the three academies to gather, analyse and act on data from a range of surveys and the outcomes in the IB Diploma. A high standard has been set for all schools, not only in Queensland but elsewhere around the nation as well as internationally. As has been shown in this report, the ways in which the academies have responded have differed from site to site, and this is as it should be given their different specialisations, stages of development, mix of students, and capacities of staff. The fact that each academy has identified and acted on different needs at different times, often with different strategies, should be seen as an endorsement of intentions and an example of good practice that should be widely modelled.

*Recommendation 3: The capacity to gather, analyse and act on survey data and learning outcomes should be maintained and extended to all schools across the state.*

An outcome of the capacity to use data in this fashion has been to develop exemplary practice in personalising learning. Such practice is often deemed to be too difficult to achieve in schools, given the size of many and demands on teachers and other staff, yet these three academies have been able to do it. They have, of course, been the subject of high expectations, given this is a pioneering initiative and parents and students have demanded outcomes beyond those that may have been achieved in schools other than academies. The expectations of governments, community, parents, students and professional staff are arguably higher than ever before, hence the capacities that have been developed in the three academies should be maintained and strengthened and used as a model for all schools.

*Recommendation 4: Approaches to personalising learning in the three academies should be maintained and strengthened and adopted as a model for all schools.*

## **Where capacity needs to be built**

While they have not been developed to the extent desired and possible, progress has been made in creating partnerships with universities and other organisations. A sharply focused perspective points to benefits for the students at each academy, each of which has a partnership with a university. A broader perspective reveals that schools generally are being encouraged, and are making good progress, in forging such partnerships for a range of reasons, including the need for schools to move out of their traditional isolation as well as recognition that schools have a critical role to play in preparing students for productive and satisfying roles in society and the economy, with universities and other providers having much to offer in sharing knowledge and providing resources, defined broadly. Increasingly in Australia and elsewhere there is co-location of institutions and this has been accomplished at QACI and QAHS.

*Recommendation 5: Partnerships of academies with universities and other organisations and institutions should be supported and strengthened now that the early developmental work has been accomplished and there is understanding on all sides of the benefits.*

There has been an expectation that the academies should in a variety of ways make contributions to the system of public education. Expressed another way, they are expected to add value to state education beyond the benefits that accrue to students who participate in their programs. One way

they are expected to do this is through the Young Scholars (YS) program which, in general terms, has two main purposes, as far as the academies are concerned: to draw the attention of students to and secure their potential interest in enrolling at an academy, and to enrich the learning of all students who participate, irrespective of whether they subsequently enrol. Other contributions have come through the workshops and seminars conducted by academy staff for staff in other schools. The evidence in this review suggests that the YS program, in particular, is not yet widely known and understood, and this is understandable given that the academies initiative has been under way for a relatively short period of time. However, there are important benefits that can be achieved through further development.

*Recommendation 6: The Young Scholars program and the sharing of professional knowledge with staff in other schools should be supported and strengthened.*

Approaches to the coordination and governance of the three academies have changed since their inception. This is understandable and appropriate. A strong central role was the logical starting point. Without sacrificing a role for senior and supporting officers at the centre, it made eminent good sense to move aspects of these functions to regional officers. It was important for principals to have a key role in these processes especially through the advisory committee. After a successful start, and with principals and other academy leaders gaining knowledge and experience, it makes sense to take the next step, with cross-academy leadership and support. A proposal for a new governance and support arrangement under consideration during the life of this review was a sound one, especially in helping the academies build capacity to accomplish work where limited progress had been made in the early years, especially in respect to partnerships with universities and others (Recommendation 5) and enhancing and extending the YS program (Recommendation 6).

*Recommendation 7: New arrangements for governance, leadership and support to strengthen partnerships and add further value to the system of state education should be located within and across the three academies while maintaining a strong role for the centre and region.*

The three academies have done well in the early years of the initiative as far as implementing the IB and securing generally high levels of student achievement are concerned. However, there is compelling evidence that expectations were unrealistically high at each academy, and that parents and students were disappointed in some instances when results were received. This was understandable given that the initiative had a high public profile and there was a degree of risk, with both factors adding considerable pressure on staff who in most instances were still learning the ropes as far as the IB was concerned. Moreover, as leaders in the IB program in Australia have noted, it typically takes more than three years for programs to be bedded down. Nevertheless, staff in the academies need highly focused support, much of which can come from related professional development opportunities and other measures to build capacity at the academy level. Staff in the IB Organisation (IBO) can assist. Universities can strengthen their contribution by introducing a small specialisation in the IB in pre-service and higher degrees as has been done, for example, at the University of Melbourne.

*Recommendation 8: Further support for the academies to ensure the setting and achievement of realistic expectations should be provided by commitments of time and money to ongoing*



*professional development and extending the engagement of the International Baccalaureate Organisation and universities.*

## **Where significant change is required**

An issue related to a number of these recommendations was raised at several points in the review, namely, that the score on the IB Diploma (IBD) that is converted by the Queensland Tertiary Admissions Centre (QTAC) to a university entrance rank is unreasonably high in comparison with an Overall Position (OP) ranking. Several students indicated in the course of interviews in early 2010 that they would not recommend to students in high schools that they consider an application to an academy because of this, as well as for the related reason that they could secure entry with much less effort and greater certainty if they remained in their current schools. While an IBD score for entry to Oxford was cited, the reasons for this perceived disparity between the Queensland standard and the Oxford benchmark were not explained in the course of the review. It seems that there is not a level playing field in this regard, with a heavy and unnecessary bias in favour of what some students referred to as 'the QSA system'. A case could be made that there is an anti-competitive, protected market in favour of the traditional system where none need or should exist.

*Recommendation 9: Education Queensland should work with universities in Queensland to reduce from 42 the score that secures entry to universities of students who graduate with the IB Diploma.*

Despite good growth in 2010, it is unlikely that QACI will achieve target for student enrolments in the foreseeable future, which raises questions about the effective use of its purpose-built and costly facilities. Recommendation 2 raised the possibility that QACI ought to become a two-stream academy rather than a single-stream IB institution. A related issue that may affect understanding of and interest in QACI concerns its name. There was evidence in the course of the review that the concept of 'creative industries' is not well understood in the school sector and, even in universities, further education and in society at large, there is a lack of clarity. Closer scrutiny of the concept as far as the economy is concerned suggests that it is appropriate but the issue is one of perception and understanding on the part of potential enrollees. One option is to take the lead of Singapore which has the only school world-wide that can be matched with QACI, and that is the recently-established and heavily subscribed School of the Arts (Sofa). It may be easier to communicate the idea of 'the arts' or 'creative arts' than it is to secure ready understanding of 'creative industries'. A possible title is Academy of the Creative Arts. While the name was reviewed at the end of year 1, it may be timely to revisit the matter in the light of experience in subsequent years.

*Recommendation 10: Consideration should be given to re-naming QACI and to re-designing its program to offer more than the single IB stream.*

## **For the system as a whole**

Several recommendations include implications for the system as a whole, notably 'Recommendation 3: The capacity to gather, analyse and act on survey data and learning outcomes should be maintained and extended to all schools across the state' and 'Recommendation 4: Approaches to personalising learning in the three academies should be

maintained and strengthened and adopted as a model for all schools'. There are two more that arise from findings in the review.

Interviews with and surveys of students and teachers suggest that the three academies are excellent examples of 'learning organisations' in which students and staff have high regard for each other, outcomes are high and there is continuous professional development. As shown in the review of related literature, this is a characteristic of schools that have a particular focus, most usually in the form of a specialisation, even though such schools offer the same broad curriculum (in this instance the IB). This raises the possibility that Education Queensland consider the possibility of extending the limited number of its schools that offer a specialisation. It may choose to create more schools elsewhere around the state that offer a specialisation in mathematics and science, or a specialisation in technology, or a specialisation in the creative arts. It was noted in the review that more than 95 percent of England's 3,100 high schools offer at least one of 13 specialisations at the same time that they address the broad curriculum.

*Recommendation 11: More specialist secondary schools should be created in Queensland, either among existing schools or in new schools in growth corridors.*

There is compelling evidence that many of the very positive aspects of the climate and emerging culture of the three academies arise because they are relatively small, not necessarily because they offer the IB or a specialisation. The international research evidence cited in this report points to the benefits of 'small schools'. There is no generally-accepted criterion for what constitutes a small school, other than it needs to be large enough to offer an adequate and efficiently delivered curriculum and should be small enough so that a high level of personalisation is possible. Academies with an enrolment of 450 certainly fit any generally-accepted view of what constitutes a small secondary school. Queensland high schools in urban areas tend to be larger than their counterparts in other states but there is no reason why the benefits of 'smallness' cannot be achieved through sub-school arrangements. This is the approach that has been followed in many instances. The issue is whether more can be done to create the climate and culture that is achieved in a relatively small but viable small school.

*Recommendation 12: The benefits of a small school that have been achieved in the three academies should be secured in other schools in the system by purposely creating smaller schools-within-schools.*

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# Chapter 1

## Introduction

From their inception in 2007, the Queensland Academies have already impacted the image of excellence and responsiveness of state school education, especially in the metropolitan areas of Brisbane, the Gold Coast and their catchment areas. They have partnerships with particular universities and industry affiliations:

- Creative Industries (QACI, at Kelvin Grove – Queensland University of Technology);
- Science, Math and Technology (QASMT, at Toowong – University of Queensland); and
- Health Sciences (QAHS, at Southport – Griffith University).

Partnerships with these universities are not exclusively one-on-one but shared among the three academies. The academies were deliberately differentiated from other models of state (public) education via a strategy of joint corporate badging with those universities. The International Baccalaureate (IB) was the curriculum of choice for students in Years 11 and 12. Together, this constitutes two key markers of difference for senior secondary schooling in Years 10, 11 and 12 in Queensland's state education system.

Emerging from reforms to senior phase learning in the early to mid-2000s (Queensland Government, 2002; 2005), the Academies were envisaged as lighthouse schools within a satellite learning system designed for talented, creative, committed young people throughout the state (see also ANSN, 2008; Cuttance et al., 2006; Fink, 2000; Sizer, 1992). They were to be first and foremost *Queensland Academies*—for the whole state school education system. From conceptualization of the vision to the realities of practice, this unique and different model of state education is just beginning to realize its full potential.

This chapter provides an overview of: the enrolment patterns at each academy from their establishment to the present; the evaluation framework provided by DET with a brief methodological note; and the chapters that constitute the body of the report.

### ***Enrolments***

The first cohort of QACI and QASMT students graduated from Year 12 in 2008, and the first cohort of Year 12 students from QAHS graduated at the end of 2009. To be accepted for enrolment at the academies, students must meet the Higher Ability Selection Test (HAST) benchmark and successfully negotiate an interview with a panel of academies' teachers. For creative industry students (QACI), entry eligibility also includes an audition or presentation of creative portfolio of past work. Families are required to pay \$1681 per student per annum for the IB Diploma program, and purchase an IT device and software, in addition to usual senior schooling costs.

The academies only accept new students at the commencement of their Year 10 studies. Accordingly, their enrolment data may be also viewed as 'true' retention data and therefore should not be compared with state or like schools.

Enrolment information was provided by the Department of Education and Training in an April 2010 progress report supplied to the evaluators. Day 8 enrolments from 2008–10 for the three Queensland Academies are outlined in the following table.

*Table 1.1 Queensland Academies' Enrolments 2008-2010  
(at Day 8 of each school year)*

Queensland Academies	Year 10			Year 11			Year 12			Total Enrolments		
	2010	2009	2008	2010	2009	2008	2010	2009	2008	2010	2009	2008
QASMT	181	186	131	150	113	85	86	71	84	417	370	300
QACI	111	104	67	92	61	34.6	56	34	45	259	199	146.6
QAHS	149	103	64	94	66	107	57.2	74	0	300.2	243	171
<b>TOTAL</b>										<b>976.2</b>	<b>812</b>	<b>617.6</b>

(Source: DET Queensland Academies Progress Report, April 2010)

In 2010, Year 10 enrolments from all three academies have increased by 48 students, or 12 per cent, compared with the same time in 2009.

As part of a longer term strategy to build student enrolments, a Young Scholars' (YS) Program was launched in 2008. The program aims to promote the future enrolment of gifted and talented students across Queensland and to develop partnership strategies with other Queensland schools. DET's April 2010 progress report suggests that it has received strong interest from the Queensland school community with 1348 Year 5 to 9 students (including 91 non-state students and 62 students now in Year 10) registering since its inception in October 2008. In addition, 56 state primary schools have registered to be an associate school, a scheme enabling them to better identify bright students for possible future entry.

Furthermore, the DET progress report notes that in 2009, the program facilitated a total of 68 workshops in the Young Scholars (Years 5 to 7) and Queensland Academy (Years 8 and 9) workshops, in addition to three workshops for the parents of gifted and talented students. In October 2009, the program was extended to include students in Gladstone and Townsville through touring workshops. Of the 62 Year 9 students registered in the program in 2009, 42 applied for 2010 entry to the Queensland Academies.

## ***Evaluation***

During 2009, the Department of Education and Training (DET) considered it timely to undertake an evaluation of the Queensland Academies. The purpose of the evaluation was to: (1) examine the effectiveness; and (2) inform future improvement of the Queensland Academies.



From the framework briefing document provided by the Department of Education and Training, five underpinning principles were formulated to guide the evaluation process. These principles establish the premise that the Queensland Academies:

1. provide strong outcomes for students
2. promote the image of excellence and responsiveness of state school education programs
3. offer a unique and different model of education
4. provide exemplars of high quality teaching and other leading educational practices
5. add value to the state education system through leading innovative practice (e.g. new ways of working with universities; young scholars program; Year of Creativity activities; industry engagement etc.)

From these principles, specific questions were formulated by the Department. They probed the academic, career and personal outcomes for academy graduates; stakeholder perceptions of the effectiveness of the academies; and the effectiveness of the academies in adding value to the public education system in Queensland.

## **A methodological note**

The evaluation was informed by a multi-method approach (Creswell & Plano Clark, 2007; Greene, 2008) mandated in the project brief. Such an approach sought not so much a “convergence and consensus” but instead provided “opportunities for respectful listening and understanding” among evaluators and participants (Greene, 2008, p. 20).

## **Data collection**

Scoping visits to each academy were undertaken in September 2009. From September 2009 to February 2010, data collected were inclusive of:

- Quantitative reports and surveys provided by the Department
- Artefacts from three academy sites
- Graduates’ perceptions of academic, career and personal outcomes collected via an online survey
- Interview data collected via semi-structured face-to-face and telephone interviews

Data from the Department of Education and Training consisted of:

- School opinion surveys (parents, staff workforce, staff workplace dimensions, students)
- Reports e.g. annual from each academy, enrolment progress reports and enrolment demographics
- IB subject analysis worldwide comparisons
- Information based on the 2008 Year 12 Outcomes Report – All State Schools
- Numbers who left academies
- IB Diploma Programme statistical bulletins
- *Next Steps* 2009 report – Main destinations of 2008’s Year 12 completers for QACI, QASMT, Government schools and Queensland and *Next Steps* 2009 report and questionnaire; Report of IB Performance data 2008 exit cohort
- Statistics of QTAC offers made to graduates from the 2008 cohorts of QACI and QASMT;

- Academies Steering Committee Papers and Reports (assorted, including 2008 Cohort Analysis report)
- Support and Intervention strategies for Students
- Year 12 Final Results Summaries 2008
- Year 12 Preferences, Achievements, QCE for 2008 completers
- A progress report and briefing notes for evaluators on 2009 Year 12 graduates academic outcomes (including IB results, QCE results, QCS results, tertiary entrance scores, career pathways and student achievements e.g. scholarships awarded)
- Enrolments for all academies Years 10-12 for 2008, 2009 and as at April 2010
- Young Scholars' Program content and brochures
- Other assorted data e.g. statistical bulletins

A range of printed artefacts included e.g. news articles; brochures and booklets; PowerPoint slides; meeting agenda items; and other items collected during the scoping and further fieldwork visits to each site in February 2010.

### Evaluation Participants

Following these visits, the evaluators negotiated via Departmental officers and the Principals of each academy to select people from the following groups of stakeholders connected with the academies:

- Past students (n=149 from 2008 and 2009 Graduate cohorts)
- Current students (n=39; Years 11 and 12 in 2010)
- Principals and Staff (n=33)
- Parents (n=22)
- University (n=9)
- Industry and Community (n=5)

The table below records the total number of respondents who participated directly in the evaluation.

*Table 1.2: Evaluation Participants*

<b>Respondents</b>	<b>Number</b>
Graduates	149
Academy staff & current students	72
Parents & Other Partners (university, industry, community)	36
<b>Total</b>	<b>257</b>

Recruiting graduates from both 2008 cohorts (QACI & QASMT) and the more recent 2009 cohorts (QAHS, QACI, QASMT) took understandably longer than was possible within the evaluation timeframe which included the summer break, potentially posing a threat to high response rates. Accordingly, an online survey method was deemed the most suitable data collection tool. This was made available to every graduate from the 5 cohorts who could be located and invited to participate within the time available.

### Data Analysis

The Department of Education and Training provided a series of questions to guide the data analysis phase as part of the scope of the evaluation framework.

Documents, notes and interview transcriptions were subjected to an initial content analysis. They were then coded for categories and themes grounded in the data. Axial coding explored convergences and divergences which were then used to create analytical points relevant to the evaluation questions, probes and principles. Orienting information was identified via key context-dependent details in the text and excerpts from interviews were selected as evidentiary quotes.

Data from the survey with the 2008 and 2009 graduates were imported into PASW Statistics version 17. Responses to open-ended questions and 'other' options within questions were coded where applicable. All percentages are reported on 'valid percent' where applicable and all multiple response questions have percentages reported as a 'percent per case' basis. The data were further analysed using Pearson's Correlation Coefficient, KMO and Bartlett's test of sphericity, Exploratory Factor Analysis (EFA) and Multiple Regression Analysis.

### **Ethical procedures**

All data collection and analysis procedures were undertaken within the guidelines for the ethical conduct of research. The approach was approved by CQUniversity's Human Research Ethics Committee (HREC Approval Number Project H09/09-054) and the Department of Education and Training, Queensland. Throughout the project, regular communication was maintained with the officers charged with the oversight of the evaluation on behalf of the Queensland Academies' Evaluation Steering Committee.

### ***Report Structure***

The chapters that follow address the specific focus of the evaluation required by DET and provided to the evaluators. Chapter 1 examines the academic outcomes as measured by the International Baccalaureate (IB) results achieved. Chapter 2 presents the views of graduates from the first cohort of Year 12 completers in 2008 and the second cohort who completed Year 12 in 2009. Views of the selected parents, students, staff, university, industry and community stakeholders are provided in the following five chapters (Chapters 4, 5, 6, 7, 8). Chapter 9 investigates the effectiveness of the academies in adding value to the public education system in Queensland. Chapter 10 reviews research related to specialist schools and school size in terms of the ways in which their characteristics may explain findings from the previous chapters. Chapter 11 offers conclusions and recommendations for future development of the academy model.

## Chapter 2

### Academic Outcomes

The purpose of Chapter 2 is to examine the intent, processes and outcomes of the International Baccalaureate (IB) in the academies program. The starting point is to locate the IB in the context of worldwide developments. Programs offered by the International Baccalaureate Organisation (IBO) are summarised with particular attention to the Diploma. IB outcomes at the three academies are then reported with a focus on 2009 since this was the first occasion all three academies presented candidates for the Diploma. Attention is then drawn to the need for care in making comparisons within Australia and beyond, especially in relation to World Average performance. A summary of international research on the IB is provided and this sets the stage for looking at a broader range of outcomes for the three academies, including pathways to universities. Particular strategies at each academy to strengthen performance are summarised.

Subject to a range of qualifications, it is concluded that the three academies have done well in the early years of implementation given that most staff have not had previous experience with the IB and that the initiative is pioneering in Australia in that this is the first time state high schools have offered the IB on an exclusive basis.

#### *The worldwide scale of the International Baccalaureate*

The IBO is a non-profit education foundation headquartered in Geneva. It was founded in 1968 at the International School of Geneva. It was initially designed to offer a single program to serve the needs of internationally mobile students preparing for university. The IBO now offers three programs worldwide; in 2009 at 2,822 schools in 138 countries for 778,000 students (these statistics and other information in this section are drawn from the IB website at [www.ibo.org](http://www.ibo.org)). The three programs are the Primary Years Program (PYP), established in 1997 for students aged 3 to 12; the Middle Years Program (MYP), established in 1994 for students aged 11 to 16, and the Diploma established at the outset in 1968 for students in the final years of secondary school. It is the Diploma that is offered in the Queensland academies.

The number of programs offered by the IBO is increasing rapidly. Data are available for enrolments across the world in February 2010, as summarised in Table 1, and these show a global increase over 12 months in enrolments across all three programs of 12.18 percent, with the highest rate of growth (24.28 percent) being in the PYP. The number of programs exceeds the number of schools since some schools offer more than one program.

*Table 2.1: Increase in the number of programs of the IBO from 2009 to 2010*

(Source: [www.ibo.org](http://www.ibo.org))

Program	2009	2010	Increase (%)
Primary (PYP)	495	615	24.28

<b>Program</b>	<b>2009</b>	<b>2010</b>	<b>Increase (%)</b>
Middle (MYP)	679	748	10.16
Diploma	1873	2055	9.72
<b>Total</b>	<b>3047</b>	<b>3418</b>	<b>12.18</b>

Of the 2,822 schools offering programs in 2009, by far the largest number (1072) were in the United States, followed by Canada (290), United Kingdom (217) and Australia (127). The total of 1,706 schools in these four countries represents 60.45 percent of all IB schools worldwide. Among the 127 schools in Australia, program offerings were 53 for the PYP, 47 for the MYP and 59 for the Diploma. Schools are grouped into three regions: Americas; Asia Pacific; and Africa, Europe, Middle East.

While the first IB schools were predominantly international private schools, the IBO reports that more than half of all schools across the world offering its programs are now state (public or government) schools. In the UK, for example, of the 132 schools that offered the IB Diploma in 2008, 56 percent came from the state sector while 44 percent come from the private sector (IBO, 2008b). Australia remains an exception to this pattern as most IB schools in this country are in the private non-government sector. It is only recently that state governments have permitted public schools to offer an IB program and then only as an alternative to the state or territory based curriculum. Queensland is the only state or territory to allow a government school to exclusively offer an IB program: the three academies which offer the Diploma.

### **The Diploma**

In general terms, the IBO states that its programs are intended to 'help develop the intellectual, personal, emotional and social skills to live, learn and work in a rapidly changing globalizing world'. Its mission statement is more specific: 'to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect'.

Students taking the Diploma must choose six subjects. There must be one subject from each of Groups 1 to 5: Language, Second Language, Individual and Societies, Experimental Sciences, and Mathematics and Computer Science. The sixth subject may be chosen from Group 6, which is the Arts group for which four subjects are available: Film, Music, Theatre and Visual Arts (Dance is currently being piloted by the IBO), or it may be another subject from Groups 1 to 5. Subjects are offered at either standard or higher level. Students are normally required to undertake at least three subjects at the higher level.

In addition to these six subjects, students are required to successfully complete three core elements: Extended Essay (EE); Theory of Knowledge (TOK); and Creativity, Action, Service (CAS).

The maximum score for any subject is 7. The maximum score for performance in the six subjects is thus 42. An additional three points are awarded on the basis of outcomes in TOK and EE. The

maximum score for the overall program is therefore 45. Students must receive a score of at least 24 to receive the Diploma. Students who are awarded the Diploma also receive the Queensland Certificate of Education (QCE). Students not awarded the Diploma, that is, their scores fall below 24, may be eligible to receive the QCE if they meet the criteria for the award of the certificate. For the 2008 cohort completing at QACI and QASMT, 93 percent of students qualified for the QCE (DETA, 2009).

Two observations about the programs offered by the academies are helpful at this point. The first concerns QACI which, unlike its counterparts, offers a specialisation that is in fact an option under the Diploma requirements, namely, Group 6 (Arts). QASMT and QAHS are academies whose specialisations fall entirely in Groups 1 to 5. The other observation concerns the IBD score that is converted to a university entrance ranking by QTAC. There is a perception that this conversion unfairly disadvantages IBD holders. A view that was consistently shared in the course of the interviews was that the benchmark entrance score for Oxford University was lower than that for Queensland universities. The reasons for this perceived disparity were not explained in the course of the review.

### **IB outcomes at the three academies**

IB outcomes at each of the three academies and in some instances for all three together have been meticulously documented, with detailed breakdowns by subject and strategies for improvement. The general patterns are reported here. Reasons why caution should be exercised in drawing conclusions are given in a separate section that follows.

Detailed reports contain comparisons with World and Australian average scores. These means are provided in reports of the Asia Pacific Region of the IBO. It is helpful to provide these for outcomes of the IB in November 2009 (the first occasion all three academies presented candidates), as reported in the regional newsletter of January 2010 (Asia Pacific Region, 2010), along with outcomes as reported by the three academies, as set out in Table 2.

*Table 2.2: IB Outcomes for 2009 as reported by IBO*

*(Asia Pacific Region, 2010) and the three academies*

<b>Average</b>	<b>World</b>	<b>Australia</b>	<b>QACI</b>	<b>QASMT</b>	<b>QAHS</b>
Score	30.85	34.08	31.25	32.7	32.8
Award Rate (%)	80.15	92.99	91.67	93.93	79.69

Each of the three academies achieved an average score slightly above the World Average and slightly below the average for Australia. The award rate among eligible students at QACI and QASMT was well above the World and Australia rates, but rates at QAHS were slightly below the World rate and well below the Australia rate. The following are patterns as set out in reports prepared by each academy.

## QACI

- There was a high retention rate across the year with 34 on Day 8, 33 on October 7 and 33 completing. Attrition for the cohort is minimal with 37 commencing on Day 8 in 2007, 35 on Day 8 in 2008, and 34 on Day 8 in 2009.
- Of 33 completing, 24 were eligible to take the Diploma
- Of the 24 eligible students, 22 or 92 percent attained the Diploma. The rate in 2008 was 39 of 40 eligible students or 97 percent
- The average subject score in 2009 was 4.95 compared to 4.83 in 2008
- Average subject scores ranged from a low of 4.33 to high of 6.65
- For the Extended Essay, 20 percent scored higher than a C (World Average 39.24 percent) compared to 50 percent for the 2008 cohort
- For Theory of Knowledge, 33.3 percent scored higher than a C (World Average 42.11 percent) compared to 40 percent for the 2008 cohort

## QASMT

- There was high retention across the year with 72 on Day 8, 71 on October 7 and 71 on completion. Attrition for the cohort is noteworthy with 114 commencing on Day 8 in 2007, 85 on Day 8 in 2008, and 72 on Day 8 in 2009
- Of 71 completing, 66 were eligible to take the Diploma
- Of the 66 eligible students, 62 or 94 percent attained the Diploma. The rate in 2008 was 66 of 81 eligible students or 81 percent.
- The average subject score in 2009 was 5.23 compared to 4.84 in 2008
- Average subject scores ranged from a low of 4.21 to a high of 6.00. The low score was in Mathematics (Higher Level) which was below the World Average of 4.81. The average score in Mathematics (Standard Level) was 4.54, the same as the World Average.
- For the Extended Essay, 59 percent scored higher than a C (World Average 39.24 percent) compared to 29 percent for the 2008 cohort
- For Theory of Knowledge, 59 percent scored higher than a C (World Average 42.11 percent) compared to 6 percent for the 2008 cohort

## QAHS

- There was high retention across the year with 74 on Day 8, 71 on October 7 and 70 on completion. Attrition for this first cohort is noteworthy with 107 commencing on Day 8 in 2008.
- Of 70 completing, 64 were eligible to take the Diploma
- Of the 64 eligible students, 51 or 79.7 percent attained the Diploma
- The average subject score was 5.2
- Average subject scores ranged from a low of 4.00 to a high of 7. The average subject score for Mathematics (Higher Level) was 4.3 which was below the World Average of 4.67. The average score for Mathematics (Standard Level) was 4.8 compared to the World Average of 4.55.
- For the Extended Essay, 44.6 percent scored higher than a C (World Average 39.24 percent)

- For Theory of Knowledge, 23 percent scored higher than a C (World Average 42.11 percent)

At first sight, the relatively low success rate at QAHS is of concern but it needs to be borne in mind that 2009 was the first year in which a cohort had completed the Diploma. This difference should also be taken into account in other observations about outcomes at QAHS. It was noted in interviews that there was an overly optimistic prediction of final results, suggesting that expectations were set too high in the first year that students sat for the Diploma and / or that staff did not yet have a sense of standards for different subjects. As noted elsewhere in this report, there was evidence that setting too high an expectation in the first year was also evident at QACI and, especially, QASMT. Strategies to assist staff at QAHS get a better sense of expectations and standards were described during interviews, including seeking expert assistance from the IBO. The Target 40+ strategy to personalise learning with mentoring support was introduced at QAHS in 2009 and will be continued in 2010. Mentoring has been an ongoing feature of the intensive academic support for students at QACI.

Noteworthy in these summaries is the volatility of performance in the Extended Essay (EE) and for Theories of Knowledge (TOK). Performance at QACI was below the World Average in 2009, especially for the EE (noted by QACI as a 'risk' in its data and outcomes report) whereas performance at QASMT was well above World Average for both EE and TOK. Performance at QAHS was just above World Average for the EE and considerably below World Average for TOK.

QASMT noted in its data and outcomes report for 2009 that student attrition rates were also a 'risk'. Data reported by the Australian Bureau of Statistics (2009) for all schools across the state are helpful indicators although reporting dates may be different. Day 8 enrolments are reported by each academy. For the 2009 cohort at QASMT, retention from Year 10 to 11 was 75 percent compared to 88 percent for all schools in Queensland. Retention from Year 11 to Year 12 was 85 percent compared to 83 percent across all schools. Data on retention from Year 11 to Year 12 at QAHS is also illuminating, being 69 percent for the 2009 cohort compared to 83 percent across all schools. QAHS data are reported from the first cohort only and 2010 trend data suggests retention of 89.5 percent which is above 83 percent apparent retention rate across all schools in the State. The situation at QACI is positive, with retention from Year 10 to Year 11 being 95 percent compared to 88 percent for all schools; from Year 11 to Year 12 it was 97 percent compared to 83 percent for all schools.

Other comparisons are of interest. Information was provided on the percentage of eligible students who attained the Diploma in 2008 at the two presenting academies and the two state high schools that offer the IB as an option. These rates were 91.7 percent (11 of 12) at Indooroopilly State High School, 93.8 percent (15 of 16) at Mountain Creek State High School, 90.4 percent (66 of 73) at QASMT, and 97.5 percent (39 of 40) at QACI. Except for the relatively high rate at QACI, the differences are not noteworthy in the absence of further information about the characteristics of students at the two state high schools.



## ***The need for care in making comparisons***

### **International comparisons**

It was asserted by several interviewees that students in the academies tended to be younger than others around the world, with local students being about 16 years only compared to international counterparts who were around 18 years of age. The example usually cited was Sweden, and this may indeed be the case, but it should be borne in mind that students in Scandinavian countries normally start school at the age of 7. The age of academy students is more likely to be about the same as those in the United States, Canada and the United Kingdom which, together with Australia, have about 60 percent of IB schools worldwide.

The comparison with Sweden was normally made in the context of discussions about how well students in the academies are doing in a global context. The results for the IB for each of the academies (and other state schools that offer the IB as an option) are always presented in reports in comparison with worldwide results, as summarised in the previous section. The mean scores are compared overall and for each subject. These comparisons were generally favourable for each of the three academies, particularly so at QACI and QASMT. Care should be taken in making these comparisons given that in 2009 a total of 138 countries had IB schools and only three (United States, Canada and the United Kingdom) are more or less comparable in general and educational terms. Comparisons of mean scores for state schools in each of the four countries would be a better basis of making judgements about the performance of academy students in an international context.

### **National comparisons**

Care should also be taken in comparing performance on the IB with other schools in Australia. The first reason, and perhaps the most significant, is that the three academies are selective schools, and selective schools tend to outperform non-selective schools assuming comparability on other factors. This is illustrated most graphically in the Australian setting by the performance of selective and non-selective schools in examinations at the end of secondary schooling. Performances in two states are noteworthy. In examinations for the HSC in New South Wales in 2009, of the top 12 schools in terms of the percentage of students who scored more than 90 in 2009, 7 were selective government schools, 4 of which were the top ranked schools, and 5 were non-government schools. In examinations for the VCE in Victoria in 2009, of the top 12 schools in terms of the percentage of scores over 40, 2 were selective government schools (at the time the only two selective government schools in the state), which were ranked second and third, and 10 were non-government schools. Comparable data are not available for Queensland since, apart from the academies, there are no selective government schools.

Overall, in both New South Wales and Victoria, non-government schools tended to out-perform government schools in rankings for HSC and VCE, respectively, and other considerations aside, the socio-economic background of students is an important factor. Of the top 12 schools in the Queensland ranked according to percentage of students with OP 1-15, (excluding schools with less than 50 OP eligible students) all were non-government schools (QSA, 2008).

Evidence of impact of private schooling and the association with socio-economic background may be found in the UK where each of the top 30 IB schools that were ranked according to mean scores of student achievement was from the private sector (Best Schools, 2009). An investigation of the level of educational attainment in the UK found that attendance at a selective school (public grammar school or a private school) has a significant positive impact on the educational outcomes of those students (Dearden, Ferri & Meghir, 2000). The possible reasons for the observed increase in educational attainment were described:

We are not able to distinguish which aspect of grammar schools and private schools enhances educational outcomes. The fact that pupils in these schools seem to do better, even conditional on our observables, may have something to do with the way teaching is organised, or possibly with the type and quality of teachers that such schools attract. If this could be shown to be the case there are important lessons to be learned from such schools. An alternative possibility is that by selecting high ability pupils, the schools create an environment of highly motivated pupils generating strong peer pressure to achieve. (Dearden, Ferri & Meghir, 2000, p. 24)

The last reason posited by Dearden, Ferri and Meghir on highly motivated students is consistent with views expressed by teachers and students during interviews at the three academies. While more detailed research on the foregoing has not been undertaken, and is beyond the scope of this evaluation, it is likely that the higher mean performance on the IB for students in Australia compared to their international counterparts, is partly explained by most schools offering the qualification in Australia being non-government schools whereas most schools internationally are now government schools. Also, it is likely that the strong performance of the three academies compared to international counterparts is partly explained by the selective nature of their intakes.

Nevertheless, what has been accomplished in a relatively short time in the three academies is noteworthy.

### ***International research on the IB Diploma***

The International Baccalaureate Organised commissioned and published a review of research on the outcomes of the IB Diploma programs around the world. *A Review of Research relating to the IB Diploma Programme* was published in 2008 (IBO, 2008a). While comparative analyses with non-IB programs are generally favourable, there is a timely and appropriate caution about drawing conclusions about causality. The key findings are summarised here to provide a foundation for a closer examination of outcomes at the three academies, including success in students proceeding to university.

Students who participate in the IB Diploma show an increase in offers for university placement, higher acceptance rates, perform well in International Students Admissions Test (ISAT), high level of degree completion and report feeling well prepared for university (IBO, 2008). A study of the comparison of over 52,000 applicants with IB qualifications (4,599) and 'non-IB' qualifications (51,7556) for a full-time undergraduate course at UK universities and colleges was undertaken on data from 2005 (UCAS, 2007 as cited by IBO, 2008). An increase of 5 percent was observed in

applications that received an offer for students with IB qualifications in comparison to those students with non-IB qualifications (UCAS, 2007 as cited by IBO, 2008). Although, a larger percentage of students with non-IB qualifications (77.7 percent) were seen to gain a place in higher education than those with IB qualifications (70.7 percent) (UCAS, 2007 as cited by IBO, 2008).

IB Diploma holders in the US and Canada showed higher acceptance rates than non-IB applicants (IBO, 2008). Two groups of Malaysian IB students in 2003 (n=541) and 2004 (n=277) performed very well on the International Students Admissions Test (ISAT) (Lai & Nankervis, 2005 cited by IBO, 2008). A study of 12 universities in the US found that successful completion of an IB Diploma program was a predictor of the completion of a first degree at university (Thomas, 1999 as cited by IBO, 2008). Canadian IB students who had graduated from university reported that their participation in IB had 'prepared them well' for post-secondary education (Taylor & Porath, 2006 cited by IBO, 2008). The above findings suggest that the IB Diploma may encourage student participation and success at University (see also Chapter 3).

University staff indicated a confidence in the ability of IB Diploma students for university studies (IBO, 2008). Interviews and surveys of 20 Pro-Vice Chancellors in UK Universities found that the institutions showed 'considerable enthusiasm for the IB Diploma Programme and confidence that the students who pursued it were well prepared for university study' (Jenkins, 2003 as cited by IBO, 2008, p.10). Open-ended survey analysis of 159 senior academic and administrative university staff at Australian and New Zealand universities found that many respondents commented that the IB 'enhances university students' academic competence and capability' and provided a university preparation that is 'as good as or better than that of the state certificates, or of other international certificates' (Coates et al 2007, cited by IBO, 2008). Students who participated in the IB were highly regarded by university staff in terms of performance in further studies (see also Chapter 7).

As far as 'value added effects' of the IB are concerned, a review of the research relating to the Diploma found that:

There is currently a dearth of valid and reliable knowledge addressing the 'value-added' effects of participating in the IB Diploma Programme . . . It is also unclear whether or not students following the IB Diploma Programme in two different schools are really pursuing the same programme of study. This is because one school might be non-selective, offering an open access whole-school programme, whereas another might be selective, offering a restricted access school within a school programme. The values and assumptions underlying the criteria for entry to the programmes of study are different in either case. (IBO, 2008, p. 23)

Linking participation in the IB Diploma Programme to observed outcomes can be naive and simplistic because it is methodologically unclear whether participation in a given programme of study is a direct antecedent of outcomes, or whether both participation and outcomes are confounded with another variable. (IBO, 2008, p. 22)

Kiplinger acknowledged the above-mentioned complexity within his study:

The question that this study seeks to answer is whether the higher academic achievement is most likely due solely to selection effects such as academic ability and prior achievement,

motivation, family background characteristics, etc., or whether the IB program has a unique, value-added effect on student achievement and growth. (Kiplinger, 2005 cited by IBO, 2008)

### ***Other IB-related indicators of performance of students at the three academies***

The review of research summarised above provides a starting point for a closer examination of outcomes at the three academies. The review found that students who participate in IB Diploma show an increase in offers for university placement, higher acceptance rates, perform well in International Students Admissions Test (ISAT), high level of degree completion and report feeling well prepared for university (IBO, 2008). It is only possible at this point to report on the first of these as far as destinations of Year 12 students at QACI and QASMT are concerned.

Queensland conducts an annual *Next Step* Survey and 2009 was the fifth occasion it has done so. Data were provided in the course of the evaluation for QACI and QASMT and comparisons are possible with destinations for Year 12 completers from government schools and all schools (Education Queensland, 2009). Reported here is the percentage of completers who proceeded to a university degree, since this was a major expectation for parents and students and it was included in the findings of the international research cited above.

For the first graduate cohort from both academies, at QACI 31 of 42 completers responded (73.8 percent) and 18 (51.06 percent) reported they were now undertaking a university degree. For QASMT completers, 77 of 83 responded (92.8 percent) and 63 (81.82 percent) reported they were now at university. The percentages of completers who proceeded to university at both QACI (51.06 percent) and QASMT (81.82 percent) are far above those for completers from government schools (25.73 percent) and for all schools (35.3 percent). These outcomes are elaborated further in discussion on the first cohort in Chapter 3 (see Table 3.1 Main Destinations of Year 12 completers).

These findings are consistent with the international research but care should be taken in imputing causality as far as the IB is concerned. No data are available about progression to university of students who participated in non-IB programs in government and non-government schools who had the same intake characteristics of those who chose and were accepted at an academy.

### ***Strategies to strengthen performance***

An outstanding feature of work at each academy is the meticulous way in which data are kept and strategies are formulated to help lift performance. Approaches to improvement in each subject are discussed and the outcomes documented. A highly personalised approach is emerging as exemplified in Target 40+ at QAHS, an important initiative because performance of the first intake to complete the IB in 2009 fell below expectations and below predictions. Target 40+ is a set of strategies for Year 12 students to help lift performance, characterised by personal learning plans that reflect interests and aptitudes, guided by a survey that students complete with their parents. The scheme got under way in 2009. Students entering Year 12 in 2010 responded positively during interview.

Information was provided about a systematic approach at QASMT that was introduced toward the end of 2009, with staff organised in planning teams that meet regularly. A two-day workshop of heads of departments prepared a matrix of roles and responsibilities to ensure a whole-of-school approach. A three-day conference of all staff helped achieve a higher level of alignment on a range of matters. As for all government schools, staff must now have a personal professional development plan that links to school priorities.

As reported elsewhere, surveys of parents, staff and students have yielded generally positive outcomes. Areas where ratings fall below those of like and all schools are reported and followed up. Responses to open-ended questions are addressed in similar fashion.

Each academy also reports reasons why students withdraw from the school, and this is important given the rates of retention reported earlier. For example, retention from Year 10 to Year 11 is of concern at QASMT; as was retention from Year 11 to Year 12 at QAHS with its first cohort. QAHS 2010 trend data suggest this situation has altered with subsequent cohorts (see Chapter 1, Table 1.1 Queensland Academies' Enrolments 2008-2010). Responses in surveys and interviews provide a partial if not substantial explanation, including distance of travel and unsuitability of the IB program after early experience.

## ***Summary***

It is fair to conclude that the three academies have generally performed well in initial outcomes in the Diploma program. Most teachers have not been involved an IB program before their appointments to these schools. It was reported (DETA, 2009) that 'advice from IBO Australia is that all schools in Australia with averages 35-39 have been offering the IB Diploma for a minimum of 5 years'. However, comparisons with World Averages should be made with care given that these are selective schools. Similar caution is required in attributing causality to the high participation rate of Year 12 completers in degree programs at university compared to government schools and all schools across the state. Detailed analysis at the academy level points to unevenness of performance among subjects and the initial success rate for the 2009 cohort at QAHS is noted.

However, these issues are being tackled in a comprehensive and transparent manner, with increasingly personalised approaches to lifting the performance of individual students, and systematic approaches to building professional capacity. Because of the academies' selective entry requirements, attrition rates in any given cohort cannot be off-set by incoming enrolments from other schools. These qualifications should be understood in the wider context of generally very high levels of parent, staff and student satisfaction, as reported in surveys and interviews, and the evidence that powerful learning communities have been created at each site in a relatively short period of time.

## Chapter 3

### Career and personal outcomes

The purpose of Chapter 3 is to report on graduates' perceptions of the ways in which the academy education and social experiences impacted their career and personal outcomes since leaving school. Data accessed include: Department of Education and Training briefing notes and 2009 graduates' outcomes; results from a DET survey undertaken by Year 12 completers from the 2008 cohort; the *2009 Next Steps* survey (Queensland Government, 2009); specific data from the *2009 Next Steps* survey provided to the evaluation team (Education Queensland, 2009); and the results from an online survey questionnaire developed and conducted by the evaluation team with graduates from both 2008 and 2009 cohorts.

At the outset, a number of caveats are necessary in relation to data interpretation. These different data sets are drawn from varying numbers of participants at different times with no means of direct correlations among and within the relatively small participant cohorts. The survey instruments themselves were constructed from different bases and analysis frameworks. Care should be taken about imputing causality from the findings. Accordingly, descriptive analyses only are presented in the text that follows.

The career and personal outcomes of Year 12 completers are now presented sequentially according to year of graduation from an academy. The first cohort graduated from QACI and QASMT in 2008 while the second cohort graduated from QACI, QASMT and QAHS in 2009.

#### ***The First Graduate Cohort***

As noted in Chapter 1, there were 129 students enrolled in Year 12 on Day 8 in 2008 (84 at QASMT and 45 at QACI).

##### *Department of Education and Training (DET) data*

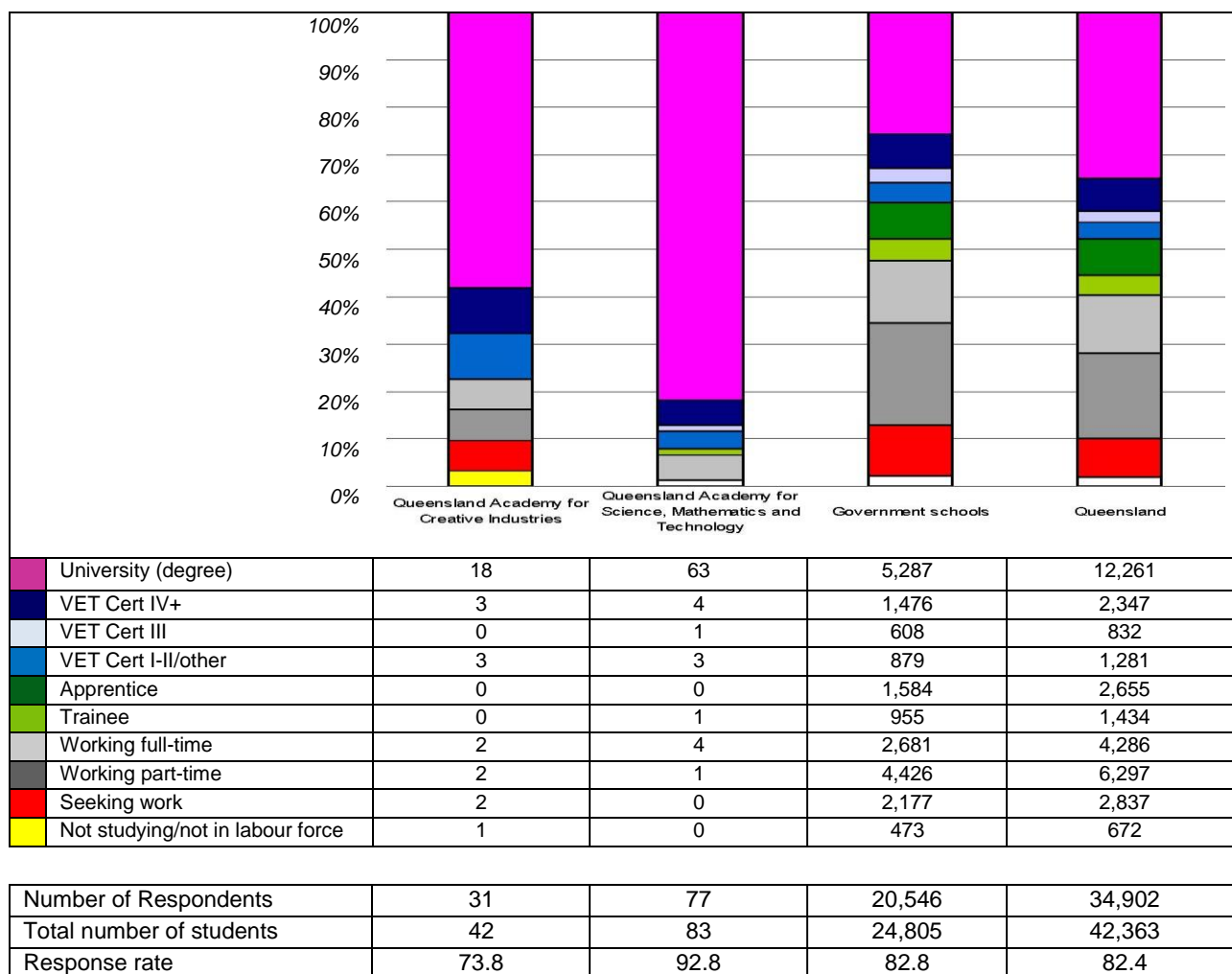
From the DET data, there were notionally slightly more females (55.5%) than males (44.5%) recorded across both academies at the time the 2008 cohort were invited to undertake the *2009 Next Steps* survey. Variables of country of birth and language background were not available for this cohort. These Year 12 completers constituted the first cohort of graduates from the academies to provide their views on the impact of their education and social experiences on post-school career and personal outcomes.

The main post-school destinations of Year 12 completers from QACI and QASMT were extracted from the larger *2009 Next Steps* data set and provided to the evaluation team. Those data pertaining to 'study and work' were reviewed to provide an overview of the programs of study and categories of work undertaken by those who participated in the survey.

From QACI, 42 students completed Year 12 in 2008; and 31 of those participated in the *2009 Next Steps* survey, giving a response rate of 73.8 percent. From QASMT, 83 students completed Year 12 in 2008; and 77 participated, with a response rate of 92.8 percent (see also Chapter 2).

In Table 3.1, QACI data are provided in column 1 and that of QASMT in column 2. They were then tabulated against the main destinations of Year 12 completers from all Government schools (column 3) and those of all Queensland schools, government and non-government (column 4).

Table 3.1 Main destinations of Year 12 completers: QACI, QASMT, Government schools & all Queensland Schools 2009



(Source: DET/Education Queensland, 2009)

The data represented in the table above confirm that the majority of the Year 12 completers from the first cohort proceeded on to university. As was to be perhaps expected, 63 of the 77 (81.82 percent) QASMT graduates went to university while just over half of the QACI graduates (51.06 percent) chose that destination. As noted in Chapter 2, these progression rates are far above those for completers from government schools (25.73 percent) and for all schools (35.3 percent).

The inclusion of vocational education and training (VET) pathways shows that 7 graduates (3 from QACI and 4 from QASMT) were undertaking higher level VET Certificates IV and above, 1 was undertaking a Certificate III, 6 studying Certificates I-II or other (3 from QACI and 3 from QASMT). A traineeship was being undertaken by 1 graduate from QASMT but there is no way of knowing if

that accounted also for the Certificate III enrolment from that academy graduate. However it is reasonable to suggest that may the case, given that traineeships (and apprenticeships) include qualifications at that level. The reasons for these VET enrolments cannot be discerned from these data.

In relation to the study-work patterns of these Year 12 completers at that time, it can be seen that the majority of respondents were studying. Six were working full-time (2 from QACI and 4 from QASMT), while three were working part-time (2 from QACI and 1 from QASMT). Two QACI graduates were seeking work and one was neither learning nor earning. This pattern of study and work suggests that the majority of Year 12 completers in this first graduate cohort progressed directly to university study.

The *Next Steps* survey was conducted in March to May 2009. For this first cohort of graduates, further exploration of their first year experience post-school was undertaken in early 2010.

### **The first year experience**

The first year experience post-school was reviewed via an online survey questionnaire developed and conducted by the evaluation team with contact details provided by the principals from QACI and QASMT. Of the 125 Year 12 completers in 2008, 49 provided responses to a survey undertaken by the evaluation team in January-February 2010. They had come to their respective academies from both state ( $n=24$ ) and private schools ( $n=25$ ). One year after completing Year 12, these graduates were invited to look back on their academy experience and, for those who went directly into tertiary studies, their first year at university. Their views on education and social experiences at an academy are consistent with those expressed in the DET survey undertaken when they completed Year 12 and reported in the previous section. Those particular findings relevant to the first year post-school experience are now provided.

Of those 49 survey respondents in early 2010, 44 were studying at a tertiary institution. Of that group, 41 were studying at a university and three at another training organisation (two were at the National Institute of the Dramatic Arts and one at the Royal Australian Air Force). When asked which university they attended, 93 percent nominated enrolment at a Queensland based university. The University of Queensland (UQ) was in the leading position with 49 percent ( $n=20$ ). A larger percentage of graduates from QASMT were enrolled at UQ, whereas QACI graduates had a more distributed spread across various universities and states.

The *2009 Next Step* report identified the top three tertiary institutions chosen by Year 12 completers from the 2008 graduate cohort across Queensland to be UQ (16.7 percent), QUT (14.7 percent) and Griffith (12.2 percent) (Queensland Government, 2009, p. 29). QASMT graduates matched this preference pattern for UQ; while for QACI graduates, UQ and Griffith were equally preferred. QACI is the academy in particular partnership with QUT and this latter finding resonates with the view of a QUT university representative who wished to see post-school enrolments grow as a consequence of the partnership (see Chapter 7: Views of Universities).

This survey also investigated in which university program graduates had enrolled. In order to simplify the answers given, four main codes were set up. Most graduates had enrolled in a Science



related program (46 percent) followed by the Arts (37 percent), followed by Business (10 percent) and Technology, Engineering (less than 10 percent). The *Next Step 2009* (Queensland Government, 2009) report uses field of study categories that are based on the Australian Standard Classification of Education (p. 25; p. 84). The programs of study align with the fields of:

Natural and Physical Sciences (Science)

Creative Arts and Society and Culture (Art)

Management and Commerce (Business)

Engineering and Related Technologies (Technology/Engineering)

In the *Next Step 2009* data, the four fields of Creative Arts, Society and Culture, Management and Commerce, Engineering and Related Technologies, together with Health and Double degrees, comprised the six fields of study that accounted for 75.9 per cent of university enrolments (Queensland Government, 2009, p. 27). The Natural and Physical Sciences field of study was chosen by only 9.3 per cent of the *Next Step 2009* survey respondents (Queensland Government, 2009, p. 27). However for the academies' graduates, it constituted 46 percent of the cohort. Given that 81.82 percent of QASMT graduates progressed on to university (see Table 3.1), it is fair to conclude that they would form the majority in those science oriented study programs.

These 49 graduates from the first cohort who responded in early 2010 after one year post-school, were all studying full time (n=49). Thirty-nine (39) of those were studying on campus at their respective tertiary institutions.

They were also asked if they were thinking of changing to another program to which a small percentage (19.5 percent) stated that they had. The majority of those who were thinking of changing their study program came from the Arts. Upon asking the reasons for their thinking, most stated that their course did not interest them or that they needed to take this pathway in order to get into the program of their choice. Only two out of this cohort further stated that if they were going to change their program of study, then they would have to change to another university.

Attributes of the International Baccalaureate that they believed impacted their study skills and coping mechanisms during this first year university experience were sought. Respondents had to rate each statement using the same scale from one to seven, whereby one stood for "very strongly disagree" and seven stood for "very strongly agree". Both cohorts (QASMT and QACI) considered that the academy experience had prepared them well for university in comparison to their peers in the particular program of study. Furthermore, they believed that their academy learning experiences helped them to be more in control of their studies, leaving them less stressed compared to peers at university.

Aspects of research skills, time management skills and being more disciplined did divide the two groups. QACI graduates had a somewhat more positive view when compared to their QASMT counterparts. The data indicated that former QACI students agreed that their university studies had benefited from '*having developed research skills*' as a direct result from having attended QACI (a mean of 6.05). QASMT graduates had a more modest view on this aspect with a mean reporting 4.84. The QACI graduates scored a mean of 5.53 in their view of '*gaining good time management skills*' during their study at QACI whereas the QASMT cohort achieved a mean of 4.28, indicating a slightly less agreeable view.

The claim that, through a focus on discipline, the IB curriculum experiences enabled graduates to see the benefits of their current studies for future opportunities was again seen more positively by QACI graduates. QACI graduates scored a mean of 5.32 compared to QASMT graduates who scored a mean of 4.40. The majority of these 49 respondents agreed that *being able to cope with stress* was one of the leading benefits (74 percent of respondents) when continuing with further studies. Other benefits included: *'learning to prioritise work'* (70 percent agreement); *'becoming a critical thinker'* (66 percent agreement); and *'being able to cope with challenges that life can throw at you'* (64 percent agreement). Around 35 percent further stated that the *'ability to study and or work abroad'* was a benefit they had gained from being a student at a Queensland academy that offered the IB.

## ***The Second Graduate Cohort***

The second graduate cohort comprised Year 12 completers from the three academies—QACI, QASMT and QAHS. As already noted, at the time of this evaluation the *Next Step* survey for 2010 had not yet been undertaken. This meant that similar data sets were not available for comparison of career and personal outcomes from the first graduate cohort to the second graduate cohort. Accordingly data have been sourced from DET/Education Queensland (2009) and the survey questionnaire compiled by the evaluation team.

The second graduate cohort of Year 12 completers from the three academies is comprised predominantly of students born in 'Oceania and Antarctica' which includes Australia (125 students). If Asia is taken to include North-East, South-East, Southern and Central areas, then 26 of the 177 academies' graduates were born in Asian countries (DET Corporate Information, CDW Students table, 2009). If the languages from Eastern, Southeastern and Southern Asia are taken together, then 25 of the 177 academies' graduates from this cohort speak an Asian language. There are no Indigenous languages spoken by any of these respondents (DET Corporate Information, CDW Languages table, 2009).

For these graduates, the tertiary entrance scores were provided and are set out in the following table.

*Table 3.2 Tertiary Entrance Scores  
(2009 graduates)*

<b>Academy</b>	<b>No. of students eligible for rank</b>	<b>% rank 93 or better</b>	<b>%rank 70 or better</b>
QASMT	71	61%	100%
QAHS	69	45%	91%
QACI	32	37.5%	97.8%

(Source: DET PowerPoint presentation to Queensland Academies Advisory Committee, 2010)

Given these tertiary entrance scores reported above, a brief overview of some of the destinations chosen by some of the Year 12 completers from the 2009 graduate cohort were also provided by the Department to the evaluation team in early 2010. The include information on IB scores, entrance rankings, universities of choice, programs of study, scholarships awarded and prizes

gained and other meritorious outcomes that are connected with outcomes from Year 12 studies at an academy.

***Destinations: a snapshot***

*(Source: DET 2010)*

**QAHS**

- Four QAHS students have chosen to study with their partner, Griffith University, and were offered unconditional entry into Griffith's Medical Program after completing the Griffith Health Certificate and specific IB subjects.
- One student, who scored in the top 4 percent worldwide and gained 99 rankings, plans to study medical science and has been offered a scholarship from Griffith University.
- Another student, who scored the highest Queensland Academies IB score of 43, received and accepted a scholarship to Griffith University. He is currently enrolled in the Griffith University Bachelor of Medical Science.
- One young woman is one of three national finalists in the 2010 Australian Stockholm Junior Water Prize. She will present her project to the judging panel at the Australian Water Association's Ozwater 10 conference in March 2010. She is also enrolled in the Griffith University Bachelor of Medical Science
- A 2009 QAHS graduate won a full scholarship to, and is enrolled in, Engineering and Commerce at the University of Tasmania.
- Another QAHS graduate, who received a Cancer Council scholarship, is completing a Bachelor of Biomedical Science (Honours) Accelerated at Griffith University. The student took time out between finishing Year 12 and beginning university to travel to Thailand and Cambodia where he volunteered in hospitals.
- A 2009 QAHS graduate and Indigenous student has accepted a scholarship to study a Bachelor of Dental Science at The University of Queensland (UQ).

**QASMT**

- 83 percent of QASMT graduates have opted to commence their tertiary studies at The University of Queensland (UQ).
- Two QASMT students have been offered Dean's Scholarships to Bond University, while another student has received a scholarship for academic excellence to study at Griffith University.
- One particular QASMT graduate who completed a UQ short course in 'Engineers Without Borders' as part of the UQ/QASMT partnership, plans to use her 99 ranking points to study Engineering at UQ.
- A 2009 QASMT graduate, who previous to attending QASMT had not studied Mandarin, is currently studying Mandarin at the University in Shanghai. During semester two 2010, the student will undertake part of a degree in International Relations at the University of British Columbia, Vancouver. He has deferred his Law/Business degree at UQ until 2011.
- A 2009 QASMT graduate is studying Bachelor of Medicine/Bachelor of Surgery (MBBS) Medicine at UQ and Arts/Medicine. The student's Psychology IB results enabled her to receive a credit in her university Psychology course.
- A 2009 QASMT graduate won a scholarship to study Engineering at the Australian National University.
- A 2009 QASMT graduate is studying a MBBS at Monash University.

**QACI**

- Eleven QACI students have completed the QUT START courses which guarantee entry or advanced credit into QUT.
- Two QACI students have gained the maximum 99 university selection rankings and plan to study Business Management and Arts Law.
- One student, an accomplished dancer, singer and presenter who scored a 98 tertiary ranking from QACI, plans to study either Law or Business at UQ and may pursue further study at New York University or University College Los Angeles.
- Two 2009 QACI graduates each received a \$24 000 scholarship and are studying a Bachelor Business/Business Arts and Bachelor of Arts/Bachelor of Law respectively, at UQ.
- A 2009 QACI graduate received a \$6000 scholarship and is undertaking a Bachelor of Arts/Bachelor of Law at UQ.
- A 2009 QACI graduate became the first QACI student to be accepted into the highly regarded Western Australia Academy of Performing Arts (WAAPA), which is associated with Edith Cowan University.

### *University rankings*

Forty-four students achieved the highest possible university ranking score in Queensland (99):

21 from Queensland Academy for Science Maths and Technology (QASMT)

5 from Queensland Academy for Creative Industries (QACI)

18 from Queensland Academy for Health Sciences (QAHS)

### *Scholarships*

20 graduates from the 2009 cohort were offered scholarships to universities including:

- Six students were offered scholarships worth \$24,000 from UQ
- Three were offered scholarships to GU while 33 were offered Early Entry.
- Four were offered scholarships to UQ, one of which was an Indigenous student who entered dentistry
- One student was offered a full scholarship to Engineering Commerce at the University of Tasmania
- One student received an Australian National University scholarship
- One student received an Australian Cancer Council scholarship
- Two students received scholarships from Bond University
- Two students received a Griffith University Dean's scholarship.

### *University entrance pathways*

22 Queensland Academies' graduates (2009) were offered direct entry into university, while other students gained semesters of credit within programs. They included:

- Two students were offered direct entry into UQ's Bachelor of Medicine/Bachelor of Surgery (a course attracting Australia-wide interest, with only 50 places being offered)
- Eleven students were guaranteed entry to QUT after completing the QUT START course
- Four students were offered direct entry into Medicine at GU.
- 12 students gained direct entry into second year at GU
- Students earned 380 semesters of credit at GU (\$500-\$700 per semester of credit depending on the subject)

- An Indigenous graduate is studying a medical degree (while another Indigenous graduate gained one of the scholarships noted above).

These DET data provide a snapshot of the 2009 cohort's post-school pathways into university studies, some of the programs of study, particular universities chosen and scholarships awarded.

### ***The academy experience***

The academy experience was thought to be challenging and stimulating by the majority (91.3 percent) of the 149 graduates from both cohorts who participated in the 2010 survey. Most (90.6 percent) had found the workload to be overwhelming and some (70.4 percent) felt unable to cope with the pressure. Graduates agreed that in this IB learning environment, they were encouraged to: think critically (83.9 percent); think outside the box (81.9 percent); explore knowledge confidently (75.1 percent); think flexibly (74 percent); and in more depth across a wide range of subjects (71.2 percent). The majority of respondents (85.2 percent) agreed that independent learning and research was fostered in this learning environment.

Socially, the majority (83.3 percent) of the 2008 and 2009 graduate cohorts experienced an all inclusive culture. They agreed that they were encouraged to examine different views before forming opinions (78.5 percent) while demonstrating compassion and respect for others (75.8 percent). Communication skills and teamwork were also cultivated by some graduates (69.1 percent) and the presence of like-minded peers was valued by many (77.2 percent). The majority of students from all academies agreed that their social life suffered during this period (just under 80 percent). More opportunities for physical education as part of the academy experience was thought to be important by some respondents (65.8 percent). While acknowledged as competitive, the academy experience was perceived to have prepared just under sixty percent of graduates for university (59.7 percent).

The last section of the 2010 evaluation team survey asked two questions. All respondents were asked to reflect on their education and social experiences during their time at their respective academies and to provide advice for future students. They were then asked to look to their future plans for the next 12 months. Both questions were open-ended and all verbatim responses were coded accordingly.

Across all three academies, the majority of graduates from both cohorts (n=149) advised future students to: learn good time management skills and manage stress as soon as possible (52 percent); be prepared to work hard (44 percent); and not hesitate to seek advice and support from others and network with other students (21.5 percent).

Some verbatim comments are now provided in "*italics*" as examples of views unique to some QACI graduates who specifically mentioned their academy by name. Other outlying comments are provided about the relationship between the IB and OP (overall position for tertiary entrance) score and the relationship with universities. These are distinctive features of the open-ended responses which were not sought specifically in the question but which provide insights into issues raised by other stakeholder groups in this evaluation (see Chapters 4 to 8).

Six QACI graduates had divergent views on the advice they would give to future students.

1. *“QACI provides a phenomenal educational experience that is very much second to none. Being goals-oriented, and being focused on developing an idea of where you want to end up after QACI is important, and allows you to really take advantage of the course. Cherishing the incredible generosity and advice of the industry professionals that I had the opportunity to meet and network with while at QACI has been so crucial in allowing me to achieve my goals, and I am still in touch with several of them. I also very much think that the QUT START program is very much something that should be taken advantage of it - use it to specialise your studies and begin to gain an understanding of what you want to study, even if you do intend to study interstate or abroad”.*
2. *“Only go to QACI if you are interested in the creative industries as a hobby”.*
3. *“If you're moderately good at Music/Art/Theatre/Film/Design...the academy is for you. Take every opportunity given to you. Exploit the resources and teachers given to you. The academy isn't about so called 'teamwork' – it's about you becoming the best. Now, if you're already extremely good at your art form, the academy is not for you. Stay in your high school where you don't have to deal with all time wasting at the academy. You'll have time for socialising, practising and getting a great OP”.*
4. *“Embrace every aspect with positive energy and motivation, even if it may not seem like it benefits your overall outcome (career). Everybody has to do things they don't want to do in life, QACI enabled me to experiment and experience my personal responses to life challenges in a sheltered and comfortable environment. Take your best shot at every opportunity!! It is so very worth it!”*
5. *“You really need to decide if IB is what you want - because QACI is not a school for incredibly talented kids; it's a school for very academic kids with a flair for art subjects”.*
6. *“Dear future QACI student, please do not procrastinate. That is all :)”*

Five other graduates commented specifically on the IB.

1. *“Rethink doing IB if you are planning to do your tertiary study in Queensland/ Australia as the current conversion leaves you at more a disadvantage for not studying abroad. Be prepared to do a lot of work and not get the results initially that you thought you would for the start of the program. If you really do want to do IB always check the results other IB schools have gotten [sic], their consistency, and length of time they have been teaching IB as experience in the program does change the school's ability to teach it from what I have seen”.*
2. *“Don't do it—it doesn't fit in well with Education Queensland structure and QTAC standards and you are no better off”.*
3. *“Don't do the IB. It's not valued in this country and the standards of conversion are not fair and equitable”.*
4. *“Think long and hard about whether or not you want to put yourself through IB. Because if you stay in Queensland for university, you have no advantage over students from regular high schools. SMT has NO special relationship with UQ”.*

5. *"I don't believe QA is worth going to because, although it may prepare you for the heavy workload at uni, the IB score doesn't get enough credit at many unis including UQ".*

This survey of graduates found that an academy experience is not for everyone. In the words of one graduate, *"If you decide that it isn't for you then get out earlier rather than later"*. Discussions with groups of Year 11 and Year 12 students at QASMT in early 2010 shed further light on the issue of unfulfilled expectations reported by some students. While those interviewed did not refer to setting initial expectations at an unreasonably high level, it was evident that they were more sharply focused on academic outcomes than their counterparts in the other academies. This may reflect the interests and aspirations of students who seek to specialise in science, mathematics and technology. They chose QASMT because they wished to be challenged and achieve the best possible IB result to help them gain admission to challenging programs at university. The tenor of these discussions was positive in every sense; it was clear that they relished the challenge while acknowledging that the program did not suit all students, including some who withdrew from the school.

When asked about their plans for the next 12 months, the majority of graduates from both cohorts undertaking the survey stated that they planned to continue full time study (87 percent). Other plans included achieving high marks (40 percent), obtaining some part time work (34.5 percent) and socialising more (20 percent).

## **Summary**

The data suggest that the education an academy provides is considered generally worthwhile in terms of capacity for future university level studies. The learning environment is challenging yet supportive. For those who chose to participate, social experiences made available as part of the Academies' activities were also viewed favourably, although more physical education opportunities were required by some graduates. Social life outside school activities and homework was curtailed and impacted negatively by demands of the IB curriculum.

In summary, these young people have expressed satisfaction with the personal outcomes achieved from their academy experiences. The academies have provided supportive learning environments and positive intellectual challenges with like-minded students in small specialised senior secondary schools. While generally satisfied with their career outcomes, they did not perceive them to be unique in terms of enhanced pathways to university or other tertiary studies.

## Chapter 4

### Views of parents

This chapter presents the views of parents from two sources: analysis of survey data provided by the Department; and interview data gathered by the evaluation team. In the survey data presented in the first section, summaries of the major patterns of responses are provided for each academy and a short discussion of findings and associated issues is presented in each instance. The second section presents findings from qualitative analysis of interview transcripts.

#### *Surveys*

Parents of 125 Year 12 completers at QACI and QASMT (QAHS students had not completed Year 12 at this time) were invited in a survey in early 2009 to comment on the reasons for enrolling their children in an academy, to indicate the extent their expectations were satisfied, and the extent of their satisfaction with the experience.

#### *Reasons*

Parents were given a list of possible reasons for enrolling their children at an academy:

1. My child was strongly motivated to attend the school
2. I preferred the International Baccalaureate curriculum
3. I was attracted to the quality of teaching staff
4. I considered the academy would provide better academic outcomes for my child
5. I preferred the specialist environment (creative industries / health sciences / science maths technology) consistent with the interests or career goals of my child
6. I thought the social environment would suit my child
7. The academy provided a suitable 'tone' (e.g. discipline, uniforms etc) for my child
8. The academy offered a more affordable alternative to exclusive schooling than a private school
9. I thought the academy would strengthen my child's pathway to university
10. I thought the academy would strengthen my child's pathway to future employment

Response alternatives were: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree and Not Applicable.

Overall, responses were received from 73 parents, 33 of whom indicated that their child had been enrolled previously in a private school. With one exception fewer than 10 disagreed that any reason did not apply. The exception referred to the alternative to a private school (reason 8) for which 16 disagreed and 7 felt the reason was not applicable. If the largest number of responses for



each reason is considered the indicator, then parents are strongly agreed on reasons 1 and 9, and agreed on reasons 3, 4, 5, 6 and 10. They are neutral in respect to reasons 2 and 8.

Considering QACI and QASMT separately, 26 parents of QACI students completed the survey, with 15 indicating that their children had previously attended a private school. Less than 10 disagreed with any reason. If the largest number of responses for each reason is considered the indicator, a neutral response was provided for reasons 2, 3, 7 and 8, with strong agreement for reasons 4, 5 and 6.

A different pattern was evident in responses from parents of Year 12 completers at QASMT where 47 parents provided a response, with 18 reporting that their child had previously attended a private school. Again, fewer than 10 disagreed with any reason. If the largest number of responses for each reason is considered the indicator, a neutral response was provided for reasons 2, 7 and 8 (similar to QACI), with strong agreement for reasons 1, 9 and 10 compared to reasons 4, 5 and 6 at QACI. A larger proportion of parents of Year 10 completers at QASMT had expectations in respect to further study and future employment, whereas counterparts at QACI had higher expectations in respect to the specialist nature of the program and the social environment.

### *Meeting expectations*

Parents were invited to indicate the extent to which expectations had been satisfied. The list of items was the same as that above, except that reason 1 above was omitted and a new item 10 in the list below was added.

1. International Baccalaureate Diploma curriculum
2. Teaching staff
3. Academic outcomes
4. A specialist environment (creative industries / health sciences / science maths technology) that suited my child's interests or career goals
5. A social environment that suited my child
6. The right 'tone' (e.g. discipline, uniforms etc)
7. Strengthened pathway to university
8. Strengthened pathway to future employment
9. Setting clearer goals for my child's future learning and employment
10. Provided exposure to other like minded and capable students for my child

Response alternatives were: Exceeded Expectations, Met Expectations, Not Met Expectations and Not Applicable.

If the largest number of responses for each reason is considered the indicator, then expectations were exceeded for item 2 ('teaching staff'). All other expectations were met except for item 2

('academic outcomes) for which 30 considered expectations were not met, although 28 felt they had been.

Considering QACI and QASMT separately, parents of Year 12 completers at QACI felt that all expectations had been met if the largest number of responses for each reason is considered the indicator, with expectations being exceeded for 2, 4 and 10 in the above list.

There was a notably different pattern of responses by parents of Year 12 completers at QASMT who felt that all expectations had been met, with the notable exceptions being 3 ('academic outcomes') and 7 ('strength pathways to university'). If the largest number of responses for each reason is considered the indicator, no expectation had been exceeded. It seems that QASMT parents have a more demanding set of expectations than QACI counterparts and that these were more sharply focused on academic outcomes and pathways to university.

Parents were invited to comment on their responses. In relation to meeting expectations, similar numbers of responses were provided by QASMT parents (29 of 47) and QACI parents (19 of 26). These were generally positive, especially in respect to the quality and commitment of staff, but several were critical of academic outcomes. The following from a parent of a student at QASMT is particularly negative but consistent with the theme of other comments about expectations not being met in this area:

I wish I had never heard about the academy and mentioned it to my child. If only she had stopped at her previous school she would have got the results needed for her tertiary course. She has wasted the last two years and now will have to endure another 12 months of study to get the outcome which we thought the academy would deliver. Very disappointed with the non-support the academy has offered after the results were released and the way the students have been treated like guinea pigs and found out information along the way from other students and not teachers. If only we had have had all the information before entering the academy and doing the IB we certainly would not have accepted the placement at the academy. Will not be recommending the academy or IB to any other students

There were few counterparts to this or similar response from QACI parents who also praised staff at the academy. Several noted that implementation was in the early stages, with one raising the issue of how relevant the IB was to 'creative students':

As the curriculum and the facilities had not been finalised until late in the final year, the inaugural Year 12 cohort were disadvantaged against established schools and even the successive classes at QACI. Unfortunately also, teacher / student personality conflicts had a severely detrimental effect on our student's major / most important subject. Her unfair treatment carried greater weight than we expected with a [sic] 'unbiased' grading system. Absence during at [sic] the time of initial university enrolments meant that it was not financially possible to enrol in Uni for 2009 and the stress experienced in the IB course made a gap year more necessary anyway . . . our student will now be older than most

university first year students when she does go. Foreign travel and study has become a greater attraction though.

While I believe the IB is a great curriculum I am unconvinced that it is right for creative students. As the first cohort the academy has been a real roller coaster of a ride, hopefully it will be a much smoother ride for future students. The academy has pushed my daughter and she now believes she can achieve anything she puts her mind to.

### *Satisfaction*

Parents were invited to indicate the extent of their satisfaction with their child's experience, with 69 providing a response as follows:

- 29 indicated that they were 'very satisfied'
- 22 indicated that they were 'satisfied'
- 5 indicated that he/she was 'neutral'
- 9 indicated that they were 'dissatisfied'
- 4 indicated that they were 'very dissatisfied'

Of the 26 QACI parents who provided a response:

- 19 indicated that they were 'very satisfied'
- 3 indicated that they were 'satisfied'
- 2 indicated that they were 'neutral'
- 2 indicated that they were 'dissatisfied'
- No parents indicated that they were 'very dissatisfied'

Of the 43 QASMT parents who provided a response:

- 10 indicated that they were 'very satisfied'
- 19 indicated that they were 'satisfied'
- 3 indicated that they were 'neutral'
- 7 indicated that they were 'dissatisfied'
- 4 indicated that they were 'very dissatisfied'

### **Discussion**

A review of these responses suggests that the expectations of parents generally coincided with the reasons why the academies were established, but with a spread of responses in respect to them being an alternative to private schools, and that expectations were met, except for the mixed responses related to academic outcomes. Overall 51 of 69 parents reported satisfaction with the experience. It is fair to conclude that the initiative has been positively received by parents. Closer analysis revealed different patterns of responses among the two sets of responding parents, with

those of QASMT being less positive for the extent to which expectations had been satisfied, especially in respect to academic outcomes and pathways to universities. Parents at both academies were conscious that programs were in the early stages of implementation, but there were sufficient numbers of decidedly critical comments to set an agenda for planning in 2009.

The issue of parental satisfaction with outcomes was raised in discussions with the senior leadership team at QASMT in early 2010. There was a general view that expectations for high academic outcomes had been set at an unreasonably high level in the early stages of advertising the general three-academy initiative and that all stakeholders now have a more balanced view of what can be accomplished. While this includes high academic outcomes the amount and intensity of effort required by students is now more widely understood and expectations are more realistic.

The results of the first cohort of students to complete the IB at QAHS became available in early 2010. While overall mean scores were better than Worldwide means, with variations among subjects described in Chapter 2, it was evident that actual outcomes were below predicated outcomes by about 4 points overall and significantly so in several subjects. Discussions with the senior leadership team and teachers in early 2010 suggested that expectations (predictions) had been set at unrealistically high levels. The issue here, similar to that described above at QASMT, may be more related to understanding performance and likely outcomes in the first year of presentation for the IB than anything else. Most teachers were new to the IB. The task then in subsequent years is to get a realistic sense of standards. For example, it seems that a score of 7 (maximum) was predicted for some students in some subjects who subsequently received a 5. As one leader at QAHS expressed it: 'we need to get a clear idea of the standard of work we should be setting and receiving in the two-year program for a student to receive a 7'. Expert assistance will be sought nationally and internationally to help clarify the standards.

### ***Parent satisfaction with the academy experience***

Parent satisfaction surveys are conducted annually for government schools in Queensland. Analyses of responses are conducted for each school, with comparisons made with like schools and all schools in similar fashion to the comparisons presented earlier in this chapter. The surveys are comprehensive, with nine dimensions and a total of 40 items. It is the most comprehensive of the surveys of key stakeholders.

Response alternatives are the same as in other surveys: Very Dissatisfied, Dissatisfied, Neutral, Satisfied and Very Satisfied. Mean ratings were calculated on a scale from 0 (Very Dissatisfied) to 4 (Very Satisfied). Education Queensland determined whether mean scores were above, the same or below those of like schools and all schools, with reports referring to means being 'measurably above', 'no measurable difference' or 'measurably below'.

This section of the chapter provides a summary of ratings for each academy on the survey administered in 2009. These summaries are presented after items in the survey are listed. The low

numbers of survey responses is a matter of concern, so general patterns and broad comparisons should not be assumed to reflect the views of a representative sample of parents. Surveys were sent to parents of students at all levels not just those of completing students.

### *Items in the survey*

#### Student outcomes

1. That your child is making sufficient progress
2. That your child works well at this school
3. That the school is developing your child's numeracy skills
4. That the school is developing your child's literacy skills
5. That the school is developing your child's social skills
6. That your child is getting a good education at this school
7. That the school is developing your child's computer technology skills (from 2004)

#### Curriculum

8. With the variety of school activities available to your child
9. With what your child is learning at this school
10. That the school is preparing your child for the future
11. About the usefulness of what your child is learning at school

#### Pedagogy

12. With the quality of teaching your child receives
13. With the standard of school work expected
14. That the school keeps you well informed on how your child is progressing
15. With the opportunities to discuss what your child is being taught (from 2000)
16. With opportunities to discuss how your child is being taught (from 2000)

#### Learning climate

17. That the school provides good learning opportunities for your child
18. With the encouragement that the school gives to your child
19. With the interest that the teacher(s) take in your child

#### School climate

20. That your child is happy to go to this school
21. About the behaviour of students at this school
22. With student discipline at this school
23. That your child is safe at this school
24. That your child is treated fairly at this school (from 2000)

### School-community relations

25. That the school staff are approachable when you want to talk about your child
26. That you have opportunities to participate in the life of the school
27. That you have opportunities to participate in school decision making
28. That the school makes you feel welcome
29. That the school communicates well with you (from 2001)

### Resources

30. With the school grounds
31. With the school buildings
32. That this is a well equipped school
33. With the access your child has to computer technology at school (from 2004)
34. With the access your child has to the internet at school (from 2004)

### General satisfaction

35. That this is a good school

### Other

36. With the science, technology and mathematics programs at this school
37. With the opportunity your child has to use internet-based resources for learning at school
38. With how environmentally friendly this school is
39. With the methods the school uses to communicate with you
40. That the school staff are responsive to your enquiries

### *QACI (32 surveys returned)*

- Mean scores exceeded 3 on the 4-point scale for all 40 items
- The mean score exceeded that for like schools for 36 of the 40 items, the exceptions being items 2, 8, 30 and 36. The last three of these exceptions are understandable given that QACI is a specialist creative arts school in a high-rise purpose-designed building in an urban setting, with no school grounds
- The mean score exceeded that for all schools for 37 of the 40 items, the exceptions being items 2, 8 and 30 (in this comparison parents were more satisfied than parents in all schools in respect to science, technology and mathematics programs).

### *QASMT (16 surveys returned)*

- Mean scores exceeded 3 on the 4-point scale for 37 of the 40 items, the exceptions being 16, 27 and 38.
- The mean score exceeded that for like schools for 30 of the 40 items, the exceptions being items 14, 15, 16, 26, 27, 28, 29, 38, 39 and 40. All exceptions other than 40 are concerned with lines of communication between the school and the parent.
- The mean score exceeded that for all schools for 29 of the 40 items, the exceptions being the same as for like schools with the addition of 19 which is concerned with the interest teachers take in their child.

#### *QAHS (13 surveys returned)*

- Mean scores exceeded 3 on the 4-point scale for all 40 items
- The mean score exceeded that for like schools for 16 of the 40 items, a notably lower number than for parents at QACI and QASMT, with the exceptions being items 2, 3, 4, 5, 8, 12, 14, 15, 17, 19, 20, 23, 24, 25, 26, 27, 28, 29, 35 and 40
- The mean score exceeded that for all schools for 16 of the 40 items, also a lower number than at QACI and QASMT, with the exceptions being items 1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 14, 15, 17, 19, 20, 23, 24, 25, 26, 27, 28, 29, 35 and 40.
- A noteworthy difference from ratings for QACI and QASMT for parents at QAHS is the lower ratings than for like and all schools on the student outcomes items.

It is reiterated at this point that the response rates in the surveys of parents are low, so the general patterns evident in the above should be treated with considerable caution. For example, for QAHS, there were just 13 respondents, but in the previous year there were 30, with a decidedly more positive pattern (for the first point in the above list for QAHS, means exceeded 3 on the 4 point scale for each of the 40 items in the 2008 survey). In general it was evident that each of the academies took account of feedback from parents no matter how small the number of respondents).

### **Discussion**

Ratings by parents were generally very positive, especially for those of parents of students at QACI, which were extraordinarily high on mean scores and comparisons with like and all schools. While still very positive, parents of students at QASMT were not so satisfied on matters related to communication between the school and home. Discussions with the senior leadership team in early 2010 suggested that further work is being done on the community / communications strategy. While it is challenging at all three academies, given the wide geographic dispersion of students, it may be particularly so at QASMT.

Ratings by parents of students at QAHS were less positive than for either QACI or QASMT, with the noteworthy lower ratings on items related to student outcomes. These observations are qualified by the low number of responses at each academy. Ratings cannot be seen as those of a representative sample of parents.

It is noteworthy that levels of satisfaction of parents were generally higher than might be expected given the patterns of response on expectations and outcomes against expectations as reported in previous pages.

## ***Interviews***

Parent stakeholder representatives were selected by academy principals. Interviews commenced in December 2009 and concluded in February 2010. They were conducted via telephone and took approximately 30 to 45 minutes each. Twenty-two (22) parents participated: 7 from QAHS, 8 from QACI, and 7 from QASMT. Given the nature of data collection via interviewing, a response to one question would sometimes blend into the response to another question. Because of the small numbers of participants, there are no assumptions being made that the views expressed in this section are representative of the parent body from all three academies or even one academy. Following coding, the interview transcripts have been search for convergent and divergent views on the major issue from which the semi-structured questions were developed, that is, parents' perceptions of their child's educational and social experience at an academy.

All parents had children who had completed their studies at an academy by the time the interviews took place. QAHS parents were awaiting the results from the first cohort to graduate from that academy. In this section, where words are quoted verbatim from the interview transcripts, they are presented in italics as direct quotations e.g. "*exactly what the IB was, I didn't know*". Other text represents a synthesis of findings from interview data analysis.

These parents' perceptions of the worth or otherwise of an academy education are presented according to the major issues—both positive and negative—that emerged as significant:

- Expectations
- Nature of my child
- Curriculum package
- Quality of teaching
- Social experiences

The parents were also asked to comment on their perceptions of the image of excellence and responsiveness as well as the impact of the Academies' unique and different model of State education for Queensland.

- Expectations

Parents expected an academy to be different from another State or private school. The comments below illustrate the ways in which this expected difference was perceived.

QASMT           ...ensure my child was among "*like-minded students*" with a curriculum  
would ...       that did "*not settle for the lowest common denominator as the benchmark*  
*within the school system*"; and provided for a "*higher level of teaching*".

QAHS           ...be a selective school, in which "*most of the children would have the*



would ... *same kinds of aspirations*". The curriculum's IB system would be "*fantastic*" and "*not really being offered much in Queensland unless you want to go to a fairly expensive private school*". Moreover, "*the calibre of the teachers would be very high*" because "*many would like to teach in such a school*".

QACI  
would ... ... be "*arts based*" and "*encourage further achievement*" by ensuring "*that there would be children of similar ability grouped together*". The curriculum would be "*more academically challenging*" and it would "*offer the creative outlets*" my child "*was interested in*" while giving "*greater opportunities in the future*".

These parents expected the Academies to provide positive learning environments for like-minded students who wanted to achieve their personal bests and realise their full academic, social and creative potential. In most instances, these parents believed their expectations were met and in some cases, even exceeded. For example, one mother thought the IB was good but did not know much about the curriculum specifics. By the end of the first year at QAHS, she noticed:

*"the transformation of my child's brain from being a knowledge recipient to a critical analyst", [gave him] "a huge number of new perceptions on all sorts of areas of life".*

These parents were not primarily concerned about the State-private school distinction. For those who were shifting from private to State, the decreased fees were welcome but they were not the overriding factor in supporting the move to an academy. Dissatisfaction with current schooling—both academically and/or socially—was the prime driver for parents' expectations that an academy experience could only be better for their children.

At QASMT, two parents found that their expectations were met ...

*... because, "they learn harder, they learn more, and they are fully challenged and we see the surrounding for the children is much better and academic achievement is wished for and you don't need to hide it as is done in many of the other schools". (Parent 1)*

But, "*I don't think we really understood the amount of work and stress load that the children would have in comparison to what they had in a state school system*". [i.e. 150 CAS hours, Extended Essays, Theory of Knowledge, all the IB exams – much longer than the OP system] (Parent 2)

Parents expected their children to be academically challenged in an environment free from bullying and disruptive behaviours. Yet neither they nor their children had ever studied at an IB school. Some were aware of such a curriculum, but none had experienced it first hand. This situation is significant. It illustrates the difficulties staff faced in not only establishing new schools, but also learning a new curriculum and delivering it with cohorts of "*like-minded*" and in most cases similarly academically able students. Students were perceived to be from the high-end achievers at their previous schools and this itself brought challenges for one parent from QAHS:

*“My son was really at the top of his tree at his old school, then when he had to move to this school, there were a lot of other kids who were obviously genius standard [...] he had to come down a peg which from a self-esteem point of view probably wasn't as good as it had been; but he also enjoyed having the challenge of the other kids there.”*

Parents' expectations were based on their experiences with the current Queensland curriculum for Years 11 and 12 and for some, the IB curriculum is believed to be “*way too hard*”. On the other hand, it was expected that the IB's “*more worldly curriculum*” would open up international options for post-school studies. It was expected to be a difficult program yet the challenge it provided was good. For the first time, many of these parents found their children had to study. Combined with often long commuting times to and from school that were noted, this meant pressures on their children that parents had not foreseen. Consequently, relationships and sporting activities outside of school were very hard to maintain. Yet the small student cohorts in these beginning years were appreciated.

QACI's interpretation of the IB curriculum in the context of creative industries was believed to be unique. One parent highlighted the predicament that his highly creative son faced and drew parallels with similar young men in other State and private schools:

*“Creativity in the State school system and the private school system is not valued, it's not promoted, and boys who are creative are singled out and they need to be sports orientated”. [My son's creative side has been] “fostered and he's been motivated to learn and he's been with like minded students, males especially, male role models there at the school who are also creative, and I think he's been so fortunate to be where he went”.*

QACI was found to be not just an Arts school i.e. “*not a Fame school*”; yet for some parents in the initial cohort, this was expected to be the case.

For children who were “*over the school bit*”, the Academies were expected to provide challenges while keeping them interested in learning. It was expected to be difficult but it was found to be more like university. In the inaugural year, QAHS parents did not have any previous experiences that they could call upon to interpret what was happening. At the time of the interviews, expectations for some parents were put on hold, with “*fingers crossed for January*” when the academic results would be made known.

- **Nature of my child:**  
**“You have to know your child”**

Parents' experiences were always reflective of the individual natures of their children. The interview data from such a small participant group confirm that it is with extreme caution that the following experiences and advice are shared. Having provided this caveat, their experiences do provide insights into the ways in which parents sacrifice their own and their families' life trajectories to provide opportunities for their children.

Even within the same family, parents made decisions based on the individual natures of each child. In some instances this meant that while the next child may be going to an academy, another may not. For example, a “*sporty kid*” needs a school that will allow him time off for sport and with the IB curriculum that is not possible. One parent who was happy with the academy education would also

caution that it is not for every child—even from within the same family. In this family, the elder daughter would be sent to the academy again because, “*it was just great for her, just perfect*”. However, the younger daughter does not wish to go, even though she is “*just as smart, just as cluey but she’s more like a piece of string and you can’t push her and she’s not going*”.

Another parent summed up his advice for others who may be thinking of sending their child to an academy:

*“Think about it extremely carefully because you run the risk of over extending your child and/or having to put a lot of pressure on them. Unless they really love their academic work, they are probably better of staying in a mainstream school that allows them more of an all-round approach. Having said that, if the child thinks that they are up to it, I think they should go for it. And I would always strongly stress that it’s not something that parents can push kids through. Because already I’ve seen kids burnt out as a result of that, so it’s got to come from the child.”*

For children from non-metropolitan areas who were accepted into an academy, parents had to choose between home-stay or moving to Brisbane/Gold Coast region. Generally, parents found 15 to 16 year olds in Year 10 (or Year 11 with the initial cohorts) not settling well into home-stay arrangements. Either the child was too young to be away from home and/or the home stay was less than ideal. In these circumstances, parents made the decision to either divide the family unit for that period of time with one parent moving to Brisbane/Gold Coast while the other stayed with siblings in the non-metropolitan community; or the whole family moved. Accessibility to suitable employment for parents was the major influence on the ultimate decision.

Commuting distances within the Brisbane metropolitan and Gold Coast regions were quite considerable for some children. Where this impacted their capacity for engagement in academy activities, parents made similar decisions about the location of the family unit. For QACI families in particular, the evening and weekend activities were noted as considerable stressors. Many of the parents had work commitments which, together with travelling distances from an academy, meant that they could not be as involved as they would have been if their child continued at the local State high school.

This potential problem is ameliorated by comprehensive and prompt communication initiated by the academies. Parents felt welcome through regular emails, school updates, newsletters and inclusion in all aspects of school activities. The various communication strategies employed by principals, senior leadership teams and individual teachers constitute a noteworthy success for the academies overall. They did not always understand the jargon-laden education language; and some needed to be well informed in plain language. However, there is strong evidence to support the claim that staff know every child as an individual whom they support socially, emotionally and intellectually.

In the final question of the interview, parents were asked to offer advice to others who may be considering an academy experience for their child. Responses described particular attributes of children whom they believed suit this type of senior secondary schooling. They are summarised in the following statement which is a synthesis of responses to the question asked about what advice would be given to other parents thinking of an academy experience for their children:

If you are considering an academy for your child, then ...

listen	to “ <i>advice from other parents and students</i> ” to your child’s views because “ <i>your child has to want to do it</i> ”
remember	that it’s “ <i>not right for everybody</i> ” it’s “ <i>high speed and hard work</i> ”
enjoy	the respectful, trusting and caring culture

These twenty-two parents perceived the academies to be for children who are “*very hard workers*”, “*love study*” and can be “*self-disciplined*”. They need to “*thrive on pressure*”, be “*very conscientious*”, “*self-motivated*” and “*driven to be able to cope*”. Such children would be “*competitive with themselves but still supportive of others*”. In addition, they must be “*happy with the IB subject selections available*”.

- **Curriculum package:**  
“*It’s significantly above the usual school leaving level*”

Overall, the International Baccalaureate (IB) curriculum package was perceived to be different to that offered at a State or private high school. However, none of the twenty-two parents interviewed were familiar with the specific requirements of the IB prior to their children enrolling at an academy. One parent was disposed to consider favourably the IB because the family had lived overseas and their children had experienced other education systems. Three others did not know much about the IB but they believed it to be internationally accepted which meant that “*it opens the world for him*”. One parent believed that by studying the IB curriculum, his son can compete for post-school study at an international level:

“*My son wants to go to Oxford depending on what his grades are but he has that goal because he knows that he can very easily apply to go to Oxford and they can look and see an IB score, and therefore that’s what I think is great*”.

The majority of those parents interviewed wished to have the issue of OP and the IB equivalency solved. They are aware that if their children had stayed at their previous schools, they would in many instances have achieved an OP 1 (or near to that) with its high ranking for university offers via the Queensland Tertiary Admissions Centre (QTAC). Yet at the same time, they share a perception that their children are uniquely positioned to succeed at whatever university studies they make undertake.

“*My daughter would have got an OP1 in the other system, but I don’t think she will get an equivalent OP1 in the IB system ... not sure if my daughter will get into medicine. However I will say her learning has been better than it would have been in the other system. So even though she might have to take an extra year to get into her preferred course, she may have to we’re not sure, I think that she will be better able to go to university. The first year will be a breeze I think*”.

The pathways into university study provided by accelerated progression and credit transfer arrangements negotiated with the three partnering universities were greatly appreciated.

*It's saved him a fortune in uni fees he doesn't have to pay. He's actually gained a whole year. He would never have got that opportunity anywhere else.*

This feature is a big selling point. Accurate advice on subject choices and career advice is important because in the early days of the academies this was not always clearly understood and disseminated with, in an incident reported here, some unfortunate consequences as a result. In one specific instance, the mathematics course information regarding articulation from the academy to university was incorrect.

*"So I've had to pay for a bridging course for her to do and she's just got the results today to say that she's actually now finished and passed her maths bridging course. We were given incorrect information from the school, and unfortunately with the way the IB is set up and the OP is set up because they call everything so differently, the course content that she actually did through the IB school is exactly the same course content that they required, but it was called something different so the university wouldn't accept it".*

Nevertheless, the majority of these parents were satisfied with the ways in which articulation arrangements have led to their children receiving enhanced learning opportunities that they believed could not have been provided for them at their previous State or private schools.

Parents did comment though on the ways in which these high achievers put extra stress on themselves to complete the IB Diploma as well as the extra courses and/or work oriented opportunities that are made available. Overall, the pace is unrelenting, with "*little down time*" as the "*hard slog*" continues throughout the years at the academy.

The IB curriculum has been embraced by some parents as a worthwhile international education experience. Yet when encountered for the first time, "*it's an eye opener*". Both parents and their children found it "*difficult, much harder than the normal Queensland education system*". Many of those interviewed are happy with this curriculum. The IB and the whole academy experience constituted a challenging transition from the 'normal' State school or private school curriculum.

- **Quality of teaching:**  
***"It takes the extraordinary teacher to nurture the individual"***

Most of the teachers were considered to be very dedicated and of high quality. They were approachable and consultative. Those "*who did not perform did not last very long*". Passionate teachers and principals connected with parents through their enthusiastic care and concern when working with their children. In the foundation years of each academy, parents recognised that this new ambitious senior secondary schooling was being provided by teachers working with a new curriculum.

The perception was that their dedication to teaching their children more than made up for any initial shortcomings due to unfamiliarity with the IB curriculum. For example, the majority of these parents recognised that the teachers had also to learn how to teach students such as their children. Some were believed to have managed this better than others. Again, the majority of parents believed that the teachers have knowledge of each child's learning abilities and excellent insight, "*almost as much as a parent*".

In particular, they contrasted the learning situations at the academies with those of previous schooling experiences. For example, no longer could teachers consign these children to doing their own thing while they taught the majority of the class or were side-tracked by the need to address behaviour management issues with disruptive students. Because these children were now in the majority, they demanded teaching. In the few isolated cases where teachers attempted a lecturing style, parents recounted that they either had to change their teaching style or they left the academy. As one parent observed, *“it’s hard being the path-blazer”*.

- **Social experiences**

Social experiences available at the Queensland Academies are always to be interpreted through the lens of individual differences in their impact on children. Social experiences were considered both positive and negative for the parents of these early cohorts of students from the foundation years.

*Table 4.1: Parents’ perceptions of social experiences at the Academies*

Positive aspects	Negative aspects
<ul style="list-style-type: none"> <li>• Friends</li> <li>• No bullying</li> <li>• Semi-formal and formal graduation</li> <li>• Camps (year level), fun days, cultural days</li> <li>• CAS (Community, Action, Service) core of IB community service activities e.g. teaching English to refugees, help disabled children</li> <li>• Overseas trips as part of language studies e.g. to China for Mandarin; to Spain for Spanish</li> <li>• External connections with Universities, other organisations</li> <li>• Activities e.g. horse riding, ice skating, discos, art exposition, rock climbing</li> <li>• Especially for the QACI students: theatres, plays, shows.</li> <li>• Internet networking among cohorts</li> <li>• <i>“Kids from all walks of life”</i></li> </ul>	<ul style="list-style-type: none"> <li>• Lack of collective school sports</li> <li>• No bonding &amp; mateship that comes with sport</li> <li>• Not much time for a social life outside school</li> <li>• Some children chose to be individual and separate</li> <li>• Distance &amp; travel time to engage in social activities</li> <li>• Workload e.g. <i>“it totalled swallowed his whole life”</i></li> </ul>

Of those children who completed Year 12 at an academy, their parents are happy with the social experiences provided through the school. In hindsight, many were not prepared for such an intensive workload and its impact on their children’s social lives both internal and external to school. Knowing what they now know, they are in a better position to advise other children and parents of the ways in which socialisation is fostered within the Academies’ learning environment.

- **Image of & Impact on State education**  
*“They have made an impact [but are] only scratching the surface”*

Of those parents who chose to comment on the issue, the academies have promoted an image of excellence and responsiveness of State school education programs in Queensland. In some

instances this image was negatively perceived; although for the majority of parents, it was perceived positively. A negative image has been impacted when an academy experience did not work out for a particular child. Conversely, a positive image of an academy is dependent on parental perceptions of a child's fit with the ethos of the academy, its staff, curriculum and interactions with other students. Their future image was believed to be at risk if they become integrated into the general school system again and the Education Queensland influence on school directions regarding the employment and removal of teachers remains a concern for some parents. The parents do not want academy teachers to be redeployed within the Departments transfer system because they are trained in the IB and they believe that they understand the types of students who are attracted to the academies.

Among the parents who perceived the academy experience as positive, their children have "*stepped up to the mark*" and taken on the responsibility of "*belonging to a school that can achieve great things*". They believe that an academy teaches these young people to be responsible for their own education and be ready for university study. At an academy, the focus on learning how to learn was considered possible because the usual distracters (i.e. other people's disruptive behaviours) in large classes are not present. This meant that teachers could challenge their students to achieve their intellectual potential, to see themselves as future leaders and to achieve their individual goals.

Expectations were high that the academy experience would be excellent for their uniquely gifted children. These expectations were fostered in the first place by the selection process that included a test. Second, the choice of the IB Diploma program reassured some parents that the curriculum was inclined towards academic excellence. Third, when the students attended lectures and participated in university activities, these parents perceived them to be ambassadors for the academies because they were demonstrating capacity for university-level studies (e.g. the Griffith University's Health Studies Certificate).

Factors impacting the image of State education were the advantage of focusing on the 'top-end' students; being outside the mainstream of the State school system; scholarships available for fee remission; and more service in terms of a supportive school environment for their children's learning for less cost than that of a private school. Parents have seen the effects of their children learning with like-minded peers and are astounded at the difference it can make. They were not afraid to be academically oriented and even seem to be proud of saying that they were in "*a nerd school*".

The majority of parents interviewed perceived the Academies to be outside the constraints of the system and not accountable to the bureaucracy in the same manner as other State schools. Scholarships for children whose families could not have afforded the fees and associated costs of the IT device are valued and do much to dispel the image of elitism based on financial capacity to buy a specialist education. For parents used to private school fees, the lower cost in combination with excellence in teaching and responsiveness to their children as individuals has made a big impact on their previously disparaging image of State education around behaviour management issues.

Two comments on State education as a whole illustrate this perception:

*“...in the state school system unfortunately bright students can’t learn because of the behaviour issues”.*

*“teachers are spending more time managing students behaviour in the classroom, so bright kids are ... they are looked down upon for being bright and ... they can’t learn what they need to learn, in the current state school environment in high school”.*

This image is changed as a result of the academy experience for these two parents:

*“The behaviour of the kids there [at the academy] was great, you didn’t have the problems with aggression and violence that you have in a lot of other state schools”.*

*“You don’t have to go to private school anymore if you’ve got a child who is smart”.*

One parent whose child had previously attended a private school found that at the academy, *“there’s nobody any nerdier than anyone else. It’s unique because they all have the same goals, they all want to achieve in their fields, and the teachers are there to help them”.* For another, her daughter had been bullied at her previous school *“for her performances, abilities”* and when she changed over to the academy there have been *“no problems like this at all”.*

The reputation of the Queensland Academies will develop with time as graduates go out into the world and partners from universities and industry experience the quality of the facilities and quality of the students attending.

*“I think they’ve begun to make an impact”.*

The academy, *“is only scratching the surface. It is a test and I hope it is a successful test because I think nurturing academic excellence, be it by the IB or a different model, is what a smart state should be doing. And I think that Queensland has an unfortunate reputation in the rest of the country as far as being educationally behind”.*

As *“the benchmark has been moved”*, other State schools are trying to retain students via ‘excellence’ or ‘aspire’ programs. Yet issues of access and equity are still of concern.

Only one of the interviewees could describe what we now know to be the Young Scholars Program. This parent claimed that if the academies are to be representing the image of excellence and responsiveness for Queensland State education, then they need to be seen to be responsive to all Queenslanders. The other parents were not aware of any outreach and engagement initiatives that could have benefited students throughout the State. Instead, they only perceived the impact of the problematical home stay and a lack of dormitory or hostel accommodation for young people who could qualify for entry to an academy.

*“I don’t feel enough money has been spent on the pastoral side of it and really trying to make it Academies for the whole of Queensland as opposed to just for Brisbane and surrounds”.*

Here the challenge is that the recognition factor for each academy is increasing over time.



Finally, the relatively small size of the academies is considered a positive for their image of responsiveness to individual learning needs. Current perceptions are that they would not work as large schools. Yet the dilemma remains: how to nurture academic excellence with “*three academies with capacity for taking in only 450 students a year*”. Increasingly parents are becoming aware that the IB is being offered as part of the curriculum at other State schools and some private schools. There was no knowledge of any other ‘fully IB’ schools. Parents are pleased with the still unique strategic alliances with universities available as a consequence of the extremely challenging IB curriculum.

## **Discussion**

The interview data provide insights into some of the complex contradictions in parents’ perceptions of the academies before, during and in some instances after their child’s time as an academy student. On the one hand there is overwhelming praise for all aspects of an academy education; while on the other hand, a minority of parents shared concerns about the selfsame education.

The Queensland Academies (QA) brand name is thought to be not well known among parents throughout the State. Yet among those who do know of it, this brand signals academic excellence. However, it also signals an elitism which excludes the majority of students (from State schools and private) not just on the basis of their talents and abilities but more importantly because of their geographical location throughout this vast State. The latter issue was considered to have implications also for the family unit. As an academy parent, the commitment to support a child is considerable. Financially, socially and emotionally, parents (and in some cases the whole family unit) are involved in supporting academy attendance of the child.

The Queensland Academies model is considered unique because it is perceived to be more academically rigorous; staff are viewed favourably as being knowledgeable and dedicated; facilities are outstanding; and it is something that is not offered elsewhere in the State education system. “*It would be good to come back in three years time and see how these kids are doing*”.

## Chapter 5

### Views of students

The purpose of Chapter 5 is to report and comment on the views of completing students as expressed in surveys. A description of how the surveys were conducted is contained in Chapter 1 and at the start of Chapter 3 which reports on graduates' career and personal outcomes.

#### *Surveys*

*Undertaken by Department of Education and Training*

Year 12 completers at QACI and QASMT (QAHS students had not completed Year 12 at this time) were invited in a survey in early 2009 to comment on the reasons for their enrolment and to indicate the extent their expectations had been satisfied. Of the 125 completers, 63 provided a response of whom 31 had previously attended a private school. Of these, 13 indicated that parents had chosen the academy and that 50 had not (that led to an assumption that attending the academy was a decision of the student).

#### *Reasons*

Completing students at the two academies were given eight possible reasons for enrolment as follows, with the list being the same as that provided to parents except that the two related to their child's motivation and the alternative to provide schooling were omitted (hence eight reasons for completers compared to ten for parents).

1. The study was based on the International Baccalaureate curriculum
2. I was attracted to the quality of teaching staff
3. I considered that the academy would assist me to achieve better academic outcomes
4. I was attracted to the specialist environment (creative industries / health sciences / science maths technology) consistent with my interests or career goals
5. I was attracted to the social environment
6. I liked the 'tone' (e.g. discipline, uniforms etc) that the academy offered
7. I thought the academy would strengthen my pathway to university
8. I thought the academy would strengthen my pathway to future employment

Response alternatives were the same as for parents: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, and Not Applicable.

Of the 63 respondents, 12 or less disagreed or felt that any reason was not applicable. If the largest number of responses is the indicator, a neutral response was given for reasons 1 and 6.

Strong agreement was recorded for items 4, 7 and 8 while agreement was the most frequent response for items 2, 3 and 5.

Considering responses from completing students at the two academies separately, 23 of 42 at QACI completed the survey, with 13 of these having previously attended a private school. As before, if the largest number of responses is the indicator, a neutral response was given for reason 1 (same number agreed) and reason 6. Strong agreement was recorded for items 2, 4, 5 and 8, while agreement was the most frequent response for items 1 (same as neutral) 3 and 7.

At QASMT, 43 of 83 completing students responded to the survey, with 18 of these having previously attended a private school. As before, if the largest number of responses is the indicator, a neutral response was given for reasons 1 and 5. Strong agreement was recorded for items 7 and 8, while agreement was the most frequent response for 2, 3, 4 and 6. The pattern differed to that for QACI completers in several ways, notably the stronger focus on pathways (7 and 8) and weaker focus on social environment (5).

### *Meeting expectations*

Completing students were invited to indicate whether their expectations had been met for each of ten expectations (two more items were added to the list which matched the equivalent set included in the parent survey).

1. International Baccalaureate Diploma curriculum
2. Teaching staff
3. Academic outcomes
4. A specialist environment (creative industries / health sciences / science maths technology) that suited my child's interests or career goals
5. A social environment that suited me
6. The right 'tone' (e.g. discipline, uniforms etc)
7. Strengthened pathway to university
8. Strengthened pathway to future employment
9. Clearer goals for my future learning and employment
10. Exposure to other like minded and capable students

Responses alternatives were the same as parents: Exceeded Expectations, Met Expectations, Not Met Expectations, and Not Applicable.

If the largest number of responses is the indicator, expectations were not met for expectation 3 ('academic outcomes') and ('strengthened pathways to universities'). Expectations were met for all other expectations, with these being exceeded for expectation 2 (teaching staff') and expectation 8 ('exposure to like minded and capable students').

For the 23 completing students from QACI who completed the survey, expectations were met for all items. If the largest number of responses is the indicator, expectations were exceeded for 2 ('teaching staff'), 4 ('specialist environment'), 5 ('social environment'), and 10 ('exposure to other like minded and capable students').

There was a different and noteworthy pattern of responses for the 43 completing students from QASMT who completed the survey. If the largest number of responses is the indicator, expectations were not met for 4 of the 10 items: expectation 3 ('academic outcomes'), expectation 7 ('strengthened pathway to university'), expectation 8 ('strengthened pathway to future employment') and expectation 9 ('clearer goals for my future learning and employment'). Expectations were exceeded for two: expectation 2 ('teaching staff') and 5 ('social environment'). Not only were QASMT completers more critical than their counterparts at QACI, they were also more critical than their parents.

On balance additional comments from the 15 QASMT students who provided them were positive, with a focus on expectations they felt had been met, especially in respect to their appreciation of staff. Few comments focused on expectations they felt had not been met. Of these, the most explicit was the following:

The point of the academies was to strengthen and make easier the transition to university. For all the work and effort we put in, we get only a maximum of five bonus ranks. For all the rigour of the IB, it still is not completely recognised by universities for its demanding curriculum. Most of the graduates who received under 35 would have been better doing QSA and receiving appropriate OP's, not lower than expected equivalent entry ranks. This needs to be addressed immediately.

This response suggests that some of the disappointed expectations might be explained by the framework in which the academies are operating and the recognition given to the IB.

Ten completing students from QACI provided additional comments, and these were generally positive. One was noteworthy for the link made between the IB and the specialist focus of QACI:

I would appreciate if my comment is taken very seriously. I came to the academy for the IB but it seems I left satisfied for all the other academy characteristics instead. In retrospect work must be done to strengthen the ties between a commitment to the IB and a commitment to nurturing the creativity of students.

### *Satisfaction*

Students were invited to rate their overall experience at their academy. Of the 59 students who responded:

- 16 indicated that they were 'very satisfied'
- 24 indicated that they were 'satisfied'
- 13 indicated that they were 'neutral'
- 3 indicated that they were 'dissatisfied'
- 3 indicated that they were 'very dissatisfied'

For QACI, 19 completing students provided ratings of their satisfaction:

- 7 indicated that they were 'very satisfied'
- 11 indicated that they were 'satisfied'
- 1 indicated that he / she was 'neutral'
- No students indicated they were 'dissatisfied' or 'very dissatisfied'

For QASMT, 40 completing students provided ratings of their satisfaction:

- 9 indicated that they were 'very satisfied'
- 13 indicated that they were 'satisfied'
- 12 indicated that he/she was 'neutral'
- 3 indicated that they were 'dissatisfied'
- 3 indicated that they were 'very dissatisfied'

## ***Summary***

A review of these responses suggests that the expectations of students generally coincided with the reasons why the academies were established, and that expectations were met, except for the mixed responses related to academic outcomes. It is fair to conclude that the initiative has been positively received by students. Closer analysis revealed different patterns of responses among the two sets of responding students, with those of QASMT being less positive in respect to the extent to which expectations had been satisfied, especially for academic outcomes and pathways to universities. The patterns of responses among students do not differ in noteworthy ways from those of parents where general comparisons on the same items can be made.

## Chapter 6

### Views of staff

The purpose of Chapter 6 is to report and comment on the views of staff as expressed in surveys and interviews. A description of how the surveys and interviews were conducted is provided in Chapter 1.

#### *Surveys*

There were two major components in surveys of staff, one related to how they saw their schools as workplaces, the other on the nature and extent of engagement and satisfaction with a range of professional activities. These are reported separately.

#### **Academies as workplaces**

As with all schools it is important to know how teachers find the academies as places to work. Education Queensland surveys all staff across the state on key dimensions of the workplace and provides reports to schools that compare responses for their staff with those in like schools and for all schools across the state. Analyses of responses in the most recent (2009) are reported here.

There are nine dimensions in the survey with a total of 39 items as listed below. The survey is therefore systematic and comprehensive.

##### Physical work environment

1. I feel that the school is a safe place in which to work
2. I am satisfied with the physical working conditions at this school
3. The facilities in this school are well maintained
4. The school has good workplace health and safety practices
5. I am satisfied with the facilities in this school

##### Relationships

6. Staff and community relations in this school are good
7. I have good working relationships with other staff
8. I get on well with the students in this school
9. I am treated with respect in this school
10. Staff and students respect each other in this school

##### School operations

11. I know what is going on in this school
12. The school is a well-organised place in which to work
13. I have a say in decisions about my work in this school
14. I am kept well informed on things that are important to my work

15. I am encouraged to take responsibility for my own work

#### Staff morale

- 16. There is good team spirit among the staff of this school
- 17. The staff in this school are enthusiastic about their work
- 18. This school is a good place in which to work
- 19. I am happy working in this school
- 20. The staff in this school put a lot of energy into their work

#### Support, resources and training

- 21. I have access to the resources I need to do my job well
- 22. I get the support within the school that I need to do my job well
- 23. People in the school let me know how well I am doing in my work
- 24. I receive helpful feedback on my work at this school
- 25. This school gives me opportunities to improve my skills
- 26. I can access appropriate information and communication technologies to do my job well (from 2004)
- 27. In this school, information and communication technology devices are well-maintained (from 2004)
- 28. I have good access to quality professional development (from 2007)

#### Work roles

- 29. I can manage the different things I have to do in this school
- 30. I can cope with what I have to do in my work
- 31. My work role makes reasonable demands of me
- 32. In this school I am confident of being able to do what is expected of me
- 33. It is clear what my work responsibilities are in this school

#### Work value and recognition

- 34. My contribution to this school is valued
- 35. I feel that my work efforts are worthwhile
- 36. My work skills enable me to make a worthwhile contribution to this school
- 37. I am regarded as a valuable staff member
- 38. My work skills are appreciated in this school

#### Additional

- 39. This school has a strong commitment to daily physical activity

Staff were provided with the following alternatives for their responses: Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. Mean scores were calculated on a scale from 0 (Strongly Disagree) to 4 (Strongly Agree). Education Queensland determined whether mean scores were

above, the same or below those of like schools and all schools, with reports referring to means being 'measurably above', 'no measurable difference' or 'measurably below'. Summaries of mean scores and comparisons for each academy are set out below.

### **QACI**

- Mean scores were above 3 for all items except 13, 14, 28, 31 and 39
- Means scores were above those of like schools for 28 of the 39 items
- In only one instance was the mean score lower than for like schools, namely, item 39
- Mean scores were above those for all schools for 28 of the 39 items
- In only one instance was the mean score lower than for all schools, namely, item 39
- The dimension for which there was no difference with like and all schools was for all 5 items in the work roles dimension

### **QASMT**

- Mean scores were above 3 for 14 of the 39 items, falling below 3 for items 4, 6, 11, 12, 13, 14, 16, 18, 19, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 35, 37, 38 and 39
- Means scores were above those of like schools for 9 of the 39 items
- In 10 instances the mean score was lower than for like schools, namely, items 11, 12, 13, 14, 16, 22, 24, 31, 33, and 39
- Mean scores were above those for all schools for 10 of the 39 items
- In 15 instances the mean score was lower than for all schools, namely, items 11, 12, 13, 14, 16, 22, 23, 24, 29, 30, 31, 33, 34 and 39
- The dimensions where the means for the majority of items were below those of like schools were school operations ( 4 of 5) and work roles (4 of 5)

### **QAHS**

- Mean scores were above 3 for all items except 31 and 39
- Means scores were above those of like schools for 36 of the 39 items
- In no instance was the mean score lower than for like schools
- Mean scores were above those for all schools for 36 of the 39 items (a precise match with comparisons with like schools)
- In no instance was the mean score lower than for all schools
- The items for which there was no difference with like and all schools were 7, 31 and 39

### **Discussion**

If all three academies are taken together it is apparent that staff saw their schools as being good places in which to work. However, there are important differences in responses at the three sites. Responses from QAHS were more positive for all but 3 of the 39 items when comparisons were made with like schools and all schools. Responses at QACI were also highly positive but less so than at QAHS. Responses at QASMT were of concern to the extent that mean responses were lower than for like and all schools for 10 and 15 items, respectively, with dimension of concern being school operations and work roles.



Surveys were conducted in 2009 so the extent to which related issues were being addressed at QASMT is of interest in the evaluation. Discussions during interviews with the senior leadership team and a group of staff in early 2010 provided the answer. Several actions were taken at the end of 2009 including a two-day conference of heads of departments which lead to a more detailed specification of roles and responsibilities. A three-day conference of staff included several 'visioning' activities leading to agreement on an attractive and arguably unique vision statement for the academy. There was a sense of ownership of the outcomes. An internal survey of staff was conducted before the conference. Staff have been placed in teams that meet every three weeks, including one team that has a special focus on pedagogy. Effort has been made to achieve a whole-of-academy outlook in addition to a focus on the particular areas in which staff are working. The climate of the group discussion with teachers in early 2010 was highly positive and, if representative of staff in general, suggested a professional team that gained immense satisfaction in working at the academy. These actions model a process that should be in place in every school, that is, ongoing monitoring of progress and emerging issues followed by the adoption of strategies that address these and at the same time further build capacity to deliver the best outcomes for students.

### ***Professional activities***

Intellectual capital refers to the knowledge and skill of those who work in or for the school. Education Queensland surveys staff in different ways and one is to obtain information about the nature and extent of engagement and satisfaction with a range of professional activities. This section reports the findings from the 2009 survey as it relates to intellectual capital with brief analyses of responses for each of the three academies.

In a separate project, indicators of intellectual capital were developed and validated in a five-year project that culminated in the six-country International Project to Frame the Transformation of Schools. Findings were reported in *Why not the Best Schools* (Caldwell & Harris, 2008). The ten indicators of intellectual capital are listed below.

1. The staff allocated to or selected by the school are at the forefront of knowledge and skill in required disciplines and pedagogies
2. The school identifies and implements outstanding practice observed in or reported by other schools
3. The school has built a substantial, systematic and sustained capacity for acquiring and sharing professional knowledge
4. Outstanding professional practice is recognised and rewarded
5. The school supports a comprehensive and coherent plan for the professional development of all staff that reflects its needs and priorities
6. When necessary, the school outsources to augment the professional talents of its staff
7. The school participates in networks with other schools and individuals, organisations, institutions and agencies, in education and other fields, to share knowledge, solve problems or pool resources
8. The school ensures that adequate funds are set aside in the budget to support the acquisition and dissemination of professional knowledge
9. The school provides opportunities for staff to innovate in their professional practice
10. The school supports a 'no-blame' culture which accepts that innovations often fail

Items in the 2009 survey of staff in Queensland government schools are listed below. In addition to a general question that sought a global response on engagement in professional development opportunities, a total of 26 specific items in four categories were contained in the survey. All are examples of specific strategies and activities that reflect the 10 indicators listed above, especially indicators 1 to 8.

Engagement in professional development opportunities (Percentage)

Engagement in learning and development (Scale: Never, Rarely, Sometimes, Frequently, Very Often) (Range: 0 Rarely to 4 Very Often)

1. Network activities
2. Conferences / seminars / workshops
3. Coaching / mentoring
4. Online professional learning
5. In-house

Satisfaction with knowledge and skills (Scale: Very Dissatisfied, Dissatisfied, Neutral, Satisfied, Very Satisfied) (Range: 0 Very Dissatisfied to 4 Very Satisfied) (All staff except for 14 to 17 for teachers only)

6. Inclusive educational practices
7. Using information and communications technologies (from 2004)
8. Understanding Indigenous cultures (from 2004)
9. Including Indigenous perspectives in your work (from 2004)
10. Supporting students at risk of disengaging from learning (from 2004)
11. Teaching science, mathematics and technology
12. Delivering physical activity
13. Delivering environmental education for sustainability
14. Developing intellectually challenging and connected curriculum (from 2007)
15. Alignment of quality assessment, curriculum, pedagogy and reporting
16. Delivering balanced literacy curriculum (from 2007)
17. Explicit teaching and assessing of literacies in the KLAs (from 2007)

Overall satisfaction (Scale: Very Dissatisfied, Dissatisfied, Neutral, Satisfied, Very Satisfied) (Range: 0 Very Dissatisfied to 4 Very Satisfied)

18. With professional development provided for syllabus implementation
19. That assessment processes in this school are appropriate for your students
20. That assessment processes in this school support student learning
21. With opportunities to develop skills in the integration of ICTs into the curriculum (from 2003)
22. With opportunities to develop skills in teaching about Indigenous students
23. With opportunities to develop skills in engaging Indigenous students (from 2004)
24. With the availability of online resources to do your job well

Other (Responses: Yes or No)

25. Have you done any postgraduate study this year?

26. Have you used professional standards or capability frameworks to inform your professional development planning (from 2007)?

Education Queensland determined whether mean scores were above, the same or below those of like schools and all schools, with reports referring to means being 'measurably above', 'no measurable difference' or 'measurably below'. Summaries of mean scores and comparisons for each academy are set out below.

### **QACI**

- The percentage of the workforce at QACI engaged in professional development opportunities is about the same as for all schools (there were no like school comparisons available)
- The mean score exceeded 3 for 10 of the 26 items: 6, 7, 14, 15, 16, 18, 19, 20, 21 and 24.
- The mean score was above like schools for 9 of the 26 items: 1, 3, 4, 6, 7, 14, 15, 16, 18, 20 and 21
- The mean score was above that for all schools for 13 of the 26 items: 1, 3, 4, 6, 7, 14, 15, 16, 18, 19, 20, 21 and 24
- In no instance did the mean score fall below that for like schools
- The mean score fell below that for all schools for only two items: 12 and 22
- The percentage of staff doing post secondary study was about the same as in like schools and in all schools
- The percentage of staff who use professional standards in planning their professional development (57.6) was higher than in like schools 42.4) and all schools (44.6).

### **QASMT**

- The percentage of the workforce at QASMT engaged in professional development opportunities (72.3) is less than for all schools (80.5) (there were no like school comparisons available)
- The mean score exceeded 3 for 5 of the 26 items: 7, 14, 15, 21 and 24.
- The mean score was above like schools for 4 of the 26 items: 4, 14, 21 and 24
- The mean score was above all schools for 5 of the 26 items: 4, 7, 14, 21 and 24
- The mean score fell below that for like schools in three instances: 12, 13 and 23
- The mean score fell below that for all schools in five instances: 9, 12, 13, 22, and 23
- The percentage of staff doing post secondary study was about the same as in like schools and in all schools
- The percentage of staff who use professional standards in planning their professional development (35.1) was lower than in like schools (42.4) and all schools (44.6).

### **QAHS**

- The percentage of the workforce at QAHS engaged in professional development opportunities (86.7) is higher than for all schools (80.5) (there were no like school comparisons available)
- The mean score exceeded 3 for 10 of the 26 items: 6, 7, 14, 15, 16, 18, 19, 20, 21 and 24.

- The mean score was above like schools for 10 of the 26 items: 1, 3, 4, 6, 7, 14, 15, 16, 18, 20 and 21
- The mean score was above all schools for 9 of the 26 items: 1, 4, 6, 7, 18, 19, 20, 21 and 24
- In no instance did the mean score fall below that for like schools
- The mean score fell below that for all schools for item 12
- The percentage of staff doing post secondary study (17.8) was higher than that for like schools (10.4) and in all schools (9.0)
- The percentage of staff who use professional standards in planning their professional development (26.2) was lower than in like schools (42.4) and all schools (44.6).

### ***Interviews***

Focus group interviews were conducted with a total of thirty-three staff selected by principals at each of the academies. The groups included the principals themselves, senior leadership teams, teachers and other school personnel. The purpose of these interviews was to confirm and/or disconfirm the major findings emerging from analysis of the school opinion survey data. These were generally confirmed with clarifying interview information provided in the discussion on page 51 of this chapter.

Perceptions of student outcomes, the model of education and the educational practices at the academies were shared with the evaluators during these interviews. Taken together, the perceived pressures on staff were confirmed in relation to the climate of intense scrutiny and very high expectations in which they had been operating from day one of their respective appointments at an academy. For example, at the time of the interviews in early February 2010, QAHS staff had just received student outcomes data from their first cohort to graduate from the academy. As noted by the principal, this QAHS first graduate cohort had undertaken a 2-year program (Year 11 and 12) while those at QACI and QASMT were graduating their second cohort which had been enrolled at those academies from Year 10 through to Year 12 (i.e. a 3-year program).

The tenor of the interviews was mostly positive with staff confirming the complexity of their individual and collective learning journeys as they transitioned into academy teaching, administration and management respectively.

### ***Summary***

Responses from staff at QACI and QAHS are similar except that the proportion of staff at QAHS engaged in post secondary study was higher, and lower for use of professional standards. Responses from staff at QASMT were less positive than those for QACI and QAHS. In general, the pattern at QASMT suggests that measures should be taken to engage in strategies and related activities to building intellectual capital, especially in their engagement in professional development activities. Actions were taken at the end of 2009 to address the issue, especially with a focus on pedagogy and regular professional activities in teams.

## Chapter 7

### Views of universities

Three Queensland universities have special stakeholder status with the Academies. They are the University of Queensland (UQ), Griffith University (Griffith) and the Queensland University of Technology (QUT). Representatives from these universities were selected by academy principals to be invited to participate in this evaluation. In addition, QASMT provided a representative from the Southbank Institute of Technology (SIT) as a potential interviewee. All eight people contacted agreed to participate (1 from UQ, 2 from Griffith, 4 from QUT and 1 from SIT).

Each person was contacted initially by email to arrange a convenient time for an individual telephone interview. Interviews took approximately 20-30 minutes and were conducted over the period December 2009 to January 2010. The purpose of the interview was to probe perceptions of the Academies impact on promoting the image of excellence and responsiveness of state school education programs in Queensland and in offering a unique and different model of state education.

Because of the small numbers of participants, there are no assumptions being made that the opinions expressed in this section are representative of the views of all university or institute staff connected with the academies. Furthermore, the interviewees held a range of positions in each organisation which impacted their perspectives when responding to questions. Some worked at strategic levels with DET officials and academy principals. Others worked at more operational levels with principals, senior management teams and staff in each academy. Accordingly perceptions on the impact of the academies that are provided in this chapter are to be interpreted through those individual lenses. This caveat was articulated by each interviewee.

The interviewees viewed the Academies as distinctive learning environments for students with a passion and commitment for developing their abilities. The curriculum was commented on specifically, as were the partnerships that were operating among the Academies and these stakeholder organisations. Direct quotes from interview transcripts are provided in italics within the text e.g. Students at QACI are “*embedded in a broader learning community, seeing pathways and opportunities to access different levels of expertise, and in some cases resources.*”

#### **Curriculum**

At QACI, “*opportunities are significant and enable students to nurture talents and passions in a unique way [...] quite focused around the way Creative Industries contributes to broader social and economic environments [and students are] nurtured to consider that quite early on*”. The IB curriculum was seen to be positive in this regard because it “*feeds their thinking about their creative practices e.g. the strong literature focus in English studies this depth of reading work is impacting on the way in which they are thinking about their art work.*” There was concern expressed that QACI staff are “*trying to do a lot of stuff on top of an already full curriculum*”.

While not all interviewees in this category had direct experiences with the curriculum or specific staff members, there was general agreement that the calibre of students' learning outcomes was commendable—even if they were only seen at special occasions to which they were invited.

Those QASMT students who attend the Southbank Institute of TAFE for the 'real world learning' of laboratory skills were considered different from other students because they:

*...ask questions then they'll test what they know themselves [...] and challenge back to the teachers. They'll ask them, 'why is it you're saying that?' They're not like a normal school [student/s] who just sit back and absorb what's told to them. If they don't understand what's told to them they'll just keep asking until they do understand it. Which means they keep the teachers on their toes because they'll say, perhaps I didn't explain it very well...here's another way of explaining it. It leads to very good teaching practices as well.*

However, because of their apparent self assurance and self confidence, people can “*tend to think of them as being older than they actually are and when they get a bit agitated, you don't expect it from them, but you've got to remember they're only 15, 16 year olds*”.

The curriculum at QAHS enables students to participate in a health certificate program as well as their IB studies. This was believed to have a noticeable positive impact because “*they have got critical masses of bright students who are self motivated.*” Once working in a university environment, “*they are very easy to teach in comparison with the bulk of our university students. In the laboratories and such, they're self directed – they read the instructions and they get on with it.*”

Within the requirements of an IB curriculum, QAHS and QACI were perceived to be very flexible in negotiations around timetables to accommodate university activities. Socially, the students' self reliance and self motivation were noted and “*no one is signalled out because they're nerds*”. The information technology support is considered helpful as part of a motivational learning environment. A high level of esprit de corps among the students was noted as a result of some interviewees attending graduations, open days, guest visits and so on.

## ***Partnerships***

Interviewees told of the multi-level engagements with Academies that are enacted through Steering Committees comprising Deputy Vice Chancellors (or their nominees), Principals and Industry representatives where appropriate. Operational level engagements occur at faculty and/or school levels with individual staff working with academy staff to initiate programs, activities and credit transfer arrangements. The partnerships discussed in these interviews are also cross-sectoral. This means that they are not just between the three universities and the academies but include an institute of technology (e.g. QASMT) and for-profit businesses from the industry sector (e.g. QACI). A third characteristic of these partnerships is that at the discipline levels, both individuals and groups work for “*good people to good people relationships*”.

While special and unique, these partnerships are by no means exclusive. Universities were found to foster positive relations with all manner of potential partners with a view to growing their knowledge business. Like schools, universities require enrolments and research outcomes to remain financially viable and educationally meaningful organisations. Each university has a range of partnerships with other public and private schools which are conducted in parallel and sometimes in conjunctions with the Academies (e.g. the Griffith Connect Program and QUT Start program).

In the view of one university representative, the Academies are beginning to provide “*a counter-weight to some of the negative publicity of public schools*” which challenges directly other stakeholder perceptions of their impact and quality educational practices. Here in particular the responsiveness of all three academy principals (past and present), their senior leadership teams and individual teachers have been commended for an attitude of, “*well if that’s possible, then let’s do it*”. They are perceived to have championed the relationships with the universities which have resulted in enhanced learning opportunities for their students and ongoing professional development for their staff.

These opportunities consist of credit transfer arrangements facilitated through these partnerships which are in some cases supplemented with special studies courses, seminars, conferences and/or workshop participations. A snapshot of specific examples is now provided.

The partnership between Griffith University and QAHS provides a number of jointly developed initiatives which are continually evolving. Students may undertake the Griffith Health Studies Certificate; participate in health orientation activities and in particular discipline specific orientation activities; and as with the other academy-university partnerships, access the university library. Tangible evidence of this partnership is the two-way web-linked access between Griffith University’s ‘Griffith Health’ and IB Diploma students at QAHS.

In a new initiative, Griffith University, QAHS and a regional Education Queensland office collaborated to attract Indigenous students. In 2010, three Indigenous students commenced study at QAHS as a result of an innovative partnership with the university’s Indigenous Elder-in-Residence, parents and students, EQ and QAHS. For Griffith University, this strategic engagement has the potential to provide pipeline support for tertiary pathways among the more than 8000 Indigenous students in Gold Coast regional State schools. The Young Scholars Program is one part of this multi-faceted strategic partnership.

A successful cross-sectoral, industry-academy engagement was reported from Southbank Institute of Technology and QASMT. In late 2009, the first cohort of students graduated from the Certificate III in Laboratory Skills under an innovative Science Industry Preparation Program (SIPP) which is QASMT’s first vocational partnership. Under SIPP, the theoretical coursework of the IB’s Biology and Chemistry subjects is recognised and complemented with specific practical training in laboratory work. Articulation from Certificate III (Year 10s) to Certificate IV (Year 11s) and on to a Diploma in Laboratory Technology (Year 12s) is also possible under SIPP.

Because of the University of Queensland's (UQ) perceived strengths in science, maths and technology, *"it's made sense to be partnering"* with QASMT. For example, UQ participates in the Young Scholars Program; with QASMT in remote laboratories between MIT in US and UQ and Schools in both North America and Australia; other links at the discipline level that are more informal; and work together in science outreach activities where QASMT hosts conference and competitions for young science students. QASMT is one of the schools that enjoy the benefits of these activities. For the university, the benefit is that a large proportion of their students did come to UQ with similar anticipation for 2010.

The Creative Industries precinct at Kelvin Grove fosters a special relationship between QACI and QUT. First, the academy is co-located in the QUT campus environment (as is QAHS with Griffith). A future challenge for the university partnership is to help students see opportunities on their doorstep to take their unique skills into Creative Industries (CIs) degree programs. Hopefully there will be more students applying to study in the CIs at QUT. An emerging phenomenon identified by one interviewee is that *"the grass is greener"* for young people for whom *"going to a building just 100m away is too familiar"* after three years of having that access. Benefits for students in the short term include: being embedded in a broader learning community; seeing pathways and opportunities to access different levels of expertise; and in some cases resources—although QACI is considered to be very well resourced. A present and future challenge is to incorporate the opportunities these partnerships present within the strategic and operational activities of the academies. In other words, for QACI this means, *"just be wary what is a bolt on and build in what [you] can—then stick to it"*.

Second, the industry focus makes the breadth and depth of the QACI-QUT relationship unique. This collaborative relationship has included joint exhibitions, functions, shared facilities, and shared resources including staff in some instances. A challenge for this academy and its university partner is the meaning of 'Creative Industries' for young people at high school level. How is that different from what it looks like at university level? QACI graduates are still potentially three or four years out from the workforce, so the challenge for this partnership may be to engage with the question of how to *"differentiate their learning from the learning and the growing and the leadership skills that are developed at university level"*.

## **Summary**

These stakeholder perceptions of the academies impact and quality education practices are positive and noteworthy in their conclusions that, considering the short time in which the academies have been operating, staff have reviewed, analysed and tried to improve in all areas. *"It's not as if they've said well this is what it is and we're going to do it for the next 10 years"*. They are quite reflective in their approach and attentive to both higher management level issues as well as practical, logistic issues all the while making sure that relationships are on track. *"If that reflective practice continues, then it will improve."*



The IB curriculum was considered favourably by those respondents who were familiar with it and is “*absolutely right*” for preparing students for university studies. “*It’s a wonderful program. It’s too easy to laugh at in glib terms about the smart state, but this is a real contribution to the smart state initiative.*”

This model of education is believed to be “*offering in the public domain the kind of educational experience that could previously only be obtained in the private school sector*”. However, there was a warning from one interviewee that attracting students from the private sector is by no means an ethically sustainable measure of success. Rather, in the opinion of another, the means by which all students in State schools may benefit from the potential of this unique and different model remains the true marker of its success; and “*the fruits of that will really be known in the years to come*”.

On the basis of these interviews, it is fair to conclude that the academies have “*hit the ground running*” and are having “*significant impact on the landscape that’s very positive*”. There was a convergence of opinion that the initiative should continue. “*It is too early to really judge the outcomes because there are some lagged indicators that require further investigation e.g. where do these students end up at the end of their university students, and how well do they do*”.

## Chapter 8

### Views of industry and community

The academies are continuing to develop an Industry and Enterprise Engagement Strategy, which provides “a framework to remain outward looking and collaboratively focused” (DET, Queensland Academies Progress Report, April 2010, pp. 2-3). The engagement activities noted in DET’s internal progress report on the academies include:

- hosting of iLAB with UQ and the Massachusetts Institute of Technology
- gaining certificate and diploma courses in Laboratory Technology from the Southbank Institute of TAFE
- students working as creative research assistants with resident media company
- student ambassador programs with the Zen Zen Zo and LaBoite Theatre companies and QUT the Block Gallery
- student workshop scholarships with NIDA
- research Series Seminars with Griffith University
- work placement at the Queensland Institute of Medical Research.

This chapter presents the views of five people on the impact of the Academies in relation to the images of excellence and responsiveness of state school education programs in Queensland and a unique and different model of state education. These representatives from the industry and community stakeholder groups were nominated by the academy principals.

There were three people nominated as industry representatives (1 from QACI, 2 from QAHS); and two people who self-identified as community representatives (1 from QASMT & 1 from QAHS). During the initial email contact, one of the QAHS representatives self-identified as a university research institute academic involved with the academy. Interviews were conducted by telephone from December 2009 to February 2010. They were individual, semi-structured interviews from the same schedule as the university stakeholder group. In the text that follows, direct quotes from transcripts are written in italics and integrated into the body of the text e.g. With respect to QAHS, “*from my point of view I think they are doing pretty well*”.

#### ***Changing views of State education***

Among four of the five industry and community respondents, the academies were found to have promoted an image of excellence and responsiveness.

*“Its been heartening for me to have exposure to state school education in Queensland of that high calibre and I know for me personally it’s really changed the way I view state school here in Queensland. I had thought previously that when I have children I’d like to send them to private school education because that’s the education that I had, but seeing QACI, if your children are able to an academy, I just think the depth of experience is just fantastic. It gives far more even that what private schools are able to offer students. It’s really changed my views of state schooling in this state”.*

This impact was thought to have been achieved through the quality of the students and staff plus the well funded learning environments. For another interviewee, some State schools may look and feel under-resourced but the academies fit more a stereotype of a private college or more elite institution, not a public high school.

The academies are perceived to offer a unique and different model of State schooling which is making a significant contribution to education in Queensland. They are always open to different opportunities for their students. Although they are swamped with so many opportunities that it is sometimes necessary to be persistent, otherwise your partnership contribution could get filtered out. For a successful partnership, “*engage with them as much as they can provide and vice versa.*”

This image of State education is impacted by the students themselves and the ways in which they are perceived by the industry and community people with whom they work. One industry representative who is involved with the ‘Friends of the Academy’ program at QAHS considered the environment to be “*what they needed; [it] allows them to blossom; [it is] very motivating*”. There was a view expressed that other schools may be jealous and reluctant to lose some of their key students. Overall, the impact was thought to be “*very positive and working very well*”.

### ***Outreach and engagement programs***

The Young Scholars’ outreach program was unknown to these respondents. Industry and community engagements are elaborated from their particular stakeholder experiences, specific to each academy. Examples are provided in the Table below.

*Table 8.1: Industry & Community Engagements*

QAHS	Community – e.g. students went to Vanuatu with Interact Club to paint the Hospital. Industry – e.g. ‘Friends of the Academy’ arrange interfaces with networking & mentoring opportunities.
QASMT	Community – e.g. Community Garden: “ <i>It’s been business as usual for us</i> ” as continue a pre-academy EQ arrangement. IB (CAS) community service once a week (e.g. gardening and maintenance).
QACI	Creative Industries Community – e.g. ‘Innovator in Residence Program’; ‘The Living Laboratory’ program; ongoing Real Life interactions with industry leaders in office, design, technology & urban design environments.

Recommendations to enhance these partnerships are also idiosyncratic to each of the respondents’ experiences with a particular academy. A specific focus of connecting with local communities is advocated by the QASMT representative. Community engagement was believed to be fostered through initiatives such as the ‘Friends of the Academy’ at QAHS and ‘The Edge’ strategic link with the State Library at QACI.

A recurring theme in these data suggests that community connections are yet to be fully realized. In part, this may be because not all students come from the same geographical area and have long

commutes to get to their respective academies. Again, the perception was that this needs people to drive it because informal arrangements can only achieve so much. *“Have someone in the academy to specifically build the relationships. It’s all new. Maybe in the future this would be good”*.

The IB’s Community, Action, Service (CAS) program was considered to add value to the students’ learning experiences, both educational and social. In their day-to-day studies, the students have a lot of stress. The CAS program is a *“really good outlet”* for all students at the Academies, while still furthering their studies. Real world connections and interactions with industry experts are aspects of the Academies activities that are definitely adding value to student’s education and social experiences.

The worth or otherwise of the academies will be judged in the immediate short term by the students’ results (i.e. academic outcomes from an academy and progression into university). As well as the purely practical, a QAHS interviewee considered that there is also scope for promoting the research side of science. Furthermore, the Innovator in Residence program as run through QACI could very well be extended to all three Academies. Finally, there was general agreement that the Queensland Academies should definitely continue because *“the quality of the individual that they are turning out is unbelievable”*.

## **Summary**

Partnerships with industry and community groups are entered into for diverse reasons. They reflect the wide-ranging needs of new schools establishing themselves with mandatory community engagements and research activities as part of an IB curriculum plus niche industry foci per academy (e.g. creative industries, health, science, mathematics and technology).

For these interviewees, the curriculum package offered by the Academies is not understood specifically in terms of the IB syllabus. Rather, the totality of educational experiences on offer to students is considered to be important. As with the university partnerships, these relationships seem to be multi-level and cross-sectoral in the ways in which they connect with the different Academies. The outreach and engagement programs are largely unknown outside each respondent’s individual relationship with an academy. This is to be expected perhaps as each stakeholder engages in particular ways with each academy.

## Chapter 9

### Adding value to state education

The terms of reference for the evaluation included an assessment of the extent to which academies 'add value to the state education system through leading innovative practice' (one of the five principles underpinning the evaluation). Their potential to do so can be realised in a number of ways, including the extent of success in their own right, without any particular interaction with the rest of the system. How they do this has been addressed and assessed elsewhere in this report, for example, the extent to which students achieve at a higher level during and after their enrolment because they are attending academies and not other schools. Another way they can add value is through their interaction with the rest of the system, that is, their external impact on others at the same time that they may have internal impact on their students and staff. Chapter 8 is concerned with 'external impact'.

A review of operations revealed a number of ways academies may have wider impact. These include the Queensland Academies Young Scholars (YS) Program described in a Queensland Government brochure as 'a network of students, parents and schools which aims to develop the talents of the brightest Years 5 to 7 students across Queensland'. Another is the intention for academies to contribute to building the intellectual capital of the system through, for example, the conduct of professional development programs for staff in other schools, or through the strategy to limit the time teachers may be appointed to an academy to ensure that the knowledge and skill of these teachers are deployed in other schools after their appointment, and others who take their place acquire new knowledge and skill that will have personal and system benefit.

There is an extensive literature that is relevant to this aspect of the evaluation. For example, the intention noted above for academies to play a leading role in networks of students, parents and schools suggests that research on networks is pertinent. So too is related research on the phenomenon of 'lighthouse schools'. A short review of national and international research on networks and lighthouses is included to enrich the criteria by which the effectiveness of academies in respect to their wider impact can be assessed.

#### ***Young Scholars Program***

The YS Program is described in the Queensland Government brochure in the following terms:

Hosted by the Queensland Academies, the YS Program offers benefits which include access to a range of workshops and learning opportunities run in partnership with GERRIC (Gifted Education Research Resource and Information) the Queensland Academies and their university partners, and a website affording a comprehensive range of resources.

Information provided by DETA indicated that at the end of Term 3 in 2009 there were 952 students in the YS Program who had participated in 37 workshops with 8 more planned in Term 4, including activities in the Townsville, Gladstone and Emerald districts. A YS website was established with 685 registered of whom 31 percent visiting on a regular basis. QUT, Griffith and UQ provided \$30,000 to support the workshop and online program.

### *The YS 'offer'*

The expected benefits of the YS Program are spelt out in the same brochure:

- Continuous curriculum support through online programs which offer a variety of activities for students to engage in and link to other gifted and talented students from across Queensland
- YS workshops (including those run in partnership with GERRIC) held at the Queensland Academies' campuses and regional centres in subjects like biotechnology, environmental science, nanotechnology, theatre, textile design, ethics and maths.
- Some of these workshop opportunities include:
  - Mentoring by academies' staff and students
  - Use of Queensland Academies' facilities
  - Scholarship opportunities
  - Access to the Gifted and Talented advisory program for parents and guardians

In a sense the foregoing is the 'YS offer', spelling out the benefits that students and their parents should expect to receive from participation in the program. This is the 'touchstone' for assessing the progress that has been made.

### *Eligibility*

Students from state and non-state schools are eligible for admission to the program providing they meet one of the following criteria:

- A 90<sup>th</sup> percentile on any individual or group IQ test
- A 90<sup>th</sup> percentile on a subscale (e.g. verbal performance) of an individual IQ test
- A High Distinction or Distinction in the Australian Schools Science, English or Mathematics Competition
- A score well within the top band of the NSW Basic Skills Test (Literacy or Numeracy)
- A letter from their teacher confirming that the student's academic performance or potential in Mathematics, Science or English is within the top 10 percent of the student population

Normally a student is nominated by a parent or a teacher. The principal of the school attended by the student must approve the nomination.

### *Views of parents*

A survey of parents of students participating in the YS program was conducted in 2009. Only 80 of a possible 1,200 parents responded. Findings should be interpreted with caution since this represents a response rate of only 6.6 percent.

Almost all respondents reported that their son or daughter had attended at least one workshop. Half indicated that a greater variety of topics would encourage a higher level of participation with other responses suggesting the need for more challenging subject matter and greater links from one topic to the next. About 40 percent indicated that the website had never been accessed. Expectations are illustrated in parents' response to a question on why their daughter or son enrolled (multiple responses were possible):

Extend their knowledge of learning areas not available at school	67.5 percent
Have fun while learning	67.5 percent
Meet like-minded students	48.8 percent
Extend their knowledge of learning areas available at school	37.5 percent
Accelerate learning	30.0 percent
Other	16.3 percent

Parents were invited to rate their satisfaction with different aspects of the YS Workshop Program. Responses are summarised in Table 9.1. Ratings were provided by Department of Education, Training and the Arts; the percentages for each aspect do not total 100 and it is assumed that some respondents did not provide a rating.

*Table 9.1: Parent satisfaction with aspects of the YS Workshop Program*

Aspect	Level of satisfaction (percentage of responses)			
	Very dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Organisation	1.25	5.00	52.50	32.50
Venue and facilities	1.25	3.75	38.75	45.00
Communication	1.25	7.50	52.50	31.25
Learning areas (topics)	0.00	7.50	58.75	26.25
Level of skill development	0.00	7.50	60.00	22.50

Subject to the qualification that the response rate was very low, it is apparent in Table 9.1 that the overwhelming majority of parents were satisfied or very satisfied with the program. Of the 80 respondents, just one reported they were very dissatisfied with one or another of three aspects.

Parents were invited to indicate in an open response how they would improve the YS Workshop Program. Responses should be interpreted in the context of the high levels of satisfaction reported in Table 9.1 but in the context of the low response rate. Comments generally concerned the timetabling of the workshops; the excessive filling out of forms when online facilities should have

been used, more challenging content in addition to fun and enjoyment, and lack of a goal or strategy that underpinned the program.

### ***Building the intellectual capital of the system***

The wider impact of academies is also illustrated in professional development provided for staff in other schools. For example by September 2009 the Scientific Officer at QAHS had conducted workshops for 600 primary teachers in sets of 100 over three sessions. She provides kits to the value of \$10 that enable teachers to conduct up to 120 experiments. She wrote the supporting materials. By the same date there had been about 8,000 visitors to QAHS. A school leader at QAHS believes wider impact extends to Queensland as a whole as 'an investment in leaders of the future'.

Primary schools that network with the academies are described as 'associate schools'. For example, QASMT had 30 associates. Staff at QASMT conduct workshops on pedagogy for teachers from other schools several of which have used facilities at the academy.

### **Review of policy and practice on lighthouse schools**

Wider impact of the kind described above means that academies have several characteristics of what are often described as 'lighthouse schools'. It is evident that they are also engaged in the creation of networks. It is helpful to review what is known about lighthouse schools and networks of schools by reviewing policy and practice in other settings and summarising some of the key research findings. This provides a basis for a deeper assessment of the impact of academies.

Lighthouse projects are characterised by 'partnerships between university scholars and school personnel' that have 'worked to change structures, cultures and learning conditions of schools' (Fink, 2000 p. 30). Lighthouse schools can be defined as those that demonstrate a strong student performance (NSW Department of Education and Training, 2009) through innovative pedagogy and / or structure (Angus & Loudon, 1998; Cuttance et al., 2006; Sizer, 1992). Lighthouse projects are dependent on lighthouse schools acting as catalysts to spread the reform across the education system (Fink, 2000) through various means, with an emphasis on school-based professional development programs for teachers (Cuttance, 2006; NSW Department of Education and Training, 2009; Sizer, 1992). The importance of teacher collaboration on school improvement, which is a key element in lighthouse projects, was described by Fullan:

School improvement will never occur on a wide scale until the majority of teachers become contributors to and beneficiaries of the professional learning community. Again, effective schools see themselves as part and parcel of this wider movement. Of course, they create conditions for continuous learning for their own members. But they do more than this. They engage in partnerships with local universities or become members of other reform networks.



They see themselves as much in the business of teacher education as in the business of school improvement (Fullan, 2000).

### *Australian National Schools Network (ANSN)*

The Australian National Schools Network (ANSN) was designed to identify and implement changes in pedagogy and the organisation of a school to encourage improved student outcomes (Angus & Loudon, 1998). The ANSN involved all territories and states, government and non-government schools, teacher unions and employers (Angus & Loudon, 1998). The schools themselves were responsible for identifying the changes they thought were important to their particular schools, which represented a considerable change from previous academic-led professional development (Angus & Loudon, 1998). The funding and time for the changes were determined by allocation and re-allocation within the school (Angus & Loudon, 1998). These schools would then become lighthouse schools with their ideas publicised and implemented by other schools to encourage systemic change (Angus & Loudon, 1998).

Research circles, based on principles of equality and democracy, involved both school based and university stakeholders (Merrit & Campbell, 1998). Research circles act to encourage 'new learning that individuals can adopt, adapt and try out' (ANSN, 2008, p.5). Individual schools within the ANSN experienced success although a lack of systemic change was noted (Angus & Loudon, 2005). Kuri Kuri High School is an example of a school that achieved improved academic outcomes through the ANSN program (Merrit & Campbell, 1998). The employment of research circles at Kuri Kuri was thought to be a key factor in the identification and implementation of pedagogical and structural change (Merrit & Campbell, 1998). The lack of systemic change within the school system was thought to be caused by a deficiency in resources to encourage other schools to implement the innovations and a lack of evidence that the school could 'improve productivity without jeopardising the work conditions' (Angus & Loudon, 1998, p.846).

### *Boys' Education Lighthouse Schools (BELS)*

The Boys' Education Lighthouse Schools (BELS) program involved 350 schools around Australia with the aim of developing and testing the effectiveness of innovative strategies to improve learning outcomes for boys (Cuttance et al., 2006). Clusters of school were created to plan and encourage the sharing of new strategies from lighthouse schools (Cuttance et al., 2006). The clusters involved both university and school staff. The funding of the project enabled teachers to undergo rich and transformative professional development from fellow teachers. The effect of professional development was described by a teacher:

Perhaps the most interesting realisation that has arisen from the first part of our project is the very strong re-affirmation of the skills and capabilities of we [us] teachers. Again, we have been forced to look closer to home and within our own ranks of fellow teachers to find support and expertise and have discovered wonderful talents and opportunities, with only the cost of a relief day to access them. The luxury of TIME and MONEY (for example, to

provide transport for students to different venues) is probably the main ingredient missing in our normal teaching lives and one which, we now realise, can make such a difference to planning and achieving outcomes.(Cuttance et al., 2006, p.10-11)

Two-thirds of the schools involved were identified as having had an impact on boys learning outcomes (Cuttance et al., 2006). The West Wallsend / Hunter (NSW) cluster was part of the BELS project which showed a high level of improvement in results for boys, with the greatest impact observed in Mathematics. A 75 percent gain was observed in increased understanding of concepts as assessed from work samples from the target group (Cuttance et al., 2006, p.10-11). The Sydenham / Delahey cluster (VIC) showed an improvement of reading achievement in over 70 percent of the boys and girls, with 50 percent of boys showing an improvement of a full year in their reading as measured by state wide test data.

Academic gains may be driven by changes in behaviour and engagement. The behaviour of the boys improved in many clusters, with a reduction in unacceptable behaviour, time-outs and suspensions (Cuttance et al., 2006). The strategies employed by the school clusters encouraged increased engagement of students as detected in improved attendance, student interest and motivation (Cuttance et al., 2006). An improvement of 30 percent was observed in student attitudes in the West Wallsend / Hunter cluster, with increased belief that 'school was an interesting place to be' (Cuttance et al., 2006, p.41). Schools in the Bayside / Thornlands cluster in Queensland experienced a 50 percent reduction in suspensions of boys in 2005.

All teachers in the study self-reported a positive impact on male student outcomes (Cuttance et al., 2006). The disparity between teachers' perceived success and evidenced-based effects provides an interesting point for discussion. Cuttance et al. (2006 p.101) noted that 'teachers are not trained in research as part of their teacher preparation, hence they need support in translating the findings of research into implications for practice and to research and analyse the effects of the strategies that they have put in place'.

BELS required teachers to be reflective about the innovative strategies they introduced (Cuttance et al., 2006). A teacher described the importance of reflection that was encouraged in BELS:

It is often the part that we leave—we'll often try things as practitioners, go and utilise them in the classroom and very briefly we'll comment as to whether it worked or not. This project makes people critically reflect on which parts are important. (Cuttance et al., 2006, p.11)

The BELS strategies were also found to encourage teacher learning, with evidence of increased awareness of boys' issues, improvement in professional knowledge and improved confidence in teaching boys (Cuttance et al., 2006). Teachers were also found to form long-term relationships with schools in their local area (Cuttance et al., 2006).

### *Best Start Lighthouse Project*

The Best Start Lighthouse Project of the NSW Department of Education and Training is intended to 'celebrate and connect those schools that are making significant and sustained progress in student achievement in the early years of schooling' (NSW Department of Education and Training, 2009). The key goal of the project is for lighthouse schools to form networks with other similar schools and

share innovative pedagogy with a specific focus on literacy and numeracy. They defined successful lighthouse schools as those that demonstrate strong student performance, clear focus on the student, use research-based strategies for large blocks of learning time, and examine and analyse data to help various disadvantaged student groups. Lighthouse schools will be encouraged to showcase their teaching programs, lead discussion groups with communities of schools and initiate and hone innovative pedagogy. The manager of the project described the desired impact of the project: ‘through sharing best practice with learning communities, the lighthouse project will help participating schools to strengthen quality teaching in the early years (Langham, 2009).

### *Coalition of Essential Schools (USA)*

The Coalition of Essential Schools (CES) was formed in 1984, as an association between schools and staff at Brown University. The individualistic nature of schools was central to the CES as noted by founder Theodore (Ted) Sizer:

Each school must draft these ideas into practices that are respectful of its community and that draw on the strengths of its particular faculty . . . they agree that no two schools are quite alike but all share principles that give shape to their effort(1992, p. 207).

The program was designed on nine common principles that emphasised personalised teaching and learning and student as workers with teachers as coaches (Sizer, 1992, p. 208). The impact of personalised teaching on students was described by Ted and Nancy Sizer:

When a student has gotten his juices up in some way, he will think about such material outside of school, argue about it at the dinner table, take a book about it out of the library, choose the topic for his next paper. Accuracy will start to matter, but only if it follows engagement, only if the student has put himself on the line. Only then will he care if he gets his dates right or if he finds himself changing his interpretation of something. He has started to grapple with a question of importance to him, and it may well emerge into a lifelong interest and a lifelong habit (Sizer & Sizer, 1999).

A new school that wished to join the CES was initially directed to contact a nearby school with a successful coalition experience (Goldberg, 1996). Schools undergoing change need support. Sizer described this challenge: ‘it’s exceedingly difficult to change schools – and particularly in a volatile environment where assessment systems, political control and collective bargaining are themselves in flux’ (Goldberg, 1996, p. 687). A key to CES success were professional development schools which enable partnerships between academics and school staff (Hudson-Ross, 1998). The CES was well funded; for example, in 1993 it received a US\$500 million grant to encourage ‘substantial and durable reform’ (Goldberg, 1996, p. 687). The CES is believed to have long-term impact for 20 percent of schools (Goldberg, 1996, p. 687). There was evidence of improved academic performance, attendance, morale and admission to college (Sizer, 1992). The importance of personalised learning and professional development was stressed.

Recent studies showed that schools from the CES in Boston, New York and Minnesota showed improved academic performance, admission to college, attendance, and hope (CES, 2006). The retention of the students at college for second year enrolment was above national average by 9

percent and 3 percent for 4-year and 2-year colleges, respectively (Foote, 2005). Boston Pilot Schools involved 19 schools which contain about 10 percent of the Boston Public School student population (CCE, 2006). Improved academic outcomes were observed: 18 percent increase in college enrolment and significantly more Pilot School students scored higher in the advanced / proficient categories than BPS students (CCE, 2006). Pilot School students showed a greater engagement as evidenced by a higher attendance rate, lower suspension rate, and a two-fold increase in retention of students in comparison to students in the Boston Public School population (CCE, 2006). The above findings indicate the success of CES schools in the improvement of student academic outcomes, engagement and college attendance.

## **Review of policy and practice on networks**

The policies and practices on lighthouse schools set out above make clear that such schools tend to operate in networks. It is helpful to conduct a similar short review of the specialist literature on policies and practices on networks and networking.

In general terms a network is an association – formal or informal, temporary or permanent, mandatory or voluntary – between and among individuals, organisations, agencies, institutions or other enterprises, through which participants share knowledge, address issues of common concern, pool resources or achieve other purposes of mutual benefit.

### *Types of networks*

Van Aalst's definition of networking is a helpful starting point in describing the forms that networks may take. 'The term "networking" refers to the systematic establishment and use (management) of internal and external links (communication, interaction and coordination) between people, teams or organisations ("nodes") in order to improve performance' (van Aalst, 2003, p. 33).

According to van Aalst (2003, pp. 36-37) there are three types of networks that may operate alone or in combination:

- A 'community of practice' that involves the relatively informal sharing of knowledge within a network of professionals. The knowledge may or may not be codified and much of the activity within the network involves the identification of who has the knowledge to address a particular issue.
- A 'networked organisation' that involves a more or less formal relationship between autonomous organisations with the intention of adding value to each, the chief advantage being that each partner can remain autonomous yet build its capacity to achieve its mission through synergies achieved with other partners.
- A 'virtual community' may take many forms, with the common element being the medium of ICT.

Smith and Wohlstetter (2001, p. 501) described four types of networks in education: (1) professional networks of educators operating largely on an informal and voluntary basis, (2) policy issue networks that pursue a single issue or a small set of issues on a related theme, (3) networks that link different schools to an external partner in the expectation that benefits will flow to

participating schools, and (4) affiliation networks where schools are related to one another because of their membership of the same organisation.

Malcolm Groves (2008) writing in *Regenerating Schools* cites the work of Harvard University's Karen Stephenson to stress that hierarchies should not be replaced by networks. 'Rather, she sees organisations as a sort of double-helix system, with hierarchy and networks perpetually influencing each other, ideally co-evolving over time to become more effective'. Stephenson described six types of networks, with the purpose of each encapsulated in a key question:

1. The Work Network: with whom do you exchange information as part of your daily work routines?
  2. The Social Network: with whom do you 'check in', inside and outside work, to find out what is going on?
  3. The Innovation Network: with whom do you collaborate or kick around new ideas?
  4. The Expert Knowledge Network: to whom do you turn for expertise or advice?
  5. The Career Guidance or Strategic Network: whom do you go to for advice about the future?
  6. The Learning Network: whom do you work with to improve existing processes or methods?
- (Adapted from Groves, 2008, p. 88)

### *Networks in England*

Some of the most extensive networks of schools may be found in England. The Specialist Schools and Academies Trust has established three kinds of networks that were identified as an important factor (Prime Minister's Delivery Unit, 2004) in explaining why specialist secondary schools, now numbering more than 95 percent of all secondary schools in England, were outperforming non-specialist schools in terms of value-added and rate of improvement, especially under challenging circumstances. These are (1) networks of schools that offer the same specialism, (2) networks of specialist schools in the same region, and (3) networks of secondary schools with their neighbouring primary schools. In another important initiative, the National College for School Leadership (NCSL) established more than 100 networked learning communities (NLC).

The Blair Government was satisfied that networking was a key factor in achieving transformation, as evidenced by proposals in its five-year strategy for each level of schooling, including pre-school, primary and secondary:

Networks are an emerging feature of the landscape – networks of schools working together to solve shared problems, networks of schools and care agencies sharing information about vulnerable children, networks of schools, colleges and universities developing and sharing materials. Community learning, for families and adults wishing to upgrade their skills offers another form of network, linked by ICT to education hubs such as schools and colleges.  
(DfES, 2004, p. 108)

### *Networks in Australia*

Several states have moved to a different arrangement, organising schools in clusters and networks with the intention of augmenting traditional vertical top-down or bottom-up lines of authority, responsibility and accountability with horizontal or lateral arrangements. An example is Victoria which is organised into nine regions. From 2008 these regions have been divided into networks of schools with a total of 70 across the state. Intentions were announced in a 'blueprint' for education and early childhood development:

We will provide support to revitalise schools and allow teachers to produce their best . . . we will significantly expand the role of school networks through the employment of new regional network leaders. Under a new network strategic plan, networks will collectively support all schools to improve and achieve better outcomes for the students in a network. (Department of Education and Early Childhood Development, 2008, p. 27)

An outstanding example of successful networks was reported by Educational Transformations (2008), commissioned to study the state's regional effectiveness model as implemented in Hume, a rural region of about 160 schools located in North East Victoria. The eight elements of the model are professional leadership, a focus on learning and teaching, strategic stakeholder partnerships, shared moral purpose, high expectations for all learners, a focus on continuous improvement and strategic use of resources. Each network in the region includes several clusters of schools with the unusual expectation that principals of each school in a cluster share responsibility for all students in the cluster to the extent that professional knowledge is shared, issues of common concern are addressed, and resources are pooled wherever possible.

Principals and other school leaders in the Hume Region participate in a common professional learning program focused on building knowledge and skills as well as a shared language on matters related to learning and teaching. This is known throughout the region as 'the common curriculum'.

All schools reported high levels of involvement in their clusters and networks. The high expectations in the region for all school principals to be dedicated, focused and professional, for example, have resulted in increased professionalism in all network and cluster meetings. Principals reported that their meetings are now more strategic and are focused on areas that can assist every one of the member schools. Representatives from each school are actively involved in professional learning communities in their cluster that target a focus area of either literacy or numeracy. Principals reported that their networks also provided resources and support for other forms of professional development.

### *Networks in Singapore*

Singapore is one of the top-performing nations as indicated, for example, in the results of the Trends in Mathematics and Science Study (TIMSS), ranking first among 49 nations in each of Grade 4 and Grade 8 for both mathematics and science in the 2003 tests. Singapore's chief resource is its people and it must continually re-shape its system of education to meet the needs of the nation. Networking plays an important part. Prime Minister Lee expressed it this way in his contribution to a special edition of *Newsweek* on the theme 'The Knowledge Revolution: Why Victory will go to the Smartest Nations & Companies': 'we are remaking ourselves into a key node in the global knowledge network, securing our place under the sun' (Lee, 2006).

In addition to operating as a 'node in the global knowledge network', there is a substantial amount of internal networking. Stimulated by the engaging vision of 1998 of 'Thinking Schools, Learning Nation', the Ministry of Education established the Teachers Network, now in operation for a decade, aiming to 'build a fraternity of reflective teachers dedicated to excellent practice through a network of support, professional exchange and learning'. In TIMSS 2007, Singapore maintained its top ranking in science at Grade 4 and Grade 8 and was ranked second and third, respectively, in mathematics.

### *Impact of networks*

Until recently there was surprisingly little research on the processes and outcomes of networking in education. Stimulated by the creation of the Networked Learning Communities of the National College for School Leadership (NCSL) in England, Kerr et al. (2003) concluded in a report to the National Foundation for Educational Research (NFER) that:

The research and evaluation base is very fragmented and there is a diversity of opinion . . . Much of the evidence available is dependent on the beliefs of researchers and interested parties and the approaches and interests they represent. The literature is sparse and contradictory about the benefits, key lessons and challenges arising from building and how best to sustain professional learning communities . . . There is a lack of research that captures the messy and complex nature of network processes. This is because of the difficulty of evaluating and monitoring multi-faceted network processes. It is also the case that network coordinators and facilitators often manage their networks in informal and implicit ways, often with limited recording procedures because of pressures of time and limited resource. (Kerr et al., 2003)

The NCSL commissioned research on the impact of its Networked Learning Communities. While cause-and-effect is not attributed, it was found that schools in networked learning communities in Cornwall consistently outperformed those that were not on value-added measures at Key Stage 2 (upper primary) (National College for School Leadership, 2005, p. 15) (see also Earl & Katz, 2005).

Smith and Wohlstetter (2001) reported an extended study of large-scale networking (see also Wohlstetter, Malloy, Chau & Polhemus, 2003). It focused on the Los Angeles Annenberg Metropolitan Project (LAAMP) funded by the Annenberg Challenge in the amount of \$53 million over five years in the mid-1990s. A total of 250 schools were distributed in 21 networks termed 'school families'. Smith and Wohlstetter found evidence of benefits that included community-based collaboration, the transformation of school leadership, cost sharing, knowledge sharing, and the involvement of external partners. Challenges included the development of group process skills and the generation of quality information. They concluded that:

The Annenberg approach to school improvement emphasised building capacity for innovation among an integrated set of schools. Through joint network activities, problems could be conceptualised in a more integrated holistic fashion, and technical competencies and other resources from a network of mutually supportive schools could be shared to respond rapidly to changing environmental conditions . . . Although networks cannot change a turbulent policy climate, preliminary findings suggest they can moderate the negative impact of turbulence on member schools (Smith & Wohlstetter, 2001, pp. 516-517).

### *Conditions for successful networks and networking*

David Hargreaves has done much to build the case for networks and networking, especially for innovation in learning, teaching, support, leadership and design, drawing extensively on practice in schools, particularly in England. He concluded that networks in education tend to succeed when:

1. There is a clear and agreed outcome to the network's activity;
2. The benefits of networking – creating the network, operating it and maintaining it – exceed the costs, since lack of pay-off is disincentive to continuation;
3. The participants are committed to professional learning through collaboration, sharing and joint activity, with agreed ways of working;
4. The network contains high social capital and its two key components: trust between members and norms of reciprocity;
5. Leadership and management are distributed and supportive;
6. There is appropriate support in terms of time and / or resources; an appropriate model for professional development that connects innovation to normal professional practice;
7. There is a good balance in communication between face-to-face and electronic and virtual forms and e-networking is instituted after trustful; face-to-face networks have been established. (Hargreaves, 2008, p. 33)

### Implications for the evaluation of the academy program

The conditions for success listed by Hargreaves constitute a useful set of criteria for assessing the extent to which the processes in the academy program set in train thus far are likely to add value to the state system of education. Table 9.2 lists these criteria and provides a summary assessment of progress. It is acknowledged that the policies and practices described in this section of the report are still in the early days of implementation compared to the well-established approaches described in the review of developments. It is therefore more a formative than a summative assessment.

It is also acknowledged that academies and their 'associate' schools as well as universities and potential industry partners are engaged in other forms of networking, some of which are well-established if not flourishing. There is therefore a challenge in creating and sustaining the new networks associated with the academies.

*Table 9.2: Assessment of progress in adding value through academies as lighthouses and networks*

*(based on Hargreaves, 2008)*

Criterion	Description	Assessment
Purpose	There is a clear and agreed outcome to the network's activity	Purposes are clear in the way they are set out in documents related to the academies but alignment among stakeholders is not yet strong, especially as seen by parents in the case of the YS Program and the academies, universities and related industries as far as partnerships are concerned
Benefits	The benefits of networking – creating the network, operating it and maintaining it – exceed the costs, since lack of pay-off is	Intended benefits are clear and early indicators of potential payoff are promising but alignment is still not strong enough to



	disincentive to continuation	draw a conclusion on this indicator
Professional	The participants are committed to professional learning through collaboration, sharing and joint activity, with agreed ways of working	There is promising evidence of professional learning through the links that academies have made with other schools
Trust	The network contains high social capital and its two key components: trust between members and norms of reciprocity	There appears to be a high level of trust among parents and the academies in respect to the YL Program, but a small sample was surveyed. There is a modest degree of reciprocity between academies and universities, but the former would prefer a higher degree of recognition of scores in the IB
Leadership	Leadership and management are distributed and supportive	Leaders in the academies work well in designing and delivering the YS Program with a financial contribution from universities
Resources	There is appropriate support in terms of time and / or resources, an appropriate model for professional development that connects innovation to normal professional practice	Leaders were 'stretched' in the early stages when it came to managing the YS Program and links / partnerships with universities and industries; recent proposals for enhanced leadership and management (governance) are timely
Communication	There is a good balance in communication between face-to-face and electronic and virtual forms and e-networking is instituted after trustful, face-to-face networks have been established	There is good early progress that will be accelerated with implementation of a different approach to governance; progress has been modest in take-up of online resources in YS Program

In general, the assessment summarised in Table 9.2 suggests that good progress has been made in adding value to the system. This is a considerable achievement given the challenges of setting up the academies. It was made clear in interviews that staff were stretched in the early years in their early professional development in the IB, ordering equipment, developing curriculum, adapting pedagogy, gathering and analysing an extraordinary range of data on process and outcomes. There was only limited time and energy to devote to establishing the YS Program and building the partnerships and links to universities and industries related to the field of specialisation. A different approach to leadership and management (governance) was under discussion in early 2010 that may see a different configuration to enable a senior appointee to lead in matters that

would enhance the contribution of academies to the state system. It is thus a resource issue but it is understood that implementation would be cost-neutral.

## ***Summary***

While networks have been evident throughout history they are a relatively recent phenomenon as far as large-scale shifts in organisational forms in education are concerned. It is likely that they will be a significant feature in the years ahead as schools and school systems seek to secure success for all students in all settings. They appear indispensable if knowledge about best practice is to be spread quickly and if there is to be flexibility in response to rapidly-changing needs. Advances in technology make this more feasible than ever. Networks are the predominant form through which academies will add value to the state system of education (apart from their contribution as entities in their own right) and a promising start has been made.

## Chapter 10

### Academies as small specialist schools

The Queensland Academies are (1) specialist schools; (2) tend to be relatively small compared to other state high schools; (3) are expected to have an impact on the wider system of state education through initiatives such as the Young Scholars Program and providing professional development for other schools, especially neighbouring schools; and (4) exclusively offer the International Baccalaureate Diploma.

There are national and international counterparts for schools that have one or more of the above four features. There is a considerable amount of research in each instance and this evaluation takes account of key findings in such research in forming a view of the processes and outcomes in the Queensland Academies.

Chapter 10 provides a review of related research on specialist schools and school size and explores the implications for academies, especially in respect to how these characteristics may explain processes and outcomes reported in previous chapters.

#### *Specialist schools*

Schools similar to the Queensland Academies are termed magnet and specialist schools in the US and the UK (England) respectively. Secondary schools that have a specialised curriculum account for approximately 3000 or about 95 percent of secondary schools in England. These schools offering at least one of 11 specialisations: arts, technology, languages, sports, business and enterprise, engineering, mathematics and computing, science, humanities, music and special education. Each school is required to secure cash or in-kind support from the private sector to obtain additional funding from government, and this support is often drawn from industries connected to these specialisations.

There are more than 5,000 magnet schools in the US, which is a significant but noteworthy minority of secondary schools in the country (US Department of Education, 2008). These schools share common characteristics that make them distinct from other schools. They offer at least one specialisation within the broader curriculum and usually offer an innovative pedagogy (Metz, 2003; US Department of Education, 2008).

Apart from offering a specialisation, academies in England are quite different to those in Queensland because they have normally replaced schools that have closed or been amalgamated and are in highly disadvantaged settings.

Some magnet schools and the Queensland Academies offer the International Baccalaureate (IB). The IB was founded in 1968 and is offered in 2,741 schools in 138 countries (IBO, 2009) (see Chapter 2). Specialist schools in the three countries seek partnerships with universities and industries related to their areas of specialisation. Enrolment processes differ. There is open enrolment in the specialist schools in England although about 10 percent of places are sometimes

reserved for students with particular aptitudes such as music. Queensland Academies employ an entry test, while magnet schools 'enrol students on a voluntary basis, usually from areas larger than traditional neighbourhood school attendance areas' (Metz, 2003, ix). In magnet schools students are usually enrolled using racial quotas to encourage a school with varied racial and socio-economic backgrounds (Goldring & Smrekar, 2002; Metz, 2003).

### *Specialist schools in England*

Jesson (2003) compared 938 non-selective specialist schools with 1,993 non-specialist comprehensive schools in England and found that students' studying for the General Certificate of Secondary Education (GCSE) in specialist schools showed 8.9 percent increase in gaining five or more A\*-C results [the grading system used for GCSE] compared to students in non-specialist schools. Specialist schools showed an increased proportion of students gaining five A\*-C grades by 1.9 percent points compared to gains of 0.4 percent points for non-specialist schools (Jesson, 2003). The average capped point score which is based on pupils' best eight GCSE results, was 35.9 points for selective specialist schools compared to 33.1 points for non-specialist schools (Jesson, 2003). Seven percent more students at specialist schools were found to achieve A\*-C grades in English, mathematics and science compared to students in other schools (Jesson, 2003). Students from specialist schools achieved 4 percent more grades in the A\*-C range in their specialist subjects compared to students from non-specialist schools (Jesson, 2003). Comparing achievement levels at the end of the year with those when the school first became a specialist school, it was found that the longer a school had been a specialist school the greater its improvement (Jesson, 2003). It should be noted that Jesson's study was reported in 2003 when about 65 percent of secondary schools in England were specialist schools.

To investigate the influence of SES on achievement, Jesson (2003) selected 347 schools of a lower SES (those with 15 percent - 80 percent of pupils entitled to a free meal, compared to national average of 14.5 percent) and observed an increase of 3.5 percent of students' gaining five or more A\*-C grades in comparison to students' in non-specialist schools.

In his next study, Jesson (2004) found that specialist schools outperformed non-specialist schools on value-added measures in all socio-economic settings, with the highest rate of improvement in schools in challenging circumstances. In GCSE results in 2005, 59.4 percent of students in specialist schools received five good passes compared to 48 percent of students in non-specialist schools. Comparisons have been more difficult in recent years as the number of specialist schools has approached 100 percent of all secondary schools.

### *Magnet schools in the US*

Studies were conducted at four American magnet schools: Chattanooga School (K-12) for the Arts and Sciences (CSAS), Galileo Magnet High School (three technology-based strands of study: air and space, biotechnology, and advanced communications and networking), Francisco Bravo Medical Magnet High School (Bravo) and design and architecture Senior High School (daSH) (US Department of Education, 2008). Their profile is similar to the specialisations in the Queensland Academies. Students of CSAS and Bravo achieved a greater percentage of proficient and advanced results in the 2007 state reading and mathematics assessments than students in their districts (excepting Bravo year 10 mathematics) and state (for CSAS alone) (U.S department of

Education, 2008, p.32, 40). A similar pattern was observed for daSH whose year 10 students achieved a higher percentage of proficient or above on reading, mathematics assessments and writing assessments (US Department of Education, 2008, p.44). Galileo outperformed district and state schools on the state's 11 Standards of Learning, showing a difference of 27 percent and 14 percent in geometry compared to district and state respectively (US Department of Education, 2008, p.48). Galileo also achieved a high school graduation rate of 95 percent. These findings suggest an association between academic gains and magnet schools in comparison to non-specialist schools.

The observed educational gains of Galileo must be tempered by the differences in the ethnicity and SES of Galileo in comparison to those of the district school. Galileo has differing ethnicity (2 percent Hispanic, 33 percent African-American, 60 percent White and 2 percent Asian American) compared to the district school (1.6 percent Hispanic, 68.5 percent African-American 28.3 percent, White and 1 percent Asian American), and 31 percent receive free or reduced cost lunches compared to 65.8 percent (US Department of Education, 2008, p.45). These factors could influence the academic outcomes of Galileo (Kao & Thomson, 2003). Illustrations of studies in both England and the US suggest that SES and ethnicity of a school population should be considered in specialist schools analysis.

#### *Post year 12 destinations*

A study that investigated the effect of changing schools in Chicago (60,000 students involved in study) found that those who changed to a magnet school were 7.6 percentage points more likely to graduate than their peers who attended their neighbourhood school (Cullen, Jacob & Levitt, 2005). For magnet schools reported above, daSH showed the strongest results for four-year college intake with 87 percent of students accepted into two- or four-year colleges compared to 81 percent of the students from CSAS, and 57 percent of Galileo's graduates (US Department of Education, 2008, p.40, 44, 47). Galileo showed the largest intake into two-year college with 38 percent, while daSH showed an enrolment of 18 percent (U.S department of Education, 2008, p.47). The remaining 5 percent of students from Galileo enlisted in the Army. About 73 percent of students from daSH enrolled in majors associated with the key specialist area of the school (architecture, art and design) (US Department of Education, 2008, p.44). Few studies have investigated why students show improved academic outcomes and college acceptance in specialist schools. This could be influenced by increased social emotional changes in the students and parental influence as discussed below.

#### *Student perceptions*

Students who changed schools in Chicago self reported that they had better junior high grades, were less likely to fail or have been suspended, had higher expectations for graduation and the future, were better prepared for high school, and had fewer absences compared to students in the surrounding local high schools (Cullen, Jacob & Levitt, 2005). Parents of students attending high achieving schools showed increased involvement in school activities and were better educated (Cullen, Jacob & Levitt, 2005). Another study found that financial support from the state, and the presence of caring, proactive teachers contributed to the positive experiences of students (Hubbard & Datnow, 2005).

### *Innovative pedagogy and curriculum*

Teachers in magnet schools have been shown to focus on higher-order thinking skills and use a variety of assessment practices to a greater extent than teachers within the traditional school structure (US Department of Education, 2008). Magnet schools and specialist schools encourage cutting edge approaches and, through technology and industry partnerships, they act to provide innovative resources for students (Specialist Schools and Academies Trust, 2008; US Department of Education, 2008). The Central Academy of Technology and Arts in Monroe, North Carolina employed virtual field trips (vRoom) which offer 'real-time, two-way communication that includes social networking tools such as instant messaging, application sharing, breakout rooms, interactive whiteboards, and a live webcam' which help to ensure 'meaningful communication' and offers a 'project-based learning environment that engages all students in the subject' (O'Hanlon, 2007). Tom Moncrief, a high school curriculum coordinator for Union County Public Schools, which includes the abovementioned Central Academy, described the importance of employing the tools of the digital age and industry stakeholders (O'Hanlon, 2007):

One of the things we've been talking about is how students are growing up in the digital age, and the internet is connecting them in a way that is so different from what we knew when we were students. It is our responsibility as educators to use that as an effective mechanism for learning.

A student described how the educational innovations of vRoom and industry partnership helped her learning (O'Hanlon, 2007):

I think vRoom helped me learn because it showed me what real surgery looks like...After all the reading we do, and all the terminology we have to learn, it's nice to see how it is implemented in the actual surgical setting. Since we could not go to the surgery, the surgery came to us.

### **Summary**

Students from specialist schools in England and the US that are broadly similar to the Queensland Academies have shown increased academic gains (Jesson, 2003; US Department of Education, 2008), course taking which favours university acceptance (Clark, 2007), graduation levels (Cullen, Jacob & Levitt, 2005) and university enrolment (Clark, 2005; US Department of Education, 2008). The increases in academic achievement in England were negatively influenced by low SES (Jesson, 2003). The importance of the attitudes and involvement of the key stakeholders (students, parents and teachers) to student engagement was identified (Cullen, Jacob & Levitt, 2005; Hubbard & Datnow, 2005). Partnerships of specialist schools with industry and availability of new technology were found to be important to development of innovative resources for students (Specialist Schools and Academies Trust, 2008; US Department of Education, 2008).

## ***School size***

The issue of school size is central to matters of provision in public education. Discussions and debates frequently centre on whether schools are too small to offer a quality education for its students. It is therefore important to consider the academy program in the light of what is known about the relationship between school size and outcomes that are relevant to the implementation of a transformation agenda.

There is a considerable body of research on school size, much of which is from the United States where there are concerns that secondary schools, in particular, are too large in some settings. The view that large schools are more cost-effective than small schools has been challenged. An increasing number of school systems have implemented a strategy to maintain or create small schools or re-structure large schools to form schools-within-schools. Perhaps the largest cross-system initiative is the project of the Bill and Melinda Gates Foundation that provided nearly \$500 million by the end of 2003 to create new small high schools.

### *Review of research to 1996*

The following is a summary of research to 1996 on the topic (adapted from Cotton, 1996). Compiled by the North West Regional Educational Laboratory, it is generally regarded as the most comprehensive of its kind, drawing on 49 primary sources that reported findings on a range of variables.

1. School consolidation has been carried out through much of this century, resulting in fewer and much larger schools and school districts. Consolidation continues.
2. The research base on the relative effects of large and small schools is large and quite consistent. The research base on the effects of school-within-a-school (SWAS) arrangements is smaller and less conclusive.
3. There is no clear agreement among researchers and educators about what constitutes a 'small' school or a 'large' school.
4. Much school consolidation has been based on the beliefs that larger schools are less expensive to operate and have higher-quality curricula than small schools. Research has demonstrated, however, that neither of these assertions is necessarily true.
5. Academic achievement in small schools is at least equal—and often superior—to that of large schools.
6. Student attitudes toward school in general and toward particular school subjects are more positive in small schools.
7. Student social behaviour—as measured by truancy, discipline problems, violence, theft, substance abuse, and gang participation—is more positive in small schools.
8. Levels of extracurricular participation are much higher and more varied in small schools than large ones, and students in small schools derive greater satisfaction from their extracurricular participation.
9. Student attendance is better in small schools than in large ones.
10. A smaller percentage of students drop out of small schools than large ones.
11. Students have a greater sense of belonging in small schools than in large ones.
12. Student academic and general self-concepts are higher in small schools than in large ones.

13. Interpersonal relations between and among students, teachers, and administrators are more positive in small schools than in large ones.
14. Students from small and large high schools do not differ from one another on college-related variables such as entrance examination scores, acceptance rates, attendance, grade point average, and completion.
15. Teacher attitudes toward their work and their administrators are more positive in small schools than in large ones.
16. Attributes associated with small school size that researchers have identified as accounting for their superiority include:
  - a. Everyone's participation is needed to populate the school's offices, teams, clubs, etc., so a far smaller percentage of students is overlooked or alienated.
  - b. Adults and students in the school know and care about one another to a greater degree than is possible in large schools.
  - c. Small schools have a higher rate of parent involvement.
  - d. Students and staff generally have a stronger sense of personal efficacy in small schools.
  - e. Students in small schools take more of the responsibility for their own learning; their learning activities are more often individualised, experiential, and relevant to the world outside of school; classes are generally smaller; and scheduling is much more flexible.
  - f. Grouping and instructional strategies associated with higher student performance are more often implemented in small schools—team teaching, integrated curriculum, multi-age grouping (especially for primary children), cooperative learning, and performance assessments.
17. The evidence for the effectiveness of school-within-a-school (SWAS) arrangements is much more limited, but it suggests that students benefit from this form of organisation if the SWAS is sufficiently separate and distinct from the other school(s) housed in the same building.
18. Poor students and those of racial and ethnic minorities are more adversely affected—academically, attitudinally, and behaviourally—by attending large schools than are other students.

### *Findings in recent studies*

There were notable differences in the way parents, teachers and students perceived various behaviours / outcomes in small high schools (n<500) and large (n>1500) high schools as summarised in Table 10.1. While differences in perceptions are not large in most instances, the small high school is viewed more positively for all behaviours / outcomes.

The Focus on High Schools (FOHS) initiative reduced the size of 12 high schools of the Boston Public Schools (BPS) (James-Burdumy, Perez-Johnson and Vartivarian, 2008). The implementation of FOHS was associated with a reduction of student absentees, suspensions and an increase in the percentage of students promoted to the next grade (James-Burdumy, Perez-Johnson and Vartivarian, 2008).



The New Century High Schools (NCHS) initiative reduced the size of high schools to below 400, and these were then compared to other New York City high schools. The NCHS schools graduated more students on time with a difference of 18 percent and more students overall by 20 percent than in other high schools (Foley, Kline & Reopener, 2007). The drop-out rate of students in their 5<sup>th</sup> year of high school was 3 percent in the NCHS compared with 17 percent in the comparison group (Foley, Kline & Reopener, 2007).

Analysis of year 10 student assignments and class work of 12 new high schools (typically less than 100 pupils per year level) in comparison to 12 larger comprehensive schools across eight districts across America showed that (Mitchell et al., 2005, p. 4):

Students in the new high schools do higher quality work in English / language arts, compared with students in the comprehensive high schools. The work is more likely to demonstrate a deep conceptual understanding of content, clear communication, facility with language and the construction of new knowledge. Students who do higher quality work in school do better on standardised achievement tests.

*Table 10.1: Stakeholder (parents, teachers, students) perceptions of selected behaviours and outcomes in large and small high schools*

*(created from data in Public Agenda, 2002)*

Behaviour / outcome	Stakeholder perceptions of present of behaviour / outcome (percentage)	
	Small high schools (n<500)	Large high schools (n>1500)
Parents (n=801)		
Students learn to speak and write well with proper pronunciation and grammar	64	47
Students get high scores on achievement tests	56	41
School has high academic expectations and pushes students to do very best	68	53
Teachers (n=920)		
Too many students get passed through the system without learning	39	51
Academic achievement is too low	42	52

Students (n=1008)		
Teachers contact parents quickly if students fall behind	60	45
Too many students get away with cutting class	17	38
Too many students get away with not doing their homework	37	43
Most students in their school treat teachers with respect	22	16
Students in their school treat each other with respect	35	31

## ***Summary***

The review of research, policy and practice on specialist and small schools reported in this chapter suggests that many of the strengths and benefits of the academy program at each of the three sites may be as much a consequence of these attributes as they are of the fact that the academies offer the IB Diploma on an exclusive basis. Such a statement assumes that teaching and the support of students are of high quality in each setting. Expressed another way, a small senior high school that offers a specialisation, where teachers and other staff are skilled and highly motivated, and students are well supported are likely to have many of the positive features reported by parents, students and staff at the three academies. These features include the generally high levels of achievement of students, the strong school culture in which there are high levels of respect and trust among all stakeholders, and an impressive learning community has been created. These positive features of the academy program are therefore in line with what should be expected in a small, specialist senior high school that is well led and where teaching is of high quality. This should be understood as a favourable finding in the evaluation. There are, of course, particular benefits that accrue to the academies beyond the fact that they are small specialist senior high schools. For example, they offer a program (IB Diploma) that is widely perceived to have high standards and that is widely accepted around the world. Moreover, the academies are selective schools. A combination of these characteristics along with generally effective advertising has resulted in a student intake that draws disproportionately large numbers of students from the private sector. The overall effect is to produce what amount to a new model of secondary schooling at the senior level in the public sector.

While beyond the terms of reference for the evaluation, an implication worth exploring is what these findings might mean for other public high schools in Queensland. Many high schools in cities across the state tend to be large compared to counterparts in other states. While still offering a broad curriculum, consideration might be given to introducing a specialisation along the lines that is now virtually universal in specialist and magnet schools in England and the United States,

respectively. These schools are not selective although a small number of places are reserved for students with particular aptitudes where the specialisations are in areas such as music and the arts. In addition, while larger schools in Queensland are often organised into sub-schools, a more comprehensive strategy might be adopted to make them even more self-contained to the extent that the kind of climate created in the academies can be nurtured.

## Chapter 11

### Conclusions and recommendations

The purpose of the evaluation as set out in the terms of reference is to:

- Examine the effectiveness of the Queensland Academies
- Inform future improvement of the Queensland Academies

Chapter 10 sets out the conclusions that can be drawn about effectiveness and offers recommendations for the further development of the academies.

#### *Conclusions*

The conclusions that have been drawn about the effectiveness of the Queensland Academies are organised below according to the five principles set out in the terms of reference. In each instance there is reference to the chapter in which the evidence is set out.

The academies:

- **provide strong outcomes for students** (*Chapter 2 and 3*)

There are two sets of outcomes about which conclusions can be drawn. First, since each academy is offering the International Baccalaureate Diploma (IB), it is evident that initial intakes of students at QACI and QASMT achieved at a high level in 2008 and 2009, with average scores exceeding the Australasian and World Averages on each occasion. The first intake at QAHS also did well in 2009 against the same criteria but not at the same level. These are noteworthy achievements considering the early stages of implementation of the academy program and the fact that most teachers had not delivered the IB before their appointments to an academy. On the other hand, academy cohorts differ from most national and international cohorts because of selection processes that take account of entry level academic achievement as well as interest and aptitude, as demonstrated in interviews and, in the case of QACI, performance in a creative / artistic field.

The other sets of outcomes are based on expectations for the academies as perceived by parents and students who were surveyed on reasons for enrolment and their satisfaction with the achievement of expectations underpinning these reasons. While overall satisfaction was positive, lower levels of satisfaction were recorded for academic outcomes and pathways to higher education and employment. This was particularly the case at QASMT after the first set IB outcomes were received for 2009, where initial expectations may be been set at unreasonably high levels and where there appears to be a sharper focus on high achievement in the IB and assured pathways to preferred university courses. Initial results at QAHS for the IB in 2009 fell below predicted results and it is likely that, in similar fashion to what occurred at QASMT, expectations were set too high in the first instance. High levels of satisfaction were reported for opportunities to study in an area of specialisation with like-minded students supported by outstanding staff. A minority of parents and students felt that they could have achieved as well or better if they had remained at their former schools. Despite these perceptions, it was apparent that students who

completed the program were satisfied with their subsequent placements in education or employment.

- **promote the image of excellence and responsiveness of state education programs**

Academies were presented to the public at large and to the general school community as offering programs of excellence in their particular areas of specialisation. There are high expectations in Queensland as elsewhere around Australia that state education should be excellent and that state schools should hold their own with private schools. The state secondary sector in metropolitan Brisbane, as for counterparts in other capital and large cities, has experienced a drift of enrolments to private schools and there is no doubt that the academies initiative was intended at least in part to arrest this drift. While overall the drift continues, it is evident that significant numbers of enrolments were drawn from the private sector. For example, it appears that about 65 percent of the Year 10 intake at QAHS in 2010 was previously enrolled in private schools.

There is one particular area in which the image has been realised at a high level. Information in surveys and interviews indicated a generally positive view about the quality of teaching in each academy. In general it is fair to conclude that the image of excellence and responsiveness has been promoted and there is evidence to support the claim that this image has been realised. Students at each academy were effusive in interviews at the start of 2010 about the quality of teaching, their relationships with teachers and the support they received from teachers.

There is a particular challenge in creating an appropriate image for QACI. Unlike the other two academies, it is having difficulty attracting enrolments to the point that at the start of 2010 there were about 260 students in a building that can accommodate 450. There are several dimensions in this challenge. First, there is the image that 'creative industries' conjures in the mind of the public and educational community. It is more than 'the arts' but it is the image of 'the arts' that is received. It is set in the context of the 'creative industries' theme at QUT. The conceptual connections may be clear in the academic but not the wider world. There is a view that the concept itself may not be sustainable even though the activities it embraces are strong and likely to grow in scale and importance.

- **offer a unique and different model of education** (*Chapters 2, 3, 7 and 10*)

The academies program is unique in Australia in two respects. First, academies are the only state senior secondary schools that offer the IB on an exclusive basis. Other schools in Queensland that also offer the IB do so as an option to the Queensland Studies Authority curriculum for Years 10-12. Few state schools in Australia currently offer the IB at any level; it has been viewed until now as mainly an option for private schools. Worldwide the majority of schools offering the IB are state schools so the Australian pattern is different. Second, the academies are also specialist schools in that within the IB program there is a particular field of specialisation, as implied by their names (creative industries; health sciences; and science, mathematics and technology). Taken together, these features make the academies very special on the international scene. For example, only one school world-wide can be matched with the QACI, and that is the School of the Arts (Sofa) in Singapore, which had its first intake in 2008. Sofa moved to its 11-storey \$S145 million dollar complex in Singapore's arts precinct in January 2010.

Another design feature of the academies is the intention to forge partnerships with the three universities and related industries. In the context of long-term historical trends this feature may be considered unique but that is no longer the case. Several state high schools in Queensland and counterparts in other states are taking the same path to the extent that, while not universal, it will soon no longer be especially noteworthy. It is, however, a significant departure from traditional arrangements where state (and private) secondary schools tended to be stand-alone institutions whose links with universities were mainly to provide the pathway for students.

It is evident that partnerships with business and industry, defined broadly, are still not well-developed in the academies. This is understandable given the relatively early stages of development of these institutions. Staff explained the high demands on their time and professional expertise in getting them underway, including course development, selection and ordering of equipment and library resources, and ongoing and deep professional development. Survey data confirmed perceptions of heavy workloads. Now that they are established, it is reasonable to expect that these kinds of partnerships can be developed at a high but not unique level.

While still operating within state-wide parameters, it is evident that there is more discretion in the academies in respect to the selection of staff and management of the budget. Academies are not autonomous but are operating with a higher level of authority and responsibility in these areas than other state high schools in Queensland and their counterparts in other states, with the exception of Victoria. These arrangements are therefore noteworthy but not unique.

An important aspect of designing a different model of education concerns facilities and those in the academies are arguably unique in Queensland and possibly Australia, although developments elsewhere suggest a trend to purpose-design rather than standard or template-design in state education. There has been a substantial capital investment at all three sites, especially at QACI and QAHS. As noted above, QACI has an even more capital-intensive counterpart in Sofa in Singapore, and there is no counterpart to the style and scale of the building in state education in Australia. QAHS has superb facilities that include some of the best for styles of learning that have been advocated in the 21<sup>st</sup> century. The extensions and refurbishments at QASMT are also outstanding, notably the world-class science laboratories. It is fair to conclude that these set a high standard for state education around the country. Surveys of staff, students and parents on satisfaction with facilities were very positive, with ratings well above those of like schools and all schools. It is unlikely that other schools in the state sector throughout Australia would achieve such ratings except in the cases of recently-built purpose-designed schools at similar scales of investment.

- **provide exemplars of high quality teaching and other leading educational practices**  
(*Chapters 2, 3, 4, 5, 6, 7 and 10*)

The nature of the evaluation did not enable direct judgements to be made of the quality of teaching. It was necessary to draw on interview and survey data and imply cause-and-effect relationships between teaching and outcomes. For the latter, mention has already been made of the success of students in the IB for successive cohorts within three years of establishment, which is a noteworthy achievement given that most staff had not previously taught in the IB program and had to complete

intensive professional development to make the transition. Staff also carried a heavy workload associated with start-up.

Levels of satisfaction with staff were at very high levels among all stakeholders (staff, students and parents). In almost every instance these ratings were above those for like schools and all schools. Indeed, if these levels were achieved for all or most schools then any public or professional disquiet about the quality of teaching would be quickly dispelled.

Each group of stakeholders was able to add comments in surveys as well as offer more expansive responses in face-to-face or telephone interviews. There were cases where parents and, less frequently, students were less positive but in very few cases were highly critical comments made about staff. The generalisations about the quality of teaching are well-supported by the available evidence.

There are other indicators of leading educational practices. Responses on state-wide surveys of the three key stakeholder groups were generally very positive. In most instances they exceeded ratings for like schools and all schools. While there were differences among the three academies that are reported separately and, while samples of parents were relatively small, it is hard to imagine a more comprehensively positive assessment of particular practices, especially the personalising of the learning experience for students. The comment that the academies offered a safe environment largely free of bullying and harassment was made very frequently in interviews. It is reasonable to include this in an assessment of 'leading educational practice' because of concerns across the school sector generally that schools are not as safe and secure as we would expect them to be.

Some observers may say that the environment for learning in the academies should indeed be of this quality, given that students are for the most part highly motivated to attend and there is a relatively high degree of selectivity in choosing students compared to other schools in the state sector. On the other hand, as described elsewhere in this report, there is international research evidence that the climate that characterises the academies is more likely to be found in small schools than large schools, and the academies are relatively small compared to state high schools in large urban settings. Moreover, while there is debate about the scale of the difference, there is persuasive evidence that better academic and other outcomes can be achieved in schools that offer specialisations that match student interests and aptitudes than in non-specialist schools. This evidence is particularly strong in England where there has been a shift from standard comprehensive to specialist secondary schools across the whole state sector over the last two decades to the point that about 95 percent of the country's 3,100 secondary schools now offer at least one specialisation while offering the broad national curriculum. Systematic comparative analysis on value-added measures of student achievement over successive years points to the benefits of specialisation (comparisons are no longer worthwhile given that nearly all state secondary schools in England are now specialist secondary schools).

It is possible that the academies are providing a model in regard to the way they are personalising learning in the sense that has attracted attention to practice in Finland. One of the reasons often given for the small gap in performance between high and low performing students in Finland is that, as far as possible, no student is permitted to 'fall behind', even by as little as 48 hours. Teachers quickly identify students who are having difficulty, and one-on-one or small group assistance is

given immediately by other teachers who are skilled in providing this special support. Students in a group interview at QASMT were able to describe how practice at their academy achieved much the same outcome. While praising the outstanding support of their teachers, they described how teachers would keep explaining until only one or two students at most would still have difficulty. These students could then attend an after school tutorial to address the issue. In 2009, QAHS introduced a program named Target 40+ for its Year 12 students. It is designed to provide special support to enable students to achieve at the highest possible level in the IB taking account of their interests and aptitudes. The scheme involves the development of a personalised learning plan for each student. The initiative was well received by students and incoming Year 12 students are looking forward to participating.

The academies model best practice in the way they analyse and act on a range of data. Several of the chapters in this report, especially Chapters 3, 4 and 5 draw extensively on data from surveys administered in all schools as well as those that are more sharply focused on practice in the academies. The annual reports of the three academies highlight the way they analyse and act on these data. Information provided in interviews with principals and staff conducted in early 2010 made clear that what was reported is a fair reflection of practice. The role of staff in DETA has been critical in building these capacities because they administer and compile reports on the surveys and make these available to principals. While this is a reflection of the priority that has been placed on the academy initiative, it is the kind of school-department partnership that ideally should be evident throughout the system. The limitation here is one of resources in the form of personnel who could provide such support for all schools. However, in respect to the terms of reference for this evaluation, the way in which data are analysed and acted on should be considered another exemplar of leading educational practice.

- **add value to the state education system through leading innovative practice** (*Chapter 7, 8 and 9*)

Taken together, these findings suggest that value has been added to the state education system, even though there are only three academies and these are small institutions compared to state high schools in urban settings. What may be seen as small-scale value-added policy and practice may in fact be larger-scale to the extent that the positive outcomes already described and others summarised below are shared with the rest of the system through partnerships and the 'lighthouse' phenomenon. As described earlier, partnerships with universities are evident but as yet still not especially noteworthy. Partnerships with business and industry and other agencies, organisations and institutions with common interests still appear to be in the early stages of development. There is potential to add further value to the state system as these partnerships are developed but the same applies to all schools, given a trend in Queensland and elsewhere around Australia for higher levels of community engagement.

There are other ways academies may have wider impact. One is the Queensland Academies Young Scholars (YS) Program described in a Queensland Government brochure as 'a network of students, parents and schools which aims to develop the talents of the brightest Years 5 to 7 students across Queensland'. Another is the intention for academies to contribute to building the intellectual capital of the system through, for example, the conduct of professional development programs for staff in other schools, or through the strategy to limit the time teachers may be



appointed to an academy to ensure that the knowledge and skill of these teachers are deployed in other schools after their appointment, and others who take their place acquire new knowledge and skill that will have personal and system benefit.

While findings in surveys of parents include some positive views about the YS program, it seems that much more will need to be done to achieve its full potential. Findings in respect to the way in which academies network professional knowledge to add value to the work of other schools are also promising but more can be accomplished. New governance and leadership arrangements will help, given current limitations in time and personnel. The review of research, policy and practice in countries around the world on lighthouse schools and networking suggests that intentions to add value to the system are soundly based and that new arrangements for support are likely to enhance the impact of academies.

As noted above, another mechanism that has the potential to add value to the system was for teachers to have only limited 'tenure', initially for three years with the possibility of an extension, after which they would return to 'the system'. Given the depth of their professional development and their knowledge and skills in a range of innovative practices, this approach is one way of developing the intellectual capital of the system. While the arrangements had not been formalised at the time of the evaluation, the length of new appointments has been extended to five years with an extension of three years possible in some circumstances. Extension of three years for the first (original) appointments was an appropriate measure given the 'start up' time that was necessary for initial success. It would have robbed the academies of valuable intellectual capital to limit their terms. New arrangements provide tenure for principals, deputy principals, heads of department, and non-teaching staff.

It is understandable that the management of the academies has shifted to a committee that is more directly embedded in the system than before. In 2009 principals of academies reported to a district officer who convened meetings of principals. An important issue to be addressed is whether academies should become more like other schools in the system, or whether other schools should take on some of the characteristics of academies given the outcomes described above. The latter seems preferable if it is accepted that the academies have added value and that they provide exemplars of quality teaching and innovation in a model that is unique in many respects. There are other outstanding schools around the state and the challenge is therefore to draw from the best of these and lift the performance of all without make them all more or less the same.

## ***Recommendations***

This section of Chapter 11 offers recommendations to inform future improvement of the Queensland Academies. They are organised in four areas: endorsement of existing policy and practice, where capacity needs to be built, where significant change ought to be considered, and for the system as a whole. There is considerable overlap in some instances.

### **Endorsement of existing policy and practice**

There is strong and consistent evidence of the success of the academy initiative in providing a new model of public education in Queensland. The three academies are small schools offering three different specialisations while addressing the broad curriculum of the International Baccalaureate

(IB) Diploma. Even though the academies have been established for three years or less, students perform well against Australian and World benchmarks. An important qualification is that these are selective schools and selective schools generally tend to out-perform non-selective schools in comparable systems. While other measures should be considered to help bring the three academies to their maximum enrolment, on the balance of the evidence in this review, the initiative ought to be judged a success and should be continued.

*Recommendation 1: The three academies should continue as small specialist schools.*

The academies are currently the only state schools in Australia that exclusively offer the IB. Students maintain their eligibility to receive the Queensland Certificate of Education (QCE). The IB is an internationally-recognised qualification of high standing. Its national and international appeal is indicated by rapid growth in each of its three programs. Graduates of the three academies have performed well in subsequent placements in universities and other institutions. There is no compelling reason why the focus on the IB Diploma ought not to continue. A different arrangement warrants consideration at QACI which continues to struggle to reach capacity despite further growth in 2010. It specialises in the difficult-to-define 'creative industries', with the arts, broadly defined, at the heart of its programs. The arts are an optional stream in the IB Diploma. It may be that QACI should unambiguously offer a two-stream program, with the IB Diploma being one and the QCE the other. A closer examination of this and other options is warranted if QACI is to build to capacity in its purpose-built facilities.

It is important to note that there has been considerable effort to create a range of opportunities at QACI over and above the delivery of the IB curriculum, often in partnership with QUT. An example is the development of digital capacity in pedagogy to allow one-to-one delivery outside the 'normal' approach to learning in the traditional classroom setting.

*Recommendation 2: With the possible exception of QACI, the three academies should maintain their exclusive offering of the IB Diploma.*

One of the most impressive aspects of the initiative and the support provided by Education Queensland is the exceptional capacity of the department and the three academies to gather, analyse and act on data from a range of surveys and the outcomes in the IB Diploma. A high standard has been set for all schools, not only in Queensland but elsewhere around the nation as well as internationally. As has been shown in this report, the ways in which the academies have responded have differed from site to site, and this is as it should be given their different specialisations, stages of development, mix of students, and capacities of staff. The fact that each academy has identified and acted on different needs at different times, often with different strategies, should be seen as an endorsement of intentions and an example of good practice that should be widely modelled.

*Recommendation 3: The capacity to gather, analyse and act on survey data and learning outcomes should be maintained and extended to all schools across the state.*

An outcome of the capacity to use data in this fashion has been to develop exemplary practice in personalising learning. Such practice is often deemed to be too difficult to achieve in schools, given the size of many and demands on teachers and other staff, yet these three academies have been able to do it. They have, of course, been the subject of high expectations, given this is a pioneering initiative and parents and students have demanded outcomes beyond those that may have been achieved in schools other than academies. The expectations of governments, community, parents, students and professional staff are arguably higher than ever before, hence the capacities that have been developed in the three academies should be maintained and strengthened and used as a model for all schools.

*Recommendation 4: Approaches to personalising learning in the three academies should be maintained and strengthened and adopted as a model for all schools.*

### **Where capacity needs to be built**

While they have not been developed to the extent desired and possible, progress has been made in creating partnerships with universities and other organisations. A sharply focused perspective points to benefits for the students at each academy, each of which has a partnership with a university. A broader perspective reveals that schools generally are being encouraged, and are making good progress, in forging such partnerships for a range of reasons, including the need for schools to move out of their traditional isolation as well as recognition that schools have a critical role to play in preparing students for productive and satisfying roles in society and the economy, with universities and other providers having much to offer in sharing knowledge and providing resources, defined broadly. Increasingly in Australia and elsewhere there is co-location of institutions and this has been accomplished at QACI.

*Recommendation 5: Partnerships of academies with universities and other organisations and institutions should be supported and strengthened now that the early developmental work has been accomplished and there is understanding on all sides of the benefits.*

There has been an expectation that the academies should in a variety of ways make contributions to the system of public education. Expressed another way, they are expected to add value to state education beyond the benefits that accrue to students who participate in their programs. One way they are expected to do this is through the Young Scholars (YS) program which, in general terms, has two main purposes, as far as the academies are concerned: to draw the attention of students to and secure their potential interest in enrolling at an academy, and to enrich the learning of all students who participate, irrespective of whether they subsequently enrol. Other contributions have come through the workshops and seminars conducted by academy staff for staff in other schools. The evidence in this review suggests that the YS program, in particular, is not yet widely known and understood, and this is understandable given that the academies initiative has been under way for a relatively short period of time. However, there are important benefits that can be achieved through further development.

*Recommendation 6: The Young Scholars program and the sharing of professional knowledge with staff in other schools should be supported and strengthened.*

Approaches to the coordination and governance of the three academies have changed since their inception. This is understandable and appropriate. A strong central role was the logical starting point. Without sacrificing a role for senior and supporting officers at the centre, it made eminent good sense to move aspects of these functions to regional officers. It was important for principals to have a key role in these processes especially through the advisory committee. After a successful start, and with principals and other academy leaders gaining knowledge and experience, it makes sense to take the next step, with cross-academy leadership and support. A proposal for a new governance and support arrangement under consideration during the life of this review was a sound one, especially in helping the academies build capacity to accomplish work where limited progress had been made in the early years, especially in respect to partnerships with universities and others (Recommendation 5) and enhancing and extending the YS program (Recommendation 6).

*Recommendation 7: New arrangements for governance, leadership and support to strengthen partnerships and add further value to the system of state education should be located within and across the three academies while maintaining a strong role for the centre and region.*

The three academies have done well in the early years of the initiative as far as implementing the IB and securing generally high levels of student achievement are concerned. However, there is compelling evidence that expectations were unrealistically high at each academy, and that parents and students were disappointed in some instances when results were received. This was understandable given that the initiative had a high public profile and there was a degree of risk, with both factors adding considerable pressure to staff who in most instances were still learning the ropes as far as the IB was concerned. Moreover, as leaders in the IB program in Australia have noted, it typically takes more than three years for programs to be bedded down. Nevertheless, staff in the academies need highly focused support, much of which can come from related professional development opportunities and other measures to build capacity at the academy level. Staff in the IB Organisation (IBO) can assist. Universities can strengthen their contribution by introducing a small specialisation in the IB in pre-service and higher degrees as has been done, for example, at the University of Melbourne.

*Recommendation 8: Further support for the academies to ensure the setting and achievement of realistic expectations should be provided by commitments of time and money to ongoing professional development and extending the engagement of the International Baccalaureate Organisation and universities.*

## **Where significant change is required**

An issue related to a number of these recommendations was raised at several points in the review, namely, that the score on the IB Diploma (IBD) that is converted by the Queensland Tertiary Admissions Centre (QTAC) to a university entrance rank is unreasonably high in comparison with an Overall Position (OP) ranking. Several students indicated in the course of interviews in early 2010 that they would not recommend to students in high schools that they consider an application to an academy because of this, as well as for the related reason that they could secure entry with much less effort and greater certainty if they remained in their current schools. While an IBD score for entry to Oxford was cited, the reasons for this perceived disparity between the Queensland standard and the Oxford benchmark were not explained in the course of the review. It seems that there is not a level playing field in this regard, with a heavy and unnecessary bias in favour of what some students referred to as 'the QSA system'. A case could be made that there is an anti-competitive, protected market in favour of the traditional system where none need or should exist.

*Recommendation 9: Education Queensland should work with universities in Queensland to reduce from 42 the score that secures entry to universities of students who graduate with the IB Diploma.*

Despite good growth in 2010, it is unlikely that QACI will achieve target for student enrolments in the foreseeable future, which raises questions about the effective use of its purpose-built and costly facilities. Recommendation 2 raised the possibility that QACI ought to become a two-stream academy rather than a single-stream IB institution. A related issue that may affect understanding of and interest in QACI concerns its name. There was evidence in the course of the review that the concept of 'creative industries' is not well understood in the school sector and, even in universities, further education and in society at large, there is a lack of clarity. Closer scrutiny of the concept as far as the economy is concerned suggests that it is appropriate but the issue is one of perception and understanding on the part of potential enrollees. One option is to take the lead of Singapore which has the only school world-wide that can be matched with QACI, and that is the recently-established and heavily subscribed School of the Arts (Sofa). It may be easier to communicate the idea of 'the arts' or 'creative arts' than it is to secure ready understanding of 'creative industries'. A possible title is Academy of the Creative Arts. While the name was reviewed at the end of year 1 it may be timely to re-visit the matter in the light of experience in subsequent years.

*Recommendation 10: Consideration should be given to re-naming QACI and to re-designing its program to offer more than the single IB stream.*

## **For the system as a whole**

Several recommendations include implications for the system as a whole, notably 'Recommendation 3: The capacity to gather, analyse and act on survey data and learning outcomes should be maintained and extended to all schools across the state' and 'Recommendation 4: Approaches to personalising learning in the three academies should be maintained and strengthened and adopted as a model for all schools'. There are two more that arise from findings in the review.

Interviews with and surveys of students and teachers suggest that the three academies are excellent examples of 'learning organisations' in which students and staff have high regard for each other, outcomes are high and there is continuous professional development. As shown in the review of related literature, this is a characteristic of schools that have a particular focus, most usually in the form of a specialisation, even though such schools offer the same broad curriculum (in this instance the IB). This raises the possibility that Education Queensland consider the possibility of extending the limited number of its schools that offer a specialisation. It may choose to create more schools elsewhere around the state that offer a specialisation in mathematics and science, or a specialisation in technology, or a specialisation in the creative arts. It was noted in the review that more than 95 percent of England's 3,100 high schools offer at least one of 13 specialisations at the same time that they address the broad curriculum.

*Recommendation 11: More specialist secondary schools should be created in Queensland, either among existing schools or in new schools in growth corridors.*

There is compelling evidence that many of the very positive aspects of the climate and emerging culture of the three academies arise because they are relatively small, not necessarily because they offer the IB or a specialisation. The international research evidence cited in this report points to the benefits of 'small schools'. There is no generally-accepted criterion for what constitutes a small school, other than it needs to be large enough to offer an adequate and efficiently delivered curriculum and should be small enough so that a high level of personalisation is possible. Academies with an enrolment of 450 certainly fit any generally-accepted view of what constitutes a small secondary school. Queensland high schools in urban areas tend to be larger than their counterparts in other states but there is no reason why the benefits of 'smallness' cannot be achieved through sub-school arrangements. This is the approach that has been followed in many instances. The issue is whether more can be done to create the climate and culture that is achieved in a relatively small but viable small school.

*Recommendation 12: The benefits of a small school that have been achieved in the three academies should be secured in other schools in the system by purposely creating smaller schools-within-schools.*

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